The Healthy Base Initiative

Healthy Base Initiative

Demonstrating How Healthy Eating, Active Living, and Tobacco Cessation Can Improve the Recruitment, Retention, Readiness, and Resilience of the Military Community

OPERATION LIVE WELL

Your Health Is Our Best Defense

HBI Support Team

- Department of Defense
- Military Health System
- Department of the Army
- United States Marine Corps
- Department of the Navy
- Department of the Air Force
- Guard and Reserve
- Department of Homeland Security - United States Coast Guard

- Alliance for a Healthier Generation
- Arrowstreet Architecture and Design
- Balanced Scorecard Institute
- Bipartisan Policy Center
- Booz Allen Hamilton Strategy and Technology Consultants
- Cambia Health Solutions
- Cornell University College of Human Ecology
- Cornell University Food and Brand Lab
- The Culinary Institute of America
- Defense Commissary Agency
- Deloitte
- Department of Defense Education Activity
- Office of Health Affairs
- The Hudson Institute
- Johns Hopkins Bloomberg School of Public Health
- Kurbo Health
- Military Community and Family Policy
- PKF Consulting USA
- Prevention Partners
- Spider Strategies
- Share Our Strength
- Wholesome Wave

Table of Contents

Executive Summary

A fit and healthy fighting force is the foundation of a strong national defense. But in the United States, poor health, obesity, lack of physical fitness, and tobacco use pose a growing threat to the Department of Defense (DoD)'s four "Rs": recruitment, retention, readiness, and resilience. A few observations underscore the scale of the challenge:

- **Recruitment** – In 2010, 27 percent of recruits did not qualify for the military due to height/weight standards.[i] By 2030, 64 percent of potential recruits will not qualify due to their weight.[ii]
- **Retention** – Failure to meet weight standards is a leading cause of involuntary separation from the military, and obesity in the civilian community is limiting DoD's ability to recruit qualified personnel.[iii]
- **Readiness and Resilience** – More service members were evacuated from Iraq and Afghanistan for serious sprains and fractures than for combat injuries; "overweight or less-fit young men and women are at a higher risk for these injuries." [iv]
- **Fiscal Impact** – Treating the effects of obesity and tobacco-related illnesses costs DoD over $3 billion annually.[v]

The Healthy Base Initiative (HBI) was a short-term demonstration project designed to inform DoD's long-term strategy — called Operation Live Well (OLW) — to make "healthy living the easy choice and the norm for service members, retirees, DoD civilians, and their families."[vi] Launched in 2014 at fourteen pilot sites, HBI was an innovative, multi-faceted approach to (1) assess the current health and wellness status of the military community and of military environments, (2) test evidence-based initiatives, (3) measure results, and (4) provide lessons and recommendations for OLW. This report documents DoD's

"The Department of Defense's Healthy Base Initiative (HBI) is a terrific complement to the National Prevention Strategy. By identifying evidence-based "promising practices," HBI took a major step toward addressing health and wellness challenges that affect Americans at every stage of life. We encourage other federal departments to learn and share in this achievement."

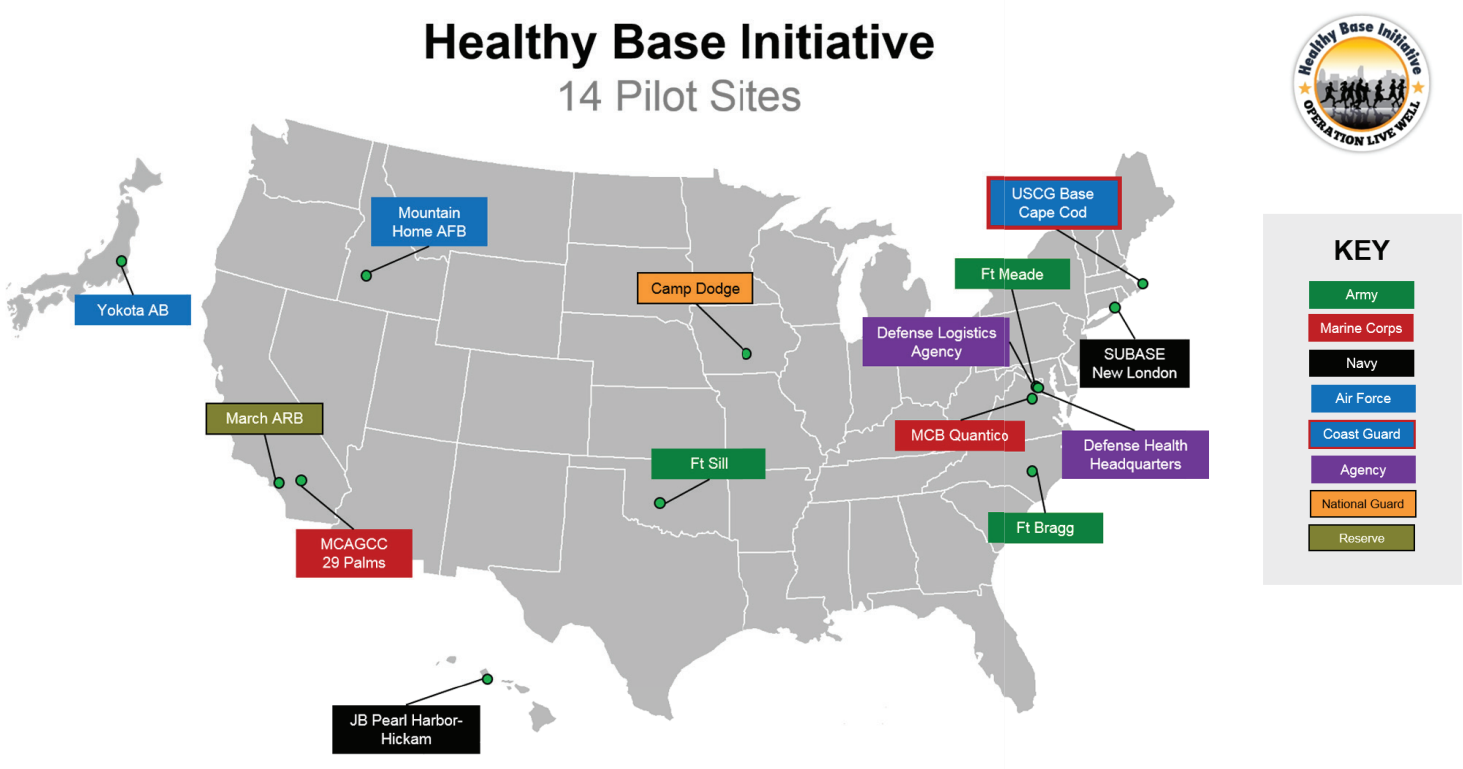
-U.S. Surgeon General
Dr. Vivek Murthy

experience with HBI, describing the different programs and interventions undertaken at HBI pilot sites, the process used to select these interventions, the successes and challenges that emerged during implementation, and the results of baseline assessment and outcome measurement efforts. Consistent with the objective of informing future DoD efforts to promote health and wellness, and OLW in particular, significant portions of the report discuss lessons learned and recommendations – both generally and with respect to specific HBI programs and interventions.

A. HBI Design and Implementation

Figure 1 shows the fourteen installations and agencies selected as HBI pilot sites. The Navy, Marines, and Air Force are each represented by two sites and the Army by three locations. The remaining five pilot sites include locations of the National Guard, the Reserves, the Coast Guard, Defense Health Headquarters, and the Defense Logistics Agency (DLA).

Figure 1. Locations of HBI Pilot Sites



The process for selecting HBI pilot sites was rigorous and involved a list of criteria, with local leadership (e.g. the presence of a commander who was committed to the goals of the initiative) weighing as the most important factor. While each Service was asked to nominate just four installations, many more installations expressed interest in participating.

To align goals, objectives, tactics, and metrics for the Initiative, the HBI team used an approach developed for the private sector by the Balanced Scorecard Institute. The Balanced Scorecard process helped DoD articulate a vision for HBI and identify a set of strategic objectives:

- Reduce overweight and obesity
- Decrease tobacco use
- Improve healthy eating
- Increase active living
- Foster a healthy environment
- Improve access to healthy choices
- Increase health knowledge
- Improve support for healthy living
- Improve incentive system
- Improve experience and engagement
- Increase financial viability
- Optimize resources
- Improve communications and marketing

The HBI team then worked with DoD, the individual Services, other federal agencies, non-profit organizations, and academic institutions to identify evidence-based initiatives that addressed the strategic objectives and could be implemented within the one-year timeframe of the demonstration project. Each HBI pilot site could select from a menu of options to identify the mix of interventions and programs that best suited its unique needs and circumstances. Thus, not every HBI program was implemented at every site.

In addition, the HBI team identified a number of "promising practices" that were already being implemented at individual installations. Many of these practices grew from local efforts to address site-specific circumstances and needs. Examples include Recess Before Lunch, a program for elementary schools that has demonstrated nutrition and behavior benefits; Community Health Promotion Councils, which strive to provide an integrated approach to community health needs; and various youth and adult fitness programs. Altogether, the HBI team identified twenty-one promising practices at the fourteen pilot sites.

Including these "homegrown" initiatives in HBI not only supported the process of innovation and knowledge diffusion, but also established a true subject matter exchange between the HBI team and installation stakeholders and acknowledged the value of local

efforts. Ultimately this expanded the number of effective program options available to participating installations and led to better and more enduring HBI outcomes. In this and other ways — for example, by setting up a web-based Community of Interest to share information about health and wellness and program experience — the HBI team sought an approach that facilitated transparency, accountability, and knowledge-sharing between installations, the Services, and DoD leadership.

B. Specific HBI Interventions and Programs

This section provides a brief description of specific HBI interventions and programs, grouped by focus area or "wedge."

Healthy Eating

- **Assessment** – HBI used the military Nutrition Environment Assessment Tool, or m-NEAT, to assess the environment at food locations.
- **Food preparation** – The HBI team examined the nutritional content of Non-Appropriated Fund (NAF) recipes and hosted healthy cooking seminars for small groups of Appropriated Fund (APF) and NAF food personnel. These efforts, which the team called the Menu Renovation Initiative, were based on a "train the trainer" model.
- **Menu labeling** – Two labeling systems were included in HBI: *Go for Green®*[1], which was primarily used in dining facilities and galleys, and Better For You, which was developed for NAF (Morale, Welfare, and Recreation/Force Support Squadron/ Marine Corps Community Services) operations on installations.[2]
- **Food presentation and placement** – HBI included implementation of the Cornell Food and Brand Lab's Smarter Food Movement program, which is rooted in the behavioral economics concept of choice architecture. The team tested how placement and presentation of food could affect customer behavior and sales of designated items.
- **Increasing fruit and vegetable consumption** – By partnering with the Defense Commissary Agency (DeCA) in a fresh produce initiative and by establishing farmers markets at key locations, HBI explored ways to increase sales of fruits and vegetables to service members and dependents.
- **Nutrition education** – HBI reached out to the non-profit organization Share our Strength to implement its nutrition education program, called *Cooking Matters.*[3] The Cooking Matters program is designed to help individuals and families learn how to purchase and cook healthy food.

"A system and culture that improves readiness while lowering costs by reducing obesity and tobacco use."

[1] More details can be found at : http://hprc-online.org/nutrition/go-for-green
[2] The Marines have a different but similar program called "Fueled to Fight"
[3] More details can be found at: http://cookingmatters.org/

Table 1. Types of Food Outlets at HBI Installations

Type of Food Outlet	Key Organizations Involved	Funding
Appropriated Fund (APF) Outlets • Dining venues (DFACs, galleys and mess halls) • Commissaries (groceries)	• Individual Services • Defense Logistics Agency (DLA) • Prime vendors • Joint Culinary Center of Excellence (JCCoE) • Natick Labs • Defense Commissary Agency (DeCA)	Congress appropriates funding to pay for food provided through these venues and to operate DFACs at a variety of locations. Congress provides appropriated funds to the commissaries each year so that they can offer virtually "no cost added" pricing.
Non-Appropriated Fund (NAF) Outlets • Clubs • Fast food, freestanding restaurants, and food courts • Snack bars • Kiosks • Vending • Concessions • Mobile food	• Army and Air Force Exchange Service (AAFES) • Navy Exchange Service (NEXCOM) • Marine Corps Exchange (MCX) • Morale, Welfare and Recreation (MWR)	These operations function like food service operations in the civilian sector. They need to make enough revenue to cover expenses and maintain solvent operations.
Youth Locations • Schools • Child development centers • Youth centers • Vending in schools and youth centers	• Department of Defense Education Activity (DoDEA) • Public schools on/near military installations • Office of Children and Youth • AAFES	Funding is mixed: USDA reimburses schools in the National School Lunch Program (NSLP) and child development centers in the Child and Adult Care Food Program (CACFP). Vending machines are considered NAF environments.

Implementing healthy eating initiatives had to take into consideration the different types of food outlets and how they are funded, as seen in Table 1.

Active Living

Essential elements of active living include a built environment that supports physical activity and access to facilities and programs that support and promote physical activity. During the HBI demonstration project, the HBI team tested a number of initiatives related to active living. These initiatives can be divided into four focus areas:

- **The built environment** – The military Promoting Active Communities (m-PAC) assessment tool was used to evaluate the built environment at installations; specifically, m-PAC was used to consider aspects of the built environment that encourage or discourage physical activity.
- **Active transport** – The HBI team looked at how existing elements of the built environment could be used to encourage physical activity. For example, one

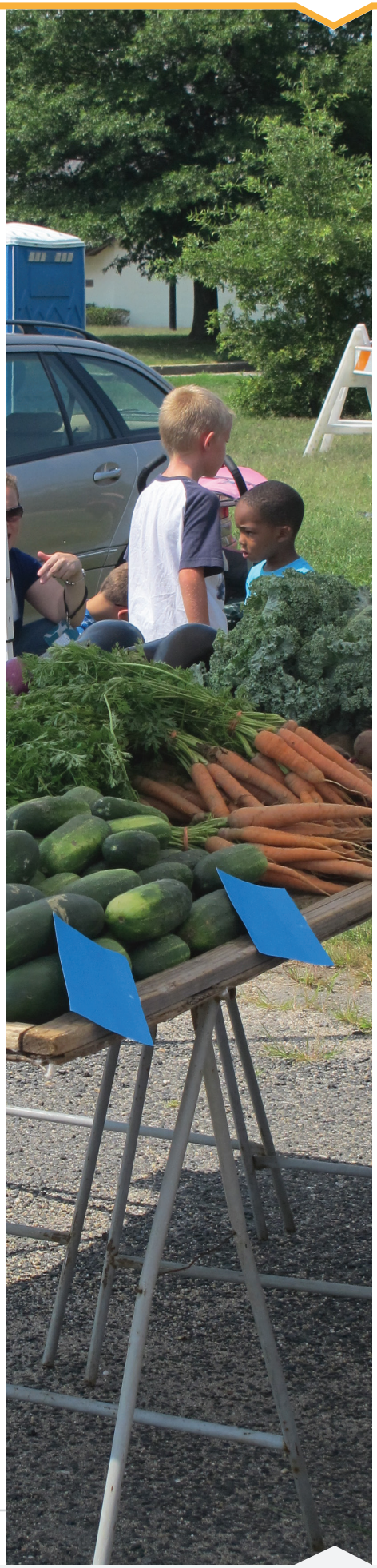
program, called StairWELL to Health, encouraged stair use. Another program, Bike Share, was originally intended to offer an alternative mode of transport for getting around on installations (as opposed to driving) but ended up as a recreational program.

- **Enhanced fitness facilities** – HBI explored whether enhancing fitness opportunities would increase physical activity. One program, 24-hour Fitness, provided individuals round-the-clock access to fitness facilities, like gyms; another program, called Fitness on Request, aimed to increase the number of fitness instructor-led classes on installations.
- **Comprehensive programming with coaches** – HBI also tested a comprehensive program, called Warrior Well, to individuals that encompassed physical activity, nutrition counseling, sleep metrics, and a team coach. The question was whether this kind of direct, multi-faceted intervention would have a greater impact on behavior than leaving individuals to try to get fit on their own.

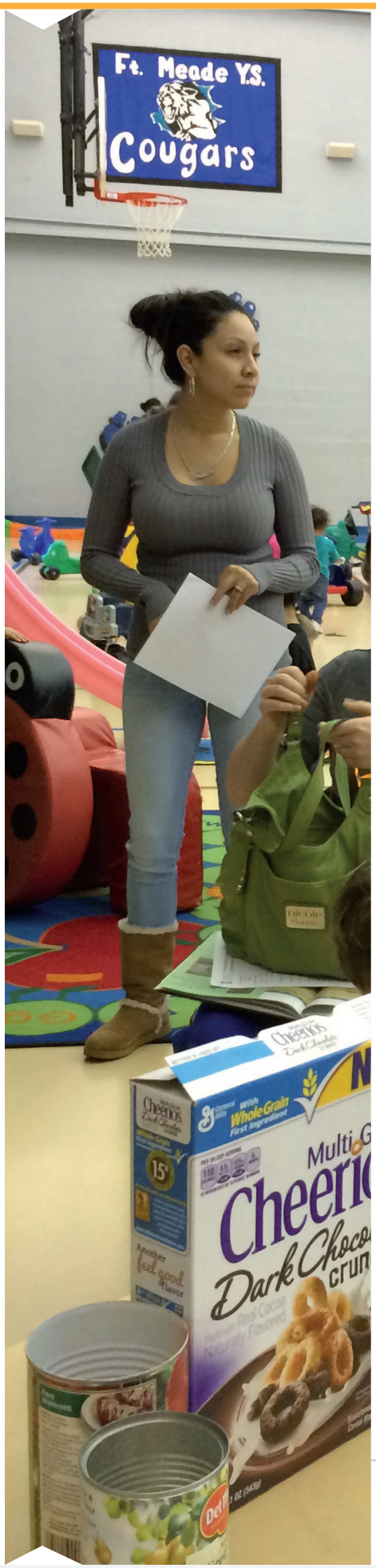
Health and Wellness

Despite its long history of attention to physical health and fitness, the U.S. military is increasingly affected by the same patterns of obesity, poor nutrition, tobacco use, and chronic disease found in the general U.S. population, which in turn imposes large costs to the DoD budget. As a member of the National Prevention Council, DoD is committed to implementing the vision, goal, priorities, and recommendations of the nation's first-ever National Prevention Strategy, which seeks to increase the number of Americans who are healthy at every stage of life. The health and wellness initiatives tested during HBI fall into six categories:

- **Assessment** – HBI tested the tool UltimateMe as a way to help individuals learn more about their "real age" and how to improve it. It also tested whether comprehensive, real-time data on the entire military community would be useful to leadership in enabling more efficient and effective allocation of resources.
- **Leveraging assets** – The HBI team looked for ways to leverage community and installation assets, while also looking for ways to "cross silos" within installations through initiatives such as the Community Resource Guide and the Community Health Promotion Council.
- **Replicating successful programs** – The HBI team tested programs like Group Lifestyle Balance™, which is modeled on the Centers for Disease Control and Prevention's (CDC's) successful *Diabetes Prevention Program*.[4]
- **Using technology to help individuals** – The HBI team tested the technology-based hologram program, Holly-Graham, as a way to deliver messages about health and wellness.



[4] More details can be found at: http://www.cdc.gov/diabetes/prevention/



- **Improving the environment at military hospitals** – Ambassadors for Health, a program that replicates a civilian program called *WorkHealthy America*℠,[5] was tested at Military Treatment Centers.
- **Addressing children's health and wellness** – The HBI team tested several programs aimed at increasing the health and wellness of children, including Operation KidFit and *5210 Healthy Military Children*.[6]

Schools

Children of military personnel can attend a variety of types of schools, including private schools, public schools off military property, public schools on military property, and DoD Education Activity (DoDEA) schools. In the area of schools, the HBI team identified a single, comprehensive, evidence-based program designed by the Alliance for a Healthier Generation. The Alliance, which has worked with more than 30,000 schools around the country, provided technical advisors to work with schools at HBI sites that were interested in implementing *the Healthy Schools Program (HSP)*. Technical advisors from the Alliance were called Healthy Schools Program Managers.[7] They provided in-person core workshops and ongoing virtual assistance to help participating schools create a culture that promotes healthy eating and physical activity. Following a continual improvement process, participating schools completed a baseline assessment and a follow-up assessment to identify the strengths and weaknesses of their policies and programs.

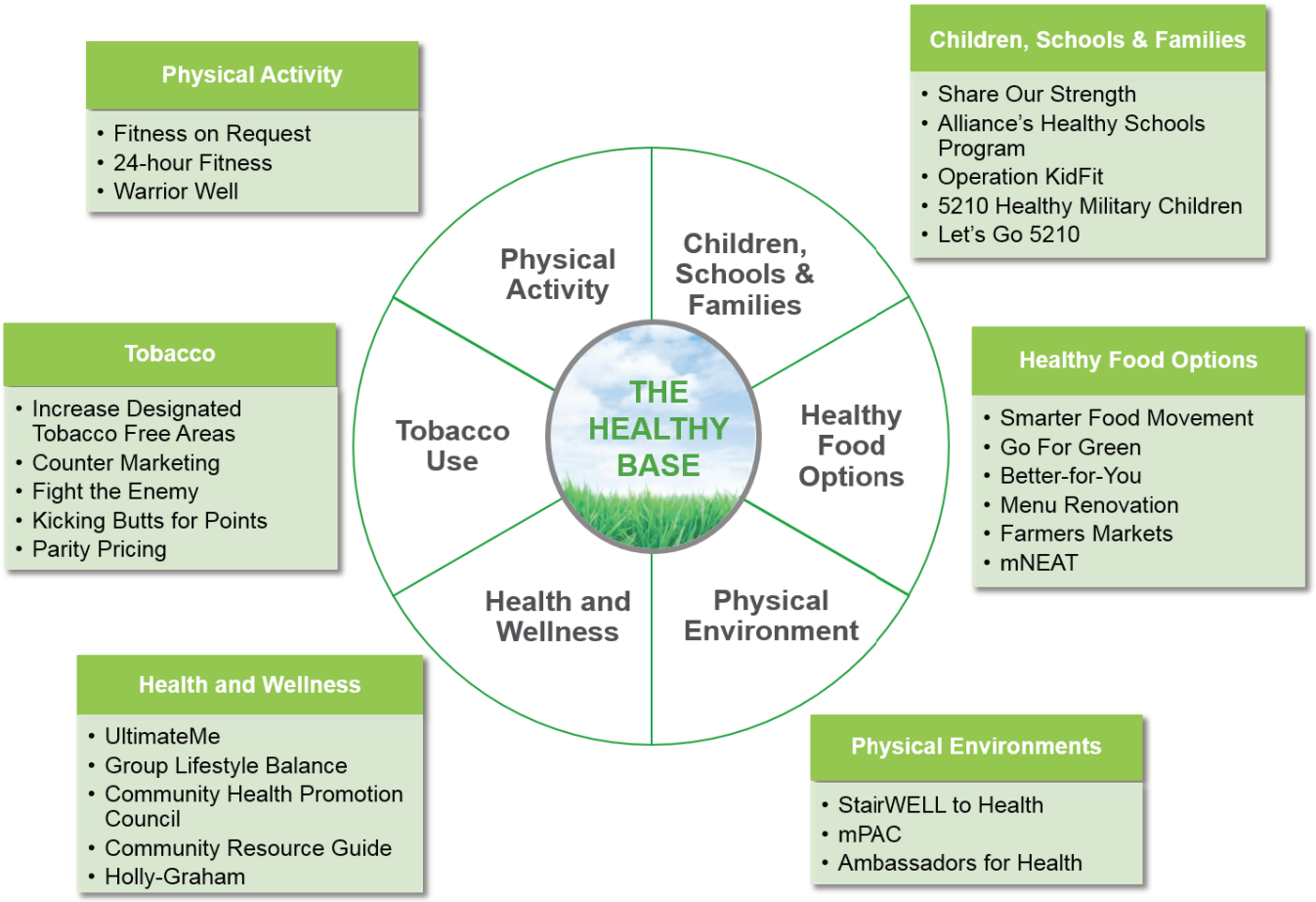
Tobacco

As part of HBI, initiatives to address tobacco use were tested at several pilot sites. These initiatives focused on policy, education, and programming. Policy initiatives included efforts to introduce parity pricing for tobacco products and increase the number of tobacco-free areas. Education and programming initiatives included a counter-marketing campaign, which involved placing anti-tobacco messages where they would be readily visible near the point of sale; Kicking Butts for Points, a unit-based competition to reduce individuals' tobacco use; and Fight the Enemy, which invited high school students to make an anti-smoking video and enter it in a national competition.

Figure 2 shows the different HBI initiatives, organized by wedge.

[5] More details can be found at: http://forprevention.org/p2/solution/workhealthy-america/
[6] More details can be found at: http://5210.healthymilitarychildren.psu.edu
[7] More details can be found at: http://healthiergeneration.org/take_action/schools/

Figure 2. HBI Initiatives by Wedge



C. HBI Measurement and Evaluation

Measurement and evaluation were important components of HBI from the outset.[8] Since a primary purpose of HBI was to generate lessons that could inform future efforts, it was important to track the demonstration project's results – both in terms of how successfully planned interventions and programs had been implemented and in terms of the relative effectiveness of different interventions and programs in bringing about desired changes in behavior and improvements in health.

The HBI measurement and evaluation framework contained three components:

1. **A structural evaluation** to assess policies and support systems for health and wellness and the existing environment at pilot sites prior to HBI implementation.

[8] A research team from John Hopkins University led the measurement and evaluation of HBI; their detailed findings are available in a separate report, which can be found at: http://www.jhsph.edu/research/centers-and-institutes/institute-for-health-and-productivity-studies/projects/archived-projects/. A separate team from Cornell University led the Climate and Resource Assessment discussed later in this section (see also Footnote 6).

This was important to establish a baseline for measuring the impact of HBI programs and to identify needs and gaps that HBI could seek to address.

2. **A process evaluation** to assess (a) the degree to which HBI was implemented as planned (fidelity) and the extent to which interventions were executed with appropriate intensity, frequency, and duration (dose delivered); (b) awareness of, participation in, and satisfaction with HBI programs and HBI overall among the target population (dose received and reach); and (c) intermediate outcomes or outputs (i.e., changes in health behaviors) as a result of HBI implementation.
3. **An outcome evaluation** to assess the impact of HBI on tobacco use and obesity.

Other assessment tools were likewise important in the evaluation and measurement portion of HBI; these tools represent another valuable output from the project because they can be refined and applied in future efforts. For example, m-NEAT and m-PAC were used to assess the environment for nutrition and physical activity, respectively, at specific HBI locations as part of the baseline-setting portion of the structural evaluation. The evaluation team also developed a Program Fidelity Tool (PFT) tailored to assess whether and to what extent each individual HBI program or intervention had been implemented as planned at different pilot sites (including, in some cases, specific facilities within the pilot site).

An important part of the process evaluation component was the Climate and Resource Assessment (CRA), which was conducted by researchers at Cornell University[9] and which was designed to give members of the military community the opportunity to provide feedback about HBI and about the specific food, active living, and tobacco cessation programs implemented at their location. The CRA took the form of an online survey, distributed at thirteen of the fourteen pilot sites at the end of the first year of HBI implementation, via a mass email to an all-hands list. In total, the CRA survey generated 2,057 responses and yielded a number of useful insights about people's interest in adopting healthier behaviors and their perception of HBI's role in supporting the kinds of lifestyle improvements they wanted to make.

Detailed findings from the HBI measurement and evaluation effort, including the results of the Climate and Resource Assessment are described in separate reports and in Chapters 8 and 9 of the main report. Four key points are highlighted here:

1. The structural evaluation identified many gaps and opportunities to improve programs, policies, and environmental support systems for health and wellness at HBI pilot sites. There is evidence that the food environment is improving but

[9] The Climate and Resource Assessment component of the measurement effort was led by the Bronfenbrenner Center for Translational Research at Cornell University. Detailed findings from that assessment are described in their full report, which can be found at: http://www.bctr.cornell.edu/healthy-base-initiative-report/.

progress toward making installations more conducive to increased physical activity has been slow.

2. There was substantial variation in the degree to which initiatives were implemented as planned (fidelity) across initiatives and installations. Overall, HBI fidelity was good — the average fidelity score for HBI initiatives was 2.1 on a 0-to-3 scale — but the score still indicates room for improvement, which could be achieved by increasing the intensity, duration, and frequency of initiatives.
3. There was substantial variation in the level of awareness, participation, and satisfaction with initiatives. In some of the targeted individual-level initiatives, such as Cooking Matters at the Store, participation was relatively strong. Other initiatives, such as Warrior Well and Group Lifestyle Balance™, were intensive and intentionally focused on small groups of individuals. In still other cases, implementation delays made it difficult to build sufficient awareness and engagement before the end of the demonstration period (e.g., Bikeshare and 24-Hour Fitness). Unfortunately, it is extremely difficult to gather robust participation data on broad environmental initiatives that would have had the largest reach (e.g., menu labeling programs like Go for Green® and Better For You and the Commissary Produce Initiative).
4. Consistent with expectations given the short-term nature and limited reach of the HBI demonstration project, the evaluation found limited evidence of a measurable change in overall rates of tobacco use and obesity that can be attributed to HBI at the pilot sites.

"HBI demonstrated that the people who needed help the most participated, but that some people also could have benefited from more help - especially if they lacked self- motivation."

Results from the CRA provide further insights into the role and impact of HBI and will be helpful in guiding future DoD efforts to promote health and wellness in all segments of the military community. First, among those who completed the CRA survey, a significant portion not only understood that changing their eating, exercising, and tobacco-use behaviors was an important first step to a healthier lifestyle, but reported meaningful progress in making these changes over the course of the project. Second, while many things contributed to this progress, it is clear from the CRA responses that HBI played a strong supportive role in helping members of the military community make positive behavior changes. It was also clear that an overwhelming majority of survey respondents would like to see many of the HBI initiatives made permanent and expanded, if possible. Thus, while the CRA did not establish a causal link between HBI and changes in eating, exercising, and tobacco-use behaviors, it showed that HBI had an important impact, consistent with the project vision articulated through the Balanced Scorecard process, in advancing "a system and culture that improves readiness while lowering costs by reducing obesity and tobacco use."

D. General Lessons Learned from HBI

Some of the most important lessons to emerge from HBI transcend particular programs, issues, and installations. These lessons — which are based on implementation experience, interviews with points of contact at the agencies and installations, the CRA survey, and the Program Fidelity Tool — are summarized here. They are likely to be relevant for any future DoD initiatives in this area, including Operation Live Well. The lessons are grouped in two broad categories — labeled here as "challenges" and "opportunities"— depending on whether they relate to a particular barrier or difficulty encountered during HBI implementation or (in the case of opportunities) point to the potential for increasing the reach and impact of future DoD health and wellness initiatives. Recommendations to address these findings are found in a later section.

Lessons from Challenges Encountered in HBI Implementation

A one-to-two-year implementation timeframe was too short to produce measurable changes in health outcomes. The consequences of obesity and tobacco use for service members and their families have been widely reported and are clearly recognized by OLW leaders. HBI attempted to address both issues, but as a short-term demonstration project, it was unrealistic to expect that HBI by itself would produce substantial, observable changes in these risk factors over a one-to-two-year timeframe. In fact, the CDC and other experts warned that it would not be possible to "move the needle" in such a short period of time.

Measurement is critical and challenging. Measuring the impact of HBI initiatives was critical in assessing their value. The HBI team, with the assistance of the Johns Hopkins research team, developed a Program Fidelity Tool for each initiative to systematically measure impact. Metrics to track progress and measure impact are extremely important but very difficult to develop and apply on many levels. In the case of HBI, installation leads often lacked the knowledge, skills, and capacity to apply metrics and collect the data needed to measure program results. In addition, it could be difficult for installation leads to determine and/or access data and metrics being collected by other programs or offices at the installation. Lack of standardization was a further problem – many programs applied completely different metrics. There is too little emphasis on measurement in the current culture within military installations, which in turn makes it difficult to evaluate the impact and effectiveness of health, nutrition, and physical fitness-related programs. As a result, success is often determined on the basis of anecdotal evidence rather than empirical data.

Up-front assessment is essential. Identifying baseline conditions or measurements for installations was key to identifying opportunities for improvement. Assessment tools like m-NEAT for healthy eating and m-PAC for active living helped installations understand how "healthy" their environment was at the outset of HBI.

Dose delivered matters. During HBI, initiatives were tested at various locations on installations but they were typically not implemented everywhere at a given pilot site. For example, on installations with multiple food locations, HBI interventions were only tested at a few outlets. The StairWELL to Health initiative was tested and measured at just one location (Yokota AB). This approach reflected the view that initiatives needed to be tested before installations were asked to implement them at every location. The team learned (1) that it was far more effective to package different initiatives together — as a healthy eating package or as an active living package, for example — and (2) that implementing multiple initiatives at more locations is critical to driving behavior change and ensuring that the healthy choice is the easy choice no matter where an individual goes on base.

Lack of a coordinating authority impeded efforts and made it difficult to align the efforts of different departments within DoD. DoD's Offices for Health Affairs (HA) and Military Community and Family Policy (MC&FP) shared responsibility for HBI implementation (at the Assistant Secretary and Deputy Assistant Secretary levels, respectively), but their HBI authority was lateral in the sense that both HA and MC&FP can formulate policy changes and enforce them within their own purview, but lack authority to make and enforce changes in policy across DoD. HBI falls in the category of policy or guidance from the Office of the Secretary of Defense (OSD) — it was not implemented as a DoD directive. Moreover, different DoD offices and agencies, including MC&FP and HA, were restricted in how they could allocate funding and, as such, often managed and implemented programs on their own. But HBI and OLW were not stand-alone programs. And while the current governance structure readily supports programs run by different offices, there is no clear, effective way to create enterprise-wide culture change and work across offices and agencies within DoD.

Department of Defense Issuances are required to implement federal policy. For DoD to create new programs and resource them appropriately, federal policies and guidelines usually need to be translated into Issuances. These instructions help provide clarity about program requirements and authorize the resources the Services need to execute programs. Many federal agencies have issued guidance applicable to obesity and tobacco cessation; however, not all have been adopted or resourced by DoD, and there is not necessarily an Issurance for each one. DoD has an opportunity to ensure that federal policy and guidelines related to food, active living, and tobacco control are

"While the current governance structure readily supports programs run by different offices, there is no clear, effective way to create enterprise-wide culture change and work across offices and agencies within DoD."

evaluated by key stakeholders and converted to Issuances that will support needed programs within the Department.

Many of DoD's health-related efforts are siloed even though they have similar objectives. Examples include the Joint Chiefs' Total Force Fitness initiative and several Service-led initiatives such as the Army's Performance Triad, the Navy's Sailor and Marine Initiative, and the Air Force's Comprehensive Airmen Fitness initiative. This lack of coordination and the perception of overlap with HBI and OLW sometimes led to confusion. At some installations, all the health, nutrition, fitness, wellness, and tobacco cessation programs were grouped under one umbrella and there was sometimes a concern that support for HBI meant less support for the Service-led effort. The plethora of programs and initiatives led to the frequent suggestion that DoD's health-related efforts must have complete organizational synergy and support up, down, and across the entire agency.

A singular Service culture can lead to duplicative efforts. Each HBI-participating Service branch (Army, Navy, Air Force, Marine Corps, Coast Guard) has a unique brand and identity. These distinctions help support cohesion and teamwork within units. They can also be essential to achieving each Service's mission. The disadvantage of these singular Service cultures, however, is that each branch sometimes develops and/or funds very similar programs/technologies or services. This in turn tends to give rise to program redundancies and potential cost inefficiencies. There was also caution about using any program that was developed or that appeared to have been developed for a different Service. For instance, UltimateMe was developed for HBI and all the Services. However, it resided on an Army server and that was reflected in the web address. Many individuals asked whether UltimateMe was intended for them.

HBI was handicapped by the inability to use incentives/prizes to increase participation. In the civilian sector, employers and health insurers increasingly offer financial incentives and sometimes prizes for behavior changes like joining a tobacco cessation, diabetes prevention, or weight loss program. The use of incentives within TRICARE®, however, is strictly circumscribed under current federal law. Similarly, government rules about awarding prize money or accepting in-kind donations made it difficult to create an incentive structure for participation in HBI programs. The UltimateMe PALA+ Challenge, presented in coordination with the President's Council on Fitness, Sports & Nutrition, encouraged users to sign up and take part in order to win prizes. This participation incentive was solely sponsored by ShareCare, Inc., which supplied and awarded the prizes.

Lessons that Spotlight Opportunities for Improving Future DoD Efforts to Promote Health and Wellness

Success requires strong leadership and management within and across installations. In the civilian sector, leadership at every level has been identified as a key factor in the success of efforts to improve employee health and wellness at any organization. Two other key factors include cultivating a culture of wellness at the organization and creating feedback mechanisms to support employee wellness programs. DoD is no different. At the start of HBI, installation commanders asked to be part of the Initiative. Not surprisingly, however, this initial, top-down commitment was not enough. HBI relied on active champions at every level, from the officers in charge of dining facilities and fitness centers to the Health Promotion Officers and others.

HBI relied on champions at every level.

Policy changes affect more people than individual behavior changes, but both are needed. Effective strategies to combat problems like obesity and tobacco use require sustained changes in the environment and in individual behavior — there is no "silver bullet" solution. Recognizing the need to address both environmental and behavioral drivers, HBI offered a combination of programs, with some efforts targeting a number of environmental or system changes across multiple installations while other programs were designed to work with a smaller population at the level of individual installations. Policy or system changes can influence more people — an example would be changing the menu options at a food outlet. At the same time, other programs, like the Warrior Well program tested at Camp Dodge, address the fact that some individuals need more support to reach their goals. Similarly, programs to educate individuals and families about the importance of a healthy diet may be of limited value absent efforts to change the food environment so that people have ready access to affordable, nutritious food options. HBI aimed to address the need for both policy and individual changes, but was hampered by its short time frame.

The Office of the Secretary of Defense (OSD) is open to policy changes to improve the accessibility and availability of healthy eating and fitness programs. OSD has made every effort consistent with the spirit and intent of the HBI demonstration to change or clarify policy to improve the accessibility and availability of healthy eating and fitness programs. For example, the Air Force was granted a waiver to leverage technology that allows access to fitness centers 24 hours per day. On the healthy eating side, policy guidance was issued that paved the way for farmers markets to operate on military installations. It is clear from the HBI findings that additional policy changes are likely necessary to assist the Services in establishing healthier communities. OSD MC&FP stands ready to address and implement any changes necessary when requested.

Future efforts need to recognize and adapt to the uniqueness and diversity of the military audience. Important differences exist across the Service branches and across the mix of DoD service members and employees. These differences can affect nutrition and physical activity needs — for example, some service members involved in specialty military operations might have far higher calorie requirements than others. Service members in some positions might face particular challenges — members of a submarine crew, for example, might have very little space for physical activity. Other challenges exist for those working in office settings. In general, HBI demonstrated that the people who needed help the most participated, but that some people also could have benefited from more help – especially if they lacked self-motivation. A further important consideration in program design is that many military individuals and families are highly mobile, moving every few years, and often face different and sometimes greater stresses than individuals and families in the general population.

Providing an integrated, customer-centered approach will lead to greater success. A typical service member and his or her family member(s) wants "one-stop shopping" to address needs for childcare, schooling, shopping, recreation, etc. For example, service members and their families who were interested in joining a fitness program felt more supported when the program was coordinated with a childcare facility. If people have to contact different departments or offices to access some of the services HBI or similar initiatives provide, they are much less likely to participate. The use of technology could be a solution to this challenge.

Everyone has a role to play. All members of the military community contribute to their health and wellness. DoD's health and wellness challenges cannot be addressed only by the medical community or only by a single department within DoD. Rather, future efforts need to engage decision makers in multiple departments (including housing, acquisition, and more) at the enterprise level and the installation level, as well as participants from all parts of the military community, including active duty, civilians, dependents, and retirees.

Installations want more partners "outside the gate" but some installations are more nimble than others in working with outside groups. Installation leaders understand that community and military resources need to be leveraged and that military installations should not compete with local organizations, but rather work with the community. Some suggested that OSD and the Services consider brokering more partnerships with national organizations they could access at their location, while others expressed the view that every installation should conduct a community scan to better understand the resources available outside the gate before making decisions to offer anything on post. Two installations were already working with outside coalitions before HBI, and both

found these coalitions to be effective ways to further HBI and other installation efforts. At Fort Sill, the Fit Kids Coalition, made up of the local school district superintendent, a pediatrician, the MWR director, and other organizations, was formed to address childhood obesity. The Coalition was able to promote Safe Routes to School, build a playground entirely through donations from the community, and increase opportunities for outdoor recreation. Another example of a successful community partnership is the Fort Meade Alliance, a non-profit group that was created to work with 117 government agencies and organizations located on or around Fort Meade. The Alliance, which was originally formed to work on Base Re-Alignment and Closure (BRAC), proactively fosters communication and partnerships between Fort Meade and outside organizations. It was helpful in promoting HBI initiatives and was instrumental in getting the Fort Meade farmers market up and running.

To better market health and wellness programs, health and wellness goals need to be more closely tied to DoD's overall mission. Throughout HBI implementation, installation leaders stressed that the HBI team needed to develop messaging that showed clearly how the health of the military community affected the installation's ability to fulfill its mission, and the mission of the Services and of DoD as a whole. Some individuals voiced frustration about the difficulty of changing mindsets to recognize that human systems are just as important as weapons systems. Others suggested that HBI/OLW messaging should be more clearly connected to readiness, including readiness to deploy, not just health. There was also a suggestion that HBI messaging should make a stronger connection to cost impact. For example, in 2012 the Army dismissed 3,000 soldiers and the Navy and Air Force each dismissed 1,300 service members for being overweight or out of shape, and the cost to recruit, screen, and train their replacements amounted to nearly half a billion dollars.[vii]

Recognition programs are important to commend installations that worked hard to implement HBI. The value of recognition is demonstrated by the Alliance for a Healthier Generation's Healthy Schools Program, which issued awards to schools that achieved success in creating a healthy school environment.[10]

[10] Three schools, one at Fort Sill and two at Fort Meade achieved silver and bronze status respectively and were honored by a ceremony in Washington with former President Clinton in October 2015.

E. Lessons by HBI Wedge

Similar to the general lessons, the assessment tools, along with the CRA, site visits, and interviews with the installations revealed a number of major themes and findings that are specific to particular HBI "wedges" and that will likewise be relevant for Operation Live Well and other future DoD efforts to promote health and wellness.

Healthy Eating

The DoD food system is complex – thus, any change affects the whole system, not just one element. As each initiative was tested, other issues emerged. For example, if the aim was to make a recipe healthier, it was also necessary to procure ingredients. Issues like procurement, cost, training, production, presentation, and tracking all proved important during HBI implementation.

There is not one universal solution or intervention that is optimal for each food operation. Different food venues in DoD (Appropriated Food and Non-Appropriated Food) operate with different decision makers, regulations, menus, training, delivery, tracking, measurement, and accountability. Any effort to improve all the food delivery systems in the military environment will have to be sensitive to these differences.

APF dining facilities offer some of the healthiest menu options but are limited by operating hours and authorized users. According to the m-NEAT assessment, dining facilities are second to the commissaries in the availability of healthy food; however, dining facilities, mess halls, and galleys have limited hours of operation and are only open to authorized patrons. Budget cutbacks continue to reduce the number of hours that dining facilities are open, hampering the availability and accessibility of the healthy choices they offer. Other organizations, like the Military Compensation and Retirement Modernization Commission, have also identified this issue through their research and found that DoD is not consistently meeting the dining needs of service members (particularly the junior enlisted). While the Commission believes it should not dictate to the Services which model of delivery they use, the Commission feels strongly that DoD needs better data on what is currently available in order to better represent the status quo and then identify the potential for improved dining choices.

Vending and fast food needs improvement. Results from the m-NEAT assessment demonstrated that dining facilities, galleys, and commissaries tended to provide healthy offerings. On the other hand, there was significant room for improvement at most installations with respect to the food available from vending machines and fast food outlets.

All food service outlets need to be part of any effort to create a healthier food environment on base. Foodservice contracts, including vending contracts and any food programs operated by third parties, do not universally mandate minimum nutrition standards consistent with current best practice. Further, even when nutrition standards are included, such as FitPick standards for vending machines, the m-NEAT assessment revealed that enforcement of the standards was inconsistent. Several instances where non-FitPick items were identified as FitPick items in a particular vending machine were observed.

Procurement is perceived as a challenge. Every installation noted that working with prime vendors sometimes presented issues in terms of improving food offerings. One complaint was that even if a location wanted to order healthier ingredients, prime vendors were often unwilling to deliver smaller quantities (especially if this meant breaking cases). Minimum order requirements could make it difficult to test new foods.

Buying power is reduced because of NAF procurement at the installation level. Most NAF food operations procure food individually. When the golf course, the bowling center, and the club all purchase their food independently and in small quantities, the potential for leveraging their buying power diminishes considerably, resulting in less efficient operations.

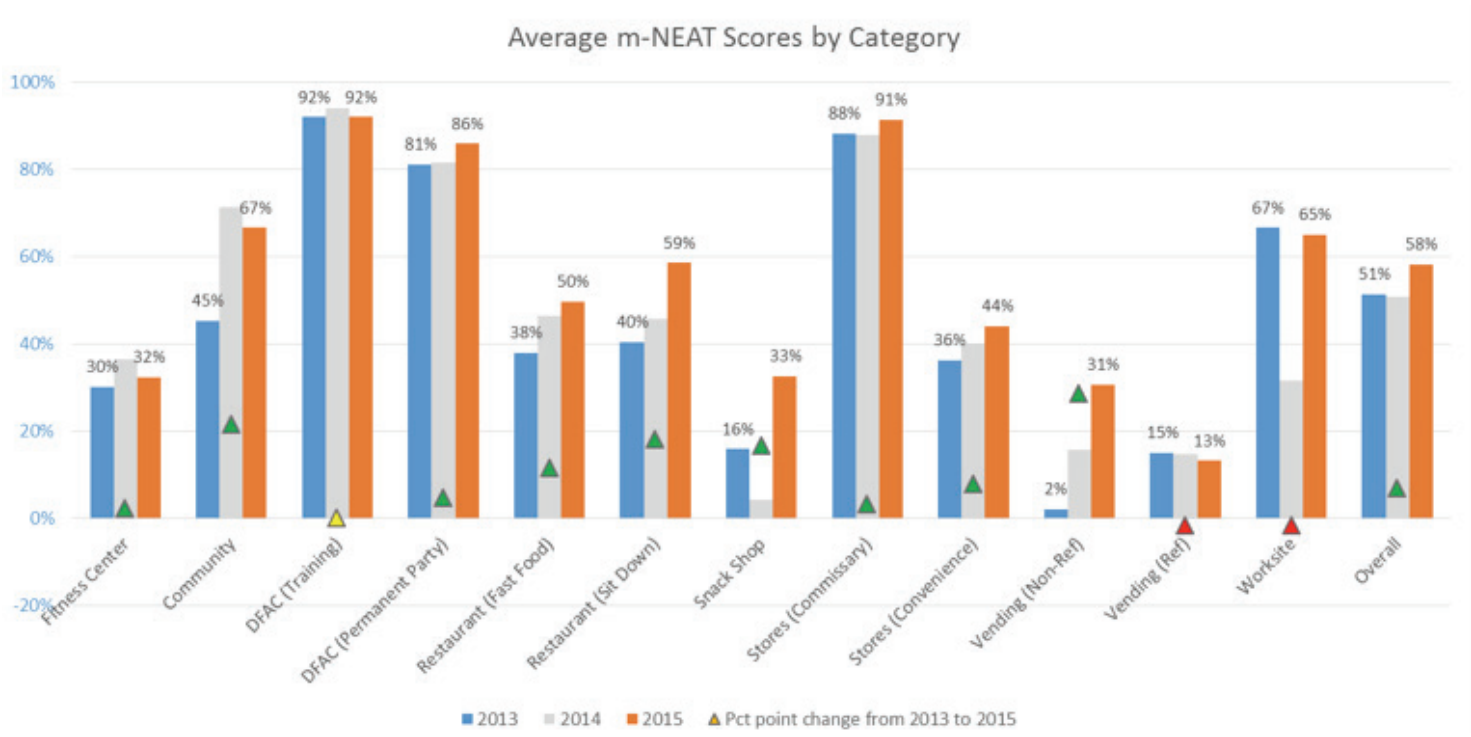
Families want to learn more about healthy eating. The popularity of programs like Cooking Matters demonstrated that there is demand for more hands-on nutrition education in locations where people shop, such as commissaries. This type of education could also be offered at other frequented locations like food outlets, family support centers, child development centers, and schools.

Many children and youth centers on military installations could do more to promote healthy eating. Eating habits form at a young age and are influenced by family habits at home and by the food environment at locations where children learn and play. Vending machines at youth centers on military installations typically carry a large number of products with high calorie, sugar, fat, and sodium content. The U.S. Department of Agriculture (USDA) and national non-profits have worked over a number of years to remove sodas and other unhealthy items from vending machines in schools but these efforts have generally not been replicated at DoD youth centers.

HBI healthy eating initiatives affected behavior. According to the Climate and Resource Assessment, installations that implemented a mix of HBI initiatives, such as menu labeling, food placement, and nutrition education, had a higher number of respondents reporting significant changes in their eating behaviors. Smaller changes were reported in tobacco use and exercise behavior (according to the CRA, exercise behavior showed the least change).

The m-NEAT assessment tool helped HBI locations understand whether they offered healthy food options as can been seen in the figure below.

Figure 3. Overall m-NEAT Scores, by Category, for All HBI Pilot Sites



The largest improvements in m-NEAT scores were in the categories of non-refrigerated vending, community, sit-down restaurants, and snack shops (improving 28 percent, 21 percent, 19 percent, and 17 percent, respectively). Areas showing little or no progress were DFAC (training), vending (refrigerated), and worksite. Given that access to a healthier diet is essential for combatting obesity, the overall conclusion from Figure 3 is that DoD has a very substantial opportunity to advance its health and wellness objectives by improving the nutrition environment at all its food establishments.

Active Living

Installation layouts are designed for the automobile. In the 1950s, communities across America began to be designed around the car. Military installations were no different. As a result, there is now a marked difference between the physical layout of installations that were designed before and after the 1950s. Installation design is also affected by the different missions of the individual Services. For example, Navy installations are more industrial than the installations of other Services. Current concepts in urban design favor walkability and bikeability for reasons of fitness, environmental

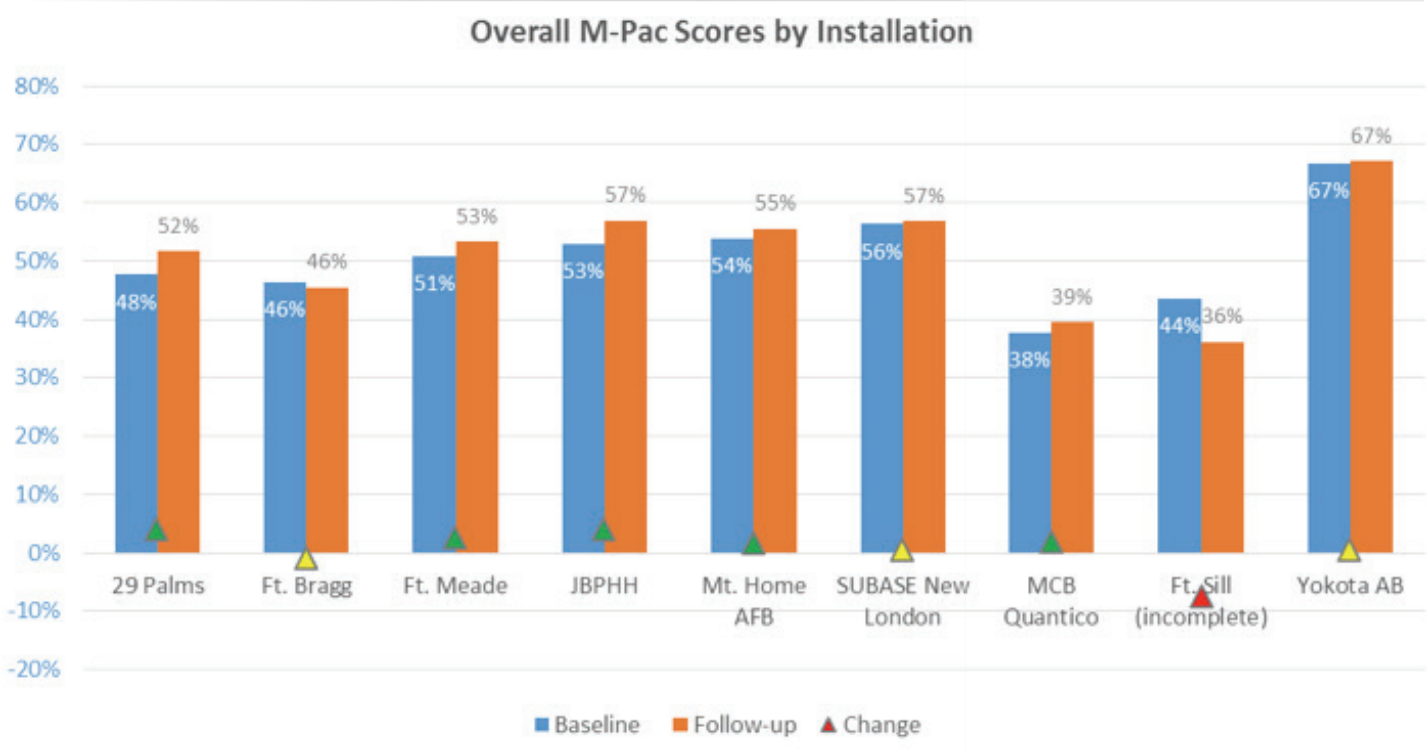
sustainability, and quality of life. The timeframe of the HBI demonstration project made it impractical to target significant changes to the layout and built environment at existing installations. Rather, the question for HBI was how to increase awareness among key stakeholders of how the built environment can impact health and wellness and support (or undermine) DoD's objectives with respect to maintaining a fit and ready force.

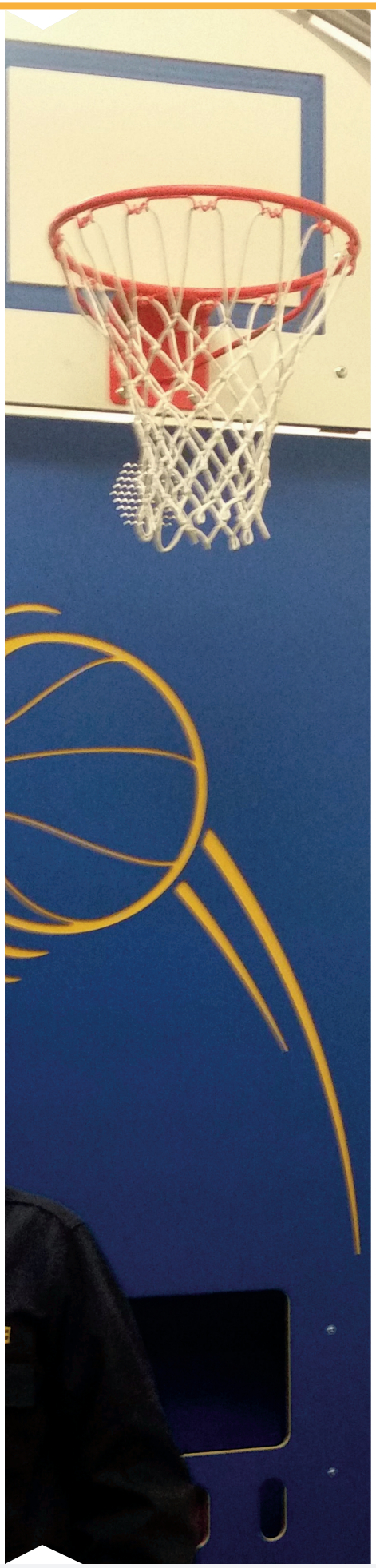
The factors that play a role in active living are complex and many-layered. Thus, simply promoting physical activity will not, by itself, result in needed changes – the built environment needs to be addressed as well. Put another way, the components of active living need to be approached as a system.

Commanders need appropriate resources to implement master plans. There was an opportunity at one installation to develop a more pedestrian- and bike-friendly environment. A planner was hired to develop designs, but the plans have not been implemented due to a lack of funding. At another installation there is interest in creating a long walk/run/bike path on the perimeter of the installation, and a small amount of funding has been allocated to construct the path.

The m-PAC assessment tool helped installations understand how much they promoted active living.

Figure 4. Overall m-PAC Scores, by Installation





Current physical activity programs are geared toward individuals who are already self-motivated. These individuals will benefit from more satellite fitness centers and extended hours. But physical activity programming is also needed to reach individuals who are not self-motivated using tools like coaches, recognition, teams, joint programming with children, etc.

Inadequate access to drop-in childcare is a barrier to exercise for many service members and their families. While some installations have drop-in childcare, slots are often limited and childcare facilities are generally not located close to fitness facilities.

Food, fitness, and active recreation outlets need to be strategically located to serve individuals where they live and work. Increasing walkability and bikeability involves more than just adding sidewalks and bike lanes. A first step is to identify population centers and locate places to eat, work out, shop, get medical services, access childcare, etc. so that the greatest number of people possible can be served within easy walking distances from where they live and work. The placement of existing facilities is sometimes out of sync with the populations they serve. In the Air Force, for example, flight lines can be very far away from food outlets. This can mean that during lunch breaks, personnel have to drive to get food or eat from vending machines if they want to eat at all.

Individualized coaching and teamwork helped individuals reach their goals. Experience with Warrior Well showed that not every service member can reach his or her fitness goals on their own. By enlisting coaches who are veterans or active military and by developing a team structure, individuals who required more guidance and motivation got the support they needed to achieve their goals.

Health and Wellness

Analysis indicates that Health-Related Quality of Life (HRQOL) is a valid measure for evaluating the health of individuals in the DoD community. HRQOL has long been used in the civilian sector by the Centers for Disease Control and Prevention (CDC) and other organizations. In addition, HRQOL was used to define one of the foundational objectives for the Healthy People 2020 initiative and is being applied at the national level to measure progress toward that initiative's established goals. However, despite its acceptance and use in the civilian community, HRQOL has attracted only limited study and application in the military setting. UltimateMe provided a vehicle for testing the utility of HRQOL in the DoD community, where it was found to be a "valuable measure of health status among UltimateMe participants."[viii]

Programs like UltimateMe can be a source of valuable real-time health data. Publically available population-level health data (such as data from the Health Related Behavioral Survey, which is performed every three years) do not provide real-time information to stakeholders and decision makers about the specific needs of a community. To allocate resources efficiently, meaningful, up-to-date information on behavior is needed. This information is helpful for identifying system and local challenges, as well as root causes. UltimateMe showed how valuable this type of fine-resolution information can be. For example, early analysis of nutrition data from participants at Yokota was extremely helpful in identifying barriers to healthier eating. The assessment indicated lower fruit and vegetable consumption and, upon further study, the team was able to identify port closures and higher prices as important causes for this finding.

Existing health and wellness programs are not always utilized. The HBI team found that many participating HBI installations already offered a plethora of health and wellness resources and programs. But many program managers felt their programs were underutilized or not very well known within the community. Efforts to market these programs may have been limited by a lack of funding or resources and program utilization may have been affected by limited hours, limited resources/staff, program location and distance from customers, and limited online/mobile accessibility. Another barrier to utilization could be a lack of personal motivation or awareness about how these programs can help change behavior and support participants' commitments to change.

Because most military families live off base, there needs to be more coordination and leveraging of resources with adjacent communities. Approximately 70 percent of military families live off post, in surrounding communities. When it comes to challenges related to obesity reduction, healthy eating, active living, and tobacco cessation, many communities around the country are facing the same issues. In many cases, military communities can tap into existing efforts at the local, county, and state levels. For example, there may be non-profits in the community working on similar issues that would be interested in working with the installation. And even if a community is not working on these issues, installation leadership may be able to inspire local elected officials, community organizations, and local businesses to reinforce the concepts of healthy eating, active living, and tobacco cessation.

Schools

Many schools embraced the Healthy Schools Program and welcomed the technical assistance the Alliance For a Healthier Generation provided. At Fort Sill, the Geronimo Road Elementary School reached the bronze level in 2014 and was recognized at a national event with former President Clinton. Geronimo school worked hard and in the 2014-2015 school year achieved the silver designation and is working towards gold in the 2015-2016 school year. Fort Sill leaders have challenged seventeen school districts near Fort Sill to follow in Geronimo's footsteps. At Fort Meade, Meade Heights Elementary School and Pershing Hill Elementary achieved bronze level status.

Only half of the HBI DoDEA schools reported that they provide comprehensive health education with respect to physical activity and healthy eating. In addition, none of the HBI DoDEA middle or high schools required health education. On a more positive note, however, it is worth noting that DoDEA schools exceed state and national averages in health education.

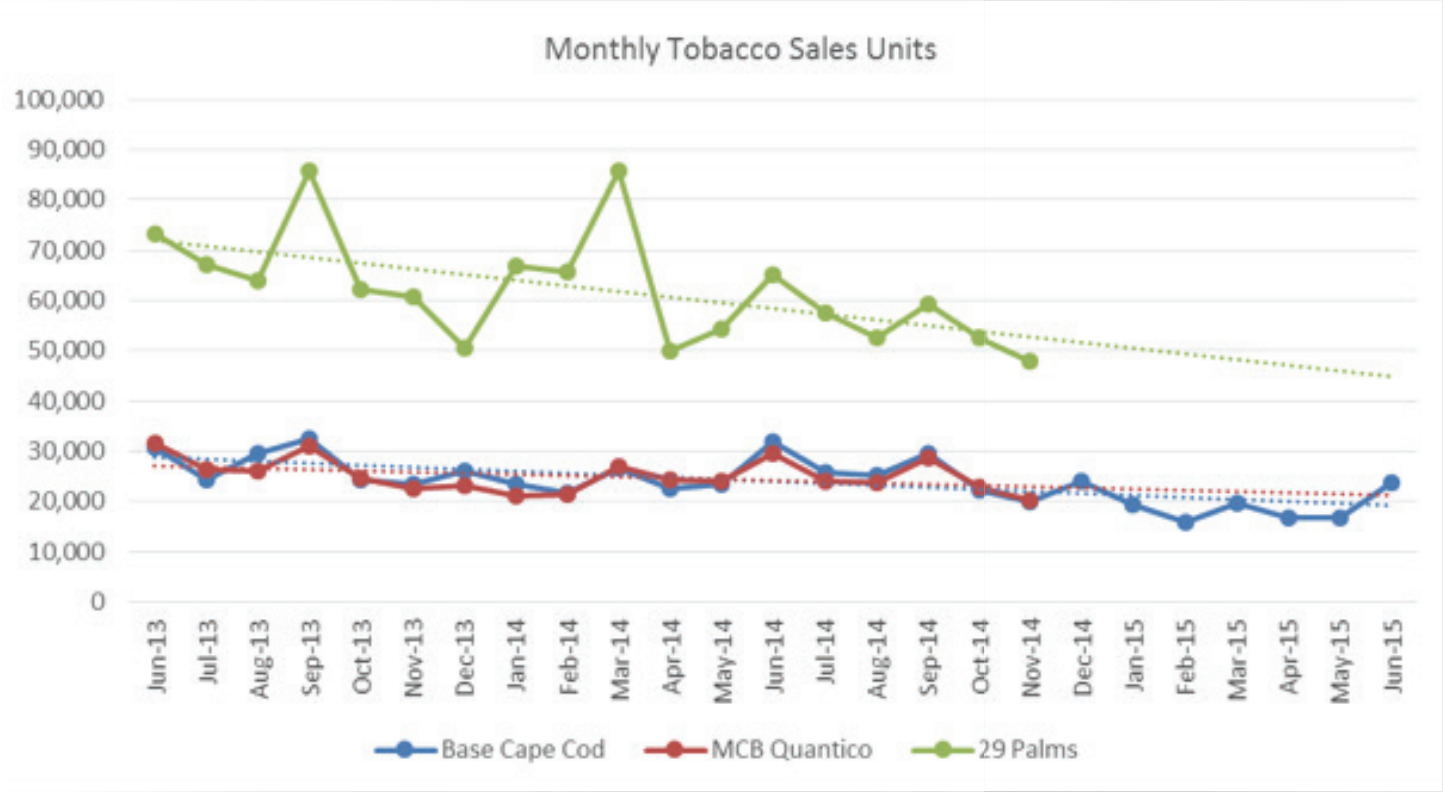
Tobacco

There is broad support for tobacco-free campuses. Installation leaders often felt that changes in tobacco policy, such as enforcing tobacco-free campuses, needed to come from the enterprise level. A number of barriers, such as perceived union opposition and lack of accountability for enforcement of existing policies, hindered the implementation of such policy changes at individual sites.

Enforcement is an issue for restrictions on tobacco use on military installations. While the Services already have policies that restrict tobacco use in many areas on military installations, enforcement of these policies varies by Service and by installation. There seems to be little accountability for enforcement, even though policies do identify individuals or offices responsible for enforcement. Adding a layer of accountability for maintaining and enforcing a partially tobacco-free installation (say, 75 percent tobacco-free) would give leadership some direction and tangible goal to achieve.

Figure 5 presents sales data from Base Cape Cod, Twentynine Palms, and Quantico MCB, the three installations most active in tobacco counter-marketing efforts. It is evident that tobacco sales are declining at all three of these installations.

Figure 5. Tobacco Sales at USCG Base Cape Cod, Marine Corps Base Quantico, and MCAGCC Twentynine Palms (in units)



F. General Recommendations

Based on lessons learned and measurement results from HBI, the HBI team developed a number of recommendations for future DoD efforts, including OLW. The team's most significant recommendations are summarized below – many of them flow directly from the general lessons summarized previously. A full list of recommendations can be found in the HBI Report.

1. **Develop the strong leadership needed at every level to make a difference.** Recognizing that strong leadership at all levels was integral to success, the HBI team recruited proactive commanders to help propel the demonstration project forward. For OLW and any HBI-like effort to succeed in the future, leaders must be identified and recruited at every level of decision-making and at every installation, including unit commanders, MWR directors, Youth and Children program directors, DoDEA school principals, child development center directors, public affairsofficers, and health promotion officers, among others. Changing the status quo is difficult and requires commitment from leadership at all levels if it is to succeed.

2. **Listen to the consumer and think like the consumer.** The HBI CRA revealed very interesting information about how DoD service members and personnel feel about healthy eating, active living, and tobacco use. This information points to the need for better integration and coordination of services and programs in ways that are responsive to the needs and preferences of service members and their families. At present, most programs and initiatives are siloed according to their funding sources, which makes it difficult to provide "one-stop" convenience to users of those programs. Creative use of technologies already in the civilian marketplace could help DoD design programs that put the customer at the center and ensure that the customer receives only the information that is relevant to them. At the same time it will be important to tailor programs to the needs of different customers. In the military, for example, some service members and employees are single, some are married, some have kids, some don't, some are just starting to serve, and others are close to retirement. All these customer differences can help DoD curate programs and tools to more effectively help service members and their families get on a path to wellness.

3. **Increase the dose of interventions.** In further iterations of HBI-like interventions, the effort will be more successful if the dose delivered is increased. Limited-dose interventions delivered on large locations, like installations, will have limited impact if they are implemented only at one venue. Interventions need to be broad-based to have an impact. For example, if there is menu labeling, the labeling should be implemented at every food venue.

4. **Share experience and programming with all installations.** While HBI was implemented at only fourteen locations, other installations asked if they could implement some of the programming HBI was offering and other institutions, like DeCA, were interested in implementing initiatives like Cooking Matters at their commissaries. DoD is sharing HBI programming, lessons, and recommendations with additional installations and other agencies through the Commander's Toolkit, which can be found on the secure, non-public HBI Community of Interest.[11]

5. **Convene a meeting on key topics to address challenges uncovered during HBI.** The HBI team identified several areas of opportunity for supporting healthy lifestyles. Many of these opportunities require a comprehensive, holistic approach. For example, if installations want to offer healthier menu items, they also have to address procurement, dietary standards, and recipes.

[11] For those who have a Common Access Card (CAC), the Commander's Toolkit can be accessed at: https://www.milsuite.mil/book/groups/hbi

These issues are complex and warrant further exploration. A potential next step would be to convene key stakeholders and decision makers for a discussion of questions and recommendations. Potential examples are listed below:

a. *Military Food Summit* – Bring together all departments and agencies responsible for NAF and APF food for the military community as a whole to discuss policies and procedures that could be improved to encourage healthy eating.

b. *Building a Healthier Installation* – Bring together all the parties involved in making planning and construction decisions at the installation level.

c. *Combatting Obesity in Schools, Youth Centers, and Child Development Centers* – The civilian sector has been addressing the issue of obesity through a range of efforts and organizations like Let's Move!, the Partnership for a Healthier America, the Robert Wood Johnson Foundation, and more. The Office of Family Readiness Policy (OSD MC&FP) should continue to foster relationships with these civilian organizations to explore how they can join forces more effectively to address child obesity in the military community through policies, programs, implementation, and measurement.

6. **Break down institutional silos within the DoD and create cross-departmental working groups. At the same time, apply consistent best practices across the Services.** In the civilian world, efforts to promote healthy living by government agencies and large foundations are often fragmented and uncoordinated, even though holistic approaches would generally be more effective. The same holds true for DoD, which should consider how to break down department barriers and acknowledge that health and wellness rests not only with Health Affairs, but with every department that touches the lives of people in the military community. A first step might be to identify and categorize all programs and contracts in each Service and look for redundancies[ix] that could be leveraged to save money. Although the HBI demonstration project has ended, DoD still has numerous programs, initiatives, and policies in place that target health and wellness and that could be categorized under Total Force Fitness (TFF) and OLW. But current funding practices, which tend to promote a siloed approach to program implementation, and other institutional factors can result in unnecessary redundancy and substantial missed opportunities to leverage resources more efficiently. To begin identifying these opportunities, DoD should conduct a thorough survey of existing programs and initiatives, while also exploring existing contracts and activities that could be deployed to the other Service branches.

7. **Create a clear governance structure and include all relevant departments:** A clear governance structure encompassing all the relevant departments and agencies that influence an individual's health and performance is critical for the success of an effort like HBI. More specifically, representation is needed from (at a minimum) Acquisition, Technology and Logistics (AT&L); Personnel & Readiness (P&R), including MC&FP; DoDEA; DeCA; DLA; the Exchanges; the Joint Chiefs of Staff; each service (e.g., Army, Navy, Air Force, etc.); the NAF and APF food managers at the Service-level; and Health Affairs. This governance structure should provide the requisite authority to (a) hold departments/offices accountable, (b) direct funding to where it is needed, (c) encourage and reward cross-collaboration, and (d) create and implement enterprise-wide solutions.

8. **Audit existing policies and look for opportunities to implement improvements.** DoD should review all policies that affect food, the built environment, physical activity, and tobacco with two objectives in mind:

    a. To assess whether existing policies need to be updated, adapted, or changed to promote a healthy military community.

    b. To benefit from experience with other, similar efforts. At the same time, DoD should work with other agencies to review broader federal policies that could improve the heath, wellness, and performance of the military community and issue the necessary DoD Issuances to reflect those policies.

9. **Work more closely with sister federal agencies.** DoD should work more closely with other federal agencies, many of which are also tackling obesity and tobacco use. Specific sub-recommendations for achieving closer interagency coordination follow:

    - *Connect installations with regional agency reps:* Almost every federal agency has regional representatives, many of whom would welcome the opportunity to work with the military. DoD should communicate with the national offices of each relevant agency to ask how best to connect installations with their regional representatives. Agencies to consider include USDA for nutrition and food procurement efforts, Health and Human Services (HHS)/CDC for health initiatives, the Department of Transportation and the Environmental Protection Agency for the built environment, the General Services Agency (GSA) for procurement and office space, and the Office of Personnel Management for personnel incentives and rewards.

- *Continue to use the U.S. Surgeon General's National Prevention Council*[12] to request greater collaboration: At present, seventeen federal agencies, departments, and offices meet with the U.S. Surgeon General on a regular basis to update each other on the implementation of the *National Prevention Strategy.*[13] DoD already participates, through Health Affairs, and gives updates. The Council presents an opportunity to ask for help from other participating agencies.
- *Choose locations for future initiatives in locations where other agencies are deploying resources:* Many federal agencies are deploying programs to improve the health of civilian communities through messaging and marketing campaigns, changes to the built environment, improved transportation, and repurposing contaminated sites slated for clean-up, otherwise known as Superfund sites, to host farmers markets and parks and riverways, etc. When DoD decides to embark on any effort, it should consider what other agencies are already doing in certain communities and build on those efforts at nearby installations.

10. Partner with non-military organizations interested in the same issues as a way to leverage national- and community-level resources and expertise.

HBI created some robust relationships with non-profits and academic institutions by using existing programs and measurement tools in the civilian sector and adapting them to the military environment. Examples include Share Our Strength's Cooking Matters, the Alliance for a Healthier Generation, Johns Hopkins' Program Fidelity Tool, Cornell Brand Lab's Smarter Food Movement, the Culinary Institute of America's healthy food training, and Prevention Partner's WorkHealthy America. DoD needs to create more partnerships as it moves forward to better leverage existing expertise and outside resources.

11. Use rigorous assessment and measurement to improve future efforts.

This means ensuring that all programs and initiatives are measured consistently. Standard reporting mechanisms should be developed and measurements should be tied to future funding. As DoD undertakes future health and wellness initiatives and policy changes, it will be important to pay attention to how these efforts can be measured. DoD should determine whether the HBI measurement model is one that can be used for future program assessments and take other specific steps to improve its measurement and assessment capabilities with respect to future health and wellness initiatives:

[12] More details can be found at: http://www.surgeongeneral.gov/priorities/prevention/about/
[13] More details can be found at: http://www.surgeongeneral.gov/priorities/prevention/strategy/

"New research is showing that other areas like sleep and stress also affect health, productivity, and performance."

a. *Require the use of measurement tools* like CACHE, which includes the *m-NEAT*[14] and m-PAC, at all installations and agencies, so that they are all in a position to establish a health baseline.

b. *Require reporting and measurement for all DoD-funded health and wellness initiatives.* This will help ensure that funding is being used effectively.

c. *Create standard forms of measurement.* For example, the Program Fidelity Tool and other measurement tools created during HBI should be used as standard ways to measure all programs and initiatives.

d. *Teach measurement at key points in military life cycle.* Not everyone understands measurement, and there is often disagreement between outputs and outcomes. A class on "Charting the Course to a Healthier Force," which is currently Army-focused, could be adapted to teach service members how to collect data and evaluate programs with measurement mechanisms.

12. **Explore more evidence-based research on healthy lifestyles.** HBI and other ongoing DoD initiatives (e.g. the Army Performance Triad and the Joint Chiefs of Staff Total Force Fitness) have focused on healthy eating, active living and tobacco free living as three areas of particular opportunity for improving force retention and readiness. Meanwhile, new research is showing that other areas like sleep and stress also affect health, productivity, and performance. Going forward, DoD needs to stay abreast of current research and incorporate new findings to develop evidence-based programming that addresses all aspects of healthy living.

13. **Include the entire military community in future efforts.** HBI focused on Service members and the families, but the military community is much broader and includes civilian employees as well as retirees. Many businesses are finding out that health and wellness programs are most effective when they target the entire family. Future DoD efforts should therefore include all members of the military community and families, as well as individuals.

14. **Create incentives or prizes/recognition programs.** Rewards help motivate action. A number of existing federal restrictions make it harder to implement rewards, but DoD should consider developing a policy that allows for incentives and recognition without running afoul of government restrictions. Additional ideas that should be considered under this heading include the following:

[14] More details can be found at: http://www.med.navy.mil/sites/nmcphc/Documents/health-promotion-wellness/healthy-eating/DoD-mNEAT-Fact-Sheet.pdf

a. *Create incentives for implementation.* Tying implementation success to staff evaluations or adding health of forces under command to the evaluation criteria for leadership promotion would also serve to create incentives.

b. *Create a recognition program for successful installations.* Much like the gold, silver, and bronze levels recognized under the *Healthy U.S. Schools Challenge,*[15] DoD should consider developing a recognition program for installations. Such a program could be based on the *Let's Move Cities, Town and Counties*[16] initiative, which requires each participating location to meet certain criteria, such as improved food offerings, bike lanes and sidewalks, schools in the *Healthy Schools program*,[17] child development centers active in *Let's Move Childcare*,[18] etc.

c. *Create rewards/incentives for service members, spouses, and children who become wellness champions.* At present, there is no incentive to be an HBI champion — you get paid the same regardless. DoD should create some reward, recognition, or incentive for initiative champions.

d. *Add modeling healthy behavior to job description/evaluation of all DoD service members.*

15. **Use technology to create a virtual military community.** Given trends in the civilian population, growing numbers of individuals in the military are interested in topics like food and where it originates, sustainability, alternatives to driving, and socially responsible uses of technology. DoD should adjust its outreach strategy as well as its programs to respond to this groundswell of interest, and make use of technology to connect to these individuals. As in the civilian sector, technology and social media can create communities of interest; moreover, technologies tailored to the military could create even more focused communities. Facebook, Twitter, and Instagram are useful tools, but DoD should also consider using technologies that are better suited to fostering social interaction and information-sharing in a more closed community.

"As in the civilian sector, technology and social media can create communities of interest; moreover, technologies tailored to the military could

[15] More details can be found at: http://www.fns.usda.gov/hussc/healthierus-school-challenge-criteria-application-criteria
[16] More details can be found at: http://www.healthycommunitieshealthyfuture.org/about-us/lets-move-cities-towns-and-counties/
[17] More details can be found at: https://www.healthiergeneration.org/take_action/schools/
[18] More details can be found at: https://healthykidshealthyfuture.org/

G. Recommendations by HBI Wedge

Healthy Eating

The HBI team developed the recommendations below based on the lessons learned during the demonstration to improve assessment, procurement, preparation, and presentation of healthy food, and at the same time leverage DoD's buying power and increase efficiency. The highlighted recommendations are specific to DoD, but can be translated for use in a civilian enviornment.

1. **Promote m-NEAT at more locations.** Since the assessment helps installations grade their food environment, DoD should consider testing m-NEAT at more locations to gauge its effectiveness and solicit more input for improvement.

2. **Convene a working group of key stakeholders to look for opportunities to promote healthy eating through programs that target military spouses, children, and families.** The working group should include, at a minimum, MC&FP, MC&FP's Office of Family Readiness, each Service's Office of Children and Youth, Health Affairs, DoD dietitian representatives, Service support center representatives, and other key stakeholders.

3. **Work with the Joint Subsistence Policy Board (JSPB), which provides — under the direction of OSD (AT&L) — overall guidance for DoD APF food service programs.** While AT&L establishes DoD policy for APF dining facilities, JSPB develops revisions to food policies and practices and develops uniform DoD menu standards, among other roles. MC&FP should consider coordinating with AT&L to participate in JSPB meetings as a way to share the lessons and recommendations from HBI and resolve issues uncovered during HBI to foster more healthy eating.

4. **Explore centralizing oversight over food service operations.** Although AT&L has policy oversight and the Services have operational oversight over food service operations, DoD should explore whether one office within DoD should be given responsibility for these operations to ensure consistency between APF and NAF funded venues and to use DoD's buying power more effectively.

5. **Leverage DoD's buying power.** Specifically, DoD should look for one or two major, high-impact opportunities to leverage its considerable purchasing power. For example, DoD could look to improve food procurement by assessing existing policies and by developing new procurement protocols aimed at improving food quality and nutritional content. This should encompass efforts to evaluate other systems of food procurement and to include all decision makers in the food procurement process, from DLA to the Joint Centers for Culinary Excellence

and from the individual services to installation-specific dining facilities and MWR locations.

6. **Improve the APF and NAF model for food procurement and delivery.** Opportunities to improve efficiency and collaboration in the procurement, preparation, and sales of food at NAF and APF locations must be identified and pursued. Successful elements of the Air Force's Food Transformation project and the Marine Corps contract with Sodexo might provide useful information for this effort. DoD should also research the college/university food service model, with its mix of retail and dining hall outlets run by the same central management, as a possible adaptation for the military environment. This would encourage dining facilities to operate more like businesses that focus on taste and consumer demand. Service members could "pay" with meal cards (the facility would be reimbursed by the government for each "swipe" of the card); non-service members would pay cash. This would allow for centralized purchasing/procurement; centralized management of all dining facilities (including exchange snack bars, etc.); and make it possible for everyone to use installation dining facilities (not just service members).

7. **Drive shift toward healthier brands when bringing on new franchises, products, etc.** DoD must develop a policy that encourages or incentivizes franchise relationships with brands that have a certain percentage of healthier offerings – e.g., 25 percent/50 percent/75 percent in their current menu.

8. **Review APF and NAF contracts and policy standards with the aim of increasing access to healthy, affordable food.** Specifically, DoD should consider reviewing existing food supply, vending, and fast food processes and contracts to ensure that appropriate menu (and nutrition) standards are in place and enforced.

9. **DoD should conduct a Department-wide assessment of all vending operations to ascertain if nutrition standards are being used, what nutrition standards are being used, and how the vending operations are being monitored for compliance.** Based on the assessment, the Department, in collaboration with the Military Departments, the Department of Education, and the state licensing agencies who oversee the Randolph-Sheppard Act blind vending contracts should work to meet the U.S. Surgeon General's challenge to integrate healthy food service guidelines into appropriate policy(ies), such as the HHS/GSA Health and Sustainability Guidelines for Federal Contracts and Vending Operations, by January 1, 2017.

10. **Support smaller food outlets' ability to buy and serve healthier items.** DoD should consider conducting a survey of installations to identify healthy products that are not being supplied by prime vendors. In addition, contracts should be reviewed to ensure they support efforts to purchase healthier items in smaller quantities. DoD could then work with prime vendors to make these products available for purchase.

11. **Review and update DLA catalogue with key purchasers to purchase healthier, locally sourced products.** Specifically, DoD could work with food specialists and vendors like Sodexo and Aramark to update the DLA catalogue to ensure that offerings are consistent with DoD policy and to promote healthier products. The Joint Subsistence Policy Board should work with DLA to identify product specifications and update all catalogues.

12. **Increase the accessibility and availability of healthy foods at dining halls.** To ensure that menu items are healthy, the Services, DLA and others on the Joint Subsistence Policy Board should work together to agree upon and establish a healthy menu rotations within their 14- and 21-day rotation. This effort would include standard recipes, specifications for product to be used, and cataloguing of required products. Concurrent steps could be taken to review the prime vendor catalogues, ensure there are product specifications and that offered products meet those specifications, and review and revise existing recipes. The Culinary Institute of America could provide assistance and Cornell experts could provide guidance on menu composition, recipes, and specifications, as well as on smart strategies for marketing menu changes.

13. **Market and broaden use of tools developed during HBI to increase the accessibility and availability of healthy food.** Working with outside organizations, the HBI team was able to develop two tools that are available to installations and other organizations. One tool, called the *Recipe Guide,*[19] which was developed with the Culinary Institute of America, provides healthy recipes for different military environments. The other tool is a *Farmers Market Guide,*[20] which was developed with assistance from USDA and Wholesome Wave to help installations and other locations understand the steps needed to create viable farmers markets.

14. **Expand and implement Go for Green® program in all dining environments.** Installations can help educate consumers by fully implementing the Joint Culinary Center of Excellence (JCCoE) *Go for Green®*[21] in all APF dining environments.

[19] More details can be found at: http://www.militaryonesource.mil/health-and-wellness/healthy-base-initiativ…
[20] More details can be found at: www.ams.usda.gov/USDA-DOD-FarmersMarketGuide
[21] The Marines use a similar program called "Fueled to Fight."

Active Living

The recommendations below concentrate on the principles that the built enviornment, or infrastructure, can promote or hinder active lifestyles, and that any type of physical acivity programming needs to recognize the uniqueness and diversity of individuals. They address the barriers to being active, from needing drop-in childcare to working the coaches to increase motivation and participation.

1. **Consider instituting m-PAC or other assessments at regular intervals (e.g., every two to three years) at all DoD/Service locations and incorporating m-PAC assessments in installation development plans (IDPs).** This would promote leadership understanding of the built environment at their installations within the timeframe of a commander's tenure. Results from these assessments should be used to prompt ideas for long-term and short-term changes and should be coordinated with IDPs, which are conducted every five years, as well as with the master planning effort as a whole. The same protocol should be followed at agencies and regional offices.

2. **Incorporate recommendations for features that help promote active living, healthy eating, and tobacco cessation into installation and facility design guidelines such as the Unified Facilities Criteria** (e.g., reduce the number of tobacco use areas, enhance the connectivity of sidewalks and bike lanes networks, adopt Complete Streets standards or similar, etc.).

    - Community leaders should be provided with non-technical versions of design guidlines to promote broader understanding of the benefits of active design.
    - Planners should consider factors such as walkability and bikeability in their master plans. Models for such criteria include *Active Design Guidelines;*[22] the "*Complete Streets*" policy, which aims to ensure that roadways allow for safe use by pedestrians, bikers, and motorists;[23] and the *National Association of City and County Health Officials Mobilizing for Action through Planning and Partnership (MAPP)*, a community-driven strategic planning process.[24]

3. **Establish a Community Health Promotion Council (CHPC) or similar group at each installation.** On many installations, existing organizations or groups may already be serving this purpose, but they could operate more effectively by leveraging lessons learned and best practices from CHPCs. Installations would be well-served by having these cross-disciplinary groups work to reduce redundancies and improve program outcomes across the installation. Existing groups

[22] More details can be found at: http://centerforactivedesign.org/dl/guidelines.pdf
[23] More details can be found at: http://www.smartgrowthamerica.org/complete-streets/changing-policy/policy-elements
[24] More details can be found at: http://www.naccho.org/topics/infrastructure/Mapp/index.cfm

do not have to be re-labeled as CHPCs – rather, flexibility in name and structure is desirable to ensure that groups meet local needs and reflect local preferences.

4. **Explore options to develop fitness facilities near childcare facilities.** This recommendation addresses the need for more convenient access to childcare to enable more parents to work out. No quick solutions exist, obviously, but as part of master planning for installations, opportunities for clustering childcare facilities, physical fitness areas, and K-12 schools in future development should be considered.

5. **Test different types of fitness support for Service members, dependents, civilians and retirees.** Every individual needs different levels of support to increase his or her physical fitness. HBI tested the idea of expanding access to fitness facilities and programs with 24-Hour Fitness and Fitness on Request, which work well for individuals who are self-motivated. Warrior Well worked for those individuals who needed more hands-on support. DoD should consider providing other levels and forms of support to individual service members, their family members, and employees to boost impact. Given the plethora of fitness options that are available, DoD may want to test other forms of support, such as mobile fitness programs that can be accessed anywhere and that often don't require equipment, online or text coaching support, peer fitness groups, and tools for measuring daily physical activity through wearable devices.

Health and Wellness

Implementing HBI highlighted the need for more behavioral data, as well as the acknowledgement that the civilian sector has a plethora of evidence-based programs that can be translated to the military enviornment. These highlighted recommendations are specific to the needs of DoD, but could also be adapted to other settings.

1. **Gather behavioral data using tools like UltimateMe.** Individual measurement tools like UltimateMe can help DoD measure whether programs are effective and help identify gaps where the military community needs more help in maintaining a healthy lifestyle.

2. **Continue to identify evidence-based programming in the civilian sector as well as at installations or in the Services.** HBI taught the team that there are many existing programs in the civilian sector, like the Diabetes Prevention Program and WorkHealthy America, that could be replicated in a military environment. Similarly, the effort to identify promising practices showed that the Services and installations have initiatives that could be replicated and measured at more locations.

3. **Develop adult/child programming for initiatives.** A consistent theme across all HBI initiatives was the need for childcare to enable full adult participation. Even when children could participate in a program, it was difficult to effectively educate parents at the same time. Planning for future initiatives should aim to include high-quality adult/child programming to effectively reach the whole family. This would include finding activities that will engage children while their parents are learning and developing programs that can be offered to parents while their children are in school or in after-school programs.

Schools

HBI's work in schools demonstrated that DoD can work with both DoDEA and public schools to improve healthy eating and increase physical activity for military children. These highlighted recommendations are specific to DoD, and more can be found in the full report.

1. **Consider offering the Healthy Schools Program to all DoDEA schools.** Since the Healthy Schools Program is available to any school in the U.S. for free, DoDEA could work directly with Alliance for a Healthier Generation regional directors to offer the program to all DoDEA schools. In addition, when funds are available, Alliance for a Healthier Generation technical advisors can be hired to help schools reach their goals.

2. **DoDEA should explore ways to promote the Healthy Schools Program to public schools with large numbers of children from military families.** Every state has different decision makers when it comes to local public schools. DoDEA and other leaders at OSD and in the Services should explore ways to educate and inform leaders in school districts with a large military population about the potential resources and assistance available through the Healthy Schools Program and through other non-profit and federal initiatives, like Let's Move Active Schools, the Healthy U.S. Schools Challenge, etc.

Tobacco

Implementing HBI revealed that to decrease tobacco use there needs to be a mixture of strong tobacco-free area policy and enforcement, as well as the availability of tobacco cessation programs for individuals. These highlighted recommendations are specific to DoD, but also could be translated for use in a civilian environment.

1. **Create governance structure to facilitate tobacco policy changes.** Since many parts of DoD are affected by tobacco policy – the exchanges, the Services, housing, etc – DoD should ensure there is a governance structure and coordinating office to implement policy changes on tobacco.

2. **Increase number of tobacco-free areas.** All departments within DoD and within installations need to enforce existing policy that restricts all smoking to outdoor areas at least 50 feet from building entrances. Enforcement of these areas will create tobacco-free zones where children live, learn, and play. DoD should also explore tobacco-free zones in multi-unit housing, privatized housing, and areas frequented by children.

3. **Promote initiatives that prevent the initiation of tobacco use and promote tobacco cessation.** DoD should increase marketing and education to prevent initiation of tobacco use. DoD should also continue to market evidence-based tobacco cessation programs. Lessons learned form the Marine Corps' successful tobacco counter-marketing campaign suggest that such efforts should be tailored specifically to the target population.

4. **Ensure parity-pricing of tobacco products.** DoD establishments that sell tobacco products should match the average local price of tobacco products in the surrounding community.

H. Conclusion

As noted at the outset, HBI was intended as a short-term demonstration project to inform DoD's longer-term strategy for addressing health and wellness challenges within the military community and Operation Live Well in particular. HBI successfully supported its strategic objectives and goals. Through the implementation of initiatives and the collection of lessons learned from the demonstration, HBI made a number of specific contributions that will improve the effectiveness of future DoD efforts in this area:

- Helped to better define the barriers and opportunities that DoD confronts in fostering a culture of health and wellness in the military community.
- Showed that one year is too short in terms of achieving measurable, broad-based changes in health outcomes.
- Identified and tested evidence-based programs from the civilian and military sectors.
- Identified homegrown "Promising Practices" at the installation level and began to socialize and scale the most effective of these practices, thereby broadening their reach within the DoD community.
- Created a measurement model that can be used by DoD to assess the effectiveness of future health and wellness programming.
- Tested practical tools for assessing the nutritional and physical environment at a wide variety of DoD locations.
- Identified leaders in the field who understand the connection between healthy eating, active living, and tobacco cessation and performance, retention, and readiness.
- Mirrored other federal-level and civilian efforts being undertaken to combat obesity and decrease tobacco use.
- Identified a number of gaps and redundancies that, if addressed, could help DoD become more efficient and potentially save costs, including:
  - Gaps in the food delivery system that point to opportunities for improving efficiency and potentially lowering costs over time.
  - Gaps in the reporting of retention rates at the level of the individual Services, which make it harder to identify needs in terms of improving retention.
  - Redundancies in programming on installations that can lead to customer confusion, resource inefficiencies, and inconsistencies in terms of meeting the diverse needs of the community.
  - A lack of customer focus that results in less effective programming and sometimes contributes to programmatic redundancy.

HBI was only a first step in DoD's long-term effort to address a core challenge to America's military strength and readiness in the years to come. As a demonstration project, it showed that while there is no simple strategy for improving health and wellness in the military community, and while DoD continues to learn about designing and implementing effective programs for healthy eating, active living, and tobacco cessation, the interest and the opportunity exist to make substantial progress in all of these areas. Leveraging that opportunity will require leadership at all levels, increased collaboration within DoD and with outside organizations, and a commitment to applying robust measurement and evaluation tools to continually identify gaps, track outcomes, and refine future efforts.

The full HBI report can be found at http://www.militaryonesource.mil/health-and-wellness/healthy-base-initiative

Endnotes

[i] Mission: Readiness. (2009). Ready, Willing, and Unable to Serve. Retrieved from: http://cdn.missionreadiness.org/MR-Ready-Willing-Unable.pdf

[ii] CNA Analysis and Solutions. (2015). Weight and Army Recruiting and Attrition.

[iii] Ibid.

[iv] Mission: Readiness. (2012). Still Too Fat to Fight. Retrieved from: http://missionreadiness.s3.amazonaws.com/wp-content/uploads/Still-Too-Fat-To-Fight.png

[v] Department of Defense. (2008). Survey of Health Related Behaviors among U.S. Military Personnel.

[vi] Human Performance Resource Center Blog. (2013, June 24). Introducing Operation Live Well – A DoD health campaign. Retrieved from: http://hprc-online.org/blog/introducing-operation-live-well-2013-a-dod-health-campaign.

[vii] Mission: Readiness. (2014, September). Retreat is Not an Option. Retrieved from: http://missionreadiness.s3.amazonaws.com/wp-content/uploads/MR-NAT-Retreat-Not-an-Option2.pdf

[viii] Whittaker KS, Hawkins SA, Perez ALU, Nihil MM. UltimateMe Health-Related Quality of Life Brief Report. Research Facilitation Laboratory, Army Analytics Group. 2015: 1-31.

[ix] DoDI 1010.10, Enclosure 2, para 1f: d. In coordination with the DoD Component heads, periodically reviews the status of non-medical programs initiated in response to References (c) through (f) and the Community Preventive Services Task Force Community Guide (Reference (h)). The review measures management effectiveness and the costs, outcomes, and impacts of these programs.

Chapter 1. Introduction

Recent years have seen rising concern about the impact of poor health and poor physical fitness on America's military community — not only from a cost perspective, but also in terms of our nation's defense capabilities and force readiness.

Indeed, the U.S. Department of Defense (DoD) increasingly views obesity, poor nutrition, lack of physical activity, and tobacco use as core challenges to its four "R" priorities: recruitment, retention, readiness, and resilience. As part of Operation Live Well (OLW), a long-term, DoD-wide strategic planning effort to "align, coordinate, and integrate health and wellness initiatives into the social expectation for service members, their families, DoD civilians, retirees, and Veterans."[i] DoD launched the Healthy Base Initiative (HBI) in 2013. Designed as a short-term demonstration project, HBI's specific aims were to:

- Identify interventions that could help achieve a healthy and fit force, which is essential to mission readiness;
- Increase awareness of the devastating impact of sedentary lifestyles and poor nutrition choices;
- Empower members of the military community to make better nutrition choices, increase physical activity, decrease tobacco use, and maintain a healthy weight;
- Provide hands-on experience with Service-level innovations, which can be used to promote health and wellness best practices throughout DoD; and
- Inform OLW and optimize Total Force Fitness (TFF).[1]

In March 2013, DoD announced the selection of 13 pilot sites for the HBI demonstration project; a fourteenth pilot site — Fort George G. Meade — was added in late summer of 2013. Twelve of these sites are military installations and the remaining two are defense agencies. Figure 1.1 shows the location of the HBI pilot sites.

[1] Total Force Fitness (TFF) is a framework for building and maintaining health, readiness, and performance in the Department of Defense. TFF attempts to address health, wellness, and resilience in a holistic manner, recognizing that optimal performance requires a connection between mind, body, spirit, and family/social relationships. See http://hprc-online.org/total-force-fitness.

Air Force:

1. Mountain Home Air Force Base, Idaho
2. Yokota Air Base, Japan
3. March Air Reserve Base, California

Army:

4. Fort Bragg, North Carolina
5. Fort Sill, Oklahoma
6. Fort George G. Meade, Maryland
7. Army National Guard Base, Camp Dodge, Iowa

Marines:

8. Marine Corps Base (MCB) Quantico, Virginia
9. Marine Corps Air Ground Combat Center (MCAGCC) Twentynine Palms, California

Navy:

10. Naval Submarine Base New London, Connecticut
11. Joint Base Pearl Harbor-Hickam, Hawaii

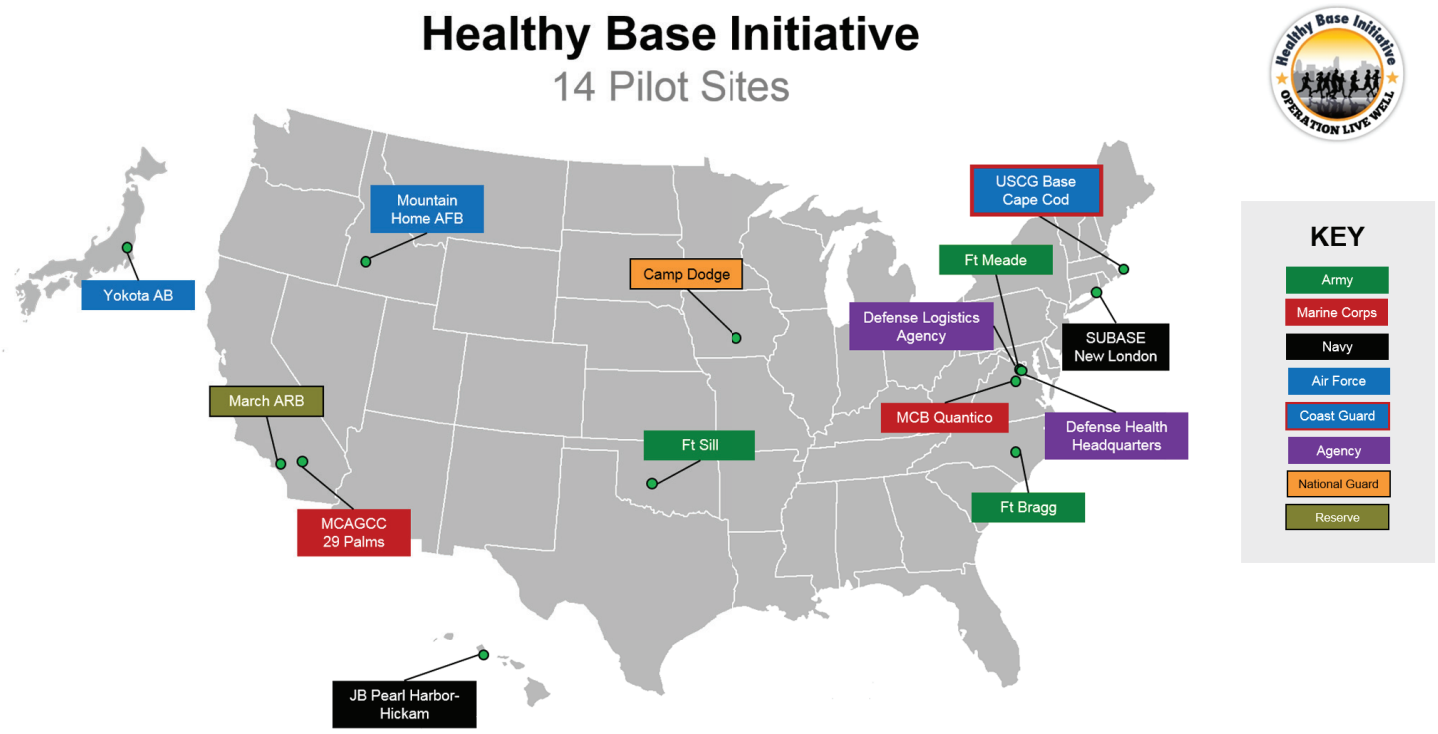
Coast Guard (a component of the U.S. Department of Homeland Security):

12. U.S. Coast Guard Base Cape Cod, Massachusetts

Defense Agencies:

13. Defense Logistics Agency (DLA), at Fort Belvoir, Virginia
14. Defense Health Headquarters (DHHQ), Falls Church, Virginia

Figure 1.1. Location of the HBI pilot sites



This report documents, analyzes, and communicates results from the implementation of HBI at the pilot sites. Findings in the report are based on quantitative and qualitative analyses, including in-depth interviews with HBI points of contact and key leaders at the pilot installations. DoD believes it is important to describe HBI and its impacts so that key decision makers — including military leaders, heads of the Service branches, members of Congress, heads of other federal agencies, and organizations that work in the civilian sector — can understand lessons learned and make informed decisions about replicating these efforts in the military and civilian communities. At a time of tight budgets at all levels of government, understanding and synthesizing the impacts of investments in healthy living is important financially and politically.

The remainder of this report is organized as follows: Chapter 2 provides context for HBI by discussing the military's interest in issues of obesity, nutrition, physical fitness, and tobacco use. Chapter 3 provides an overview of HBI and its goals; it includes a table that provides summary information on each of the pilot sites. Chapter 4 discusses the specific initiatives and implementation steps that were considered and undertaken at HBI pilot sites. Chapter 5 describes a number of interventions that were already being implemented at some installations prior to HBI and that were identified as promising practices. Chapter 6 profiles each of the HBI locations and summarizes program experience at these sites. Chapter 7 describes some additional efforts outside the direct scope of HBI that DoD took to address problems that emerged during implementation. Chapter 8 describes the methodology used to establish a baseline and evaluate results from the sites. Chapter 9 provides results from the Climate and Resource Assessment (CRA), which was used to learn about individuals' experiences of HBI. Chapters 10 and 11 synthesize key lessons, Chapters 12 and 13 provide recommendations, and Chapter 14 offers closing thoughts on the HBI experience and its implications for future DoD efforts to implement OLW and TFF.

Chapter 2. Background and Context

The U.S. military, which includes the Army, Navy, Air Force, Marines, and the Reserve Component, is one of our nation's largest and most important institutions.[2] As the nation's largest employer, DoD also covers health care expenses for roughly 9.5 million Americans, including 1.4 million active duty, 1.9 million military family members and dependents, and 5.3 million retirees and their families.[ii] Concern about the state of nutrition and health within the military and among potential recruits dates back to the late 1940s and 1950s, when such concerns motivated President Truman and others to launch the National School Lunch Program (NSLP).[3]

In fact, health data indicate that the pool of men and women who could potentially serve in the military is more physically compromised and less fit than ever before. With nearly 35 percent of American adults meeting the definition of overweight or obese, as many as 27 percent of potential candidates cannot qualify for military service due to their weight.[iii] In 2009, the Army found that among those "millennial" recruits ages 18 to 24 who did not qualify for military service, as many as 15 percent were disqualified due to weight. Among millennial recruits who did not qualify for service, 85 percent reported eating fast food on a regular basis, 53 percent used tobacco products, 33 percent reported watching television three or more hours per day (an additional 25 percent used a computer three or more hours per day), and 39 percent consumed soda as their primary beverage.[iv] In 2010, 59 percent of females and 47 percent of males who took the military's entry-level physical fitness test failed.[v]

Once in the military, unhealthy lifestyle choices and associated health problems pose challenges even for recruits who successfully enlist. Despite its long history of attention to physical health and fitness, the U.S. military is increasingly affected by the same patterns of obesity, poor nutrition, tobacco use, and chronic disease found in the general U.S. population. According to one recent report, 12 percent of active duty service members qualify as obese based on Body Mass Index (BMI). This represents an increase in the obesity rate among service members of 61 percent since 2002. Meanwhile, nearly half of all service members report using a nicotine product

[2] Note that the U.S. Coast Guard, which is part of the U.S. Department of Homeland Security, also participated in HBI.

[3] During World War II, the military discovered that at least 40 percent of rejected recruits were turned away for reasons related to poor nutrition. Stunted growth from inadequate nutrition and poor health was so common that the young men who made it into the military during World War II were more than an inch and a half shorter, on average, than young American men today. After the war ended, General Lewis Hershey, the military's Selective Service Director, delivered testimony that helped win passage of the National School Lunch Program (NSLP). That Program, established in 1946, made sure children across America had access to healthful meals at school. From: http://cdn.missionreadiness.org/MR_Too_Fat_to_Fight-1.pdf. More information on the NSLP is available at http://www.fns.usda.gov/nslp/national-school-lunch-program-nslp.

in the past 12 months and nearly a quarter of active duty personnel report that they currently smoke. This rate of smoking is well above the 19 percent rate in the civilian population.[vi]

Together obesity and smoking impose large costs on the military – obesity among military personnel and their families is estimated to cost DoD more than $1.5 billion a year in health care spending and recruiting replacements, while smoking-related medical care, increased hospitalizations, and lost days of work were estimated to cost DoD more than $1.6 billion in 2009 alone.[vii] Both risk factors — obesity and smoking — reduce physical fitness and endurance and increase susceptibility to injury. Failure to meet weight standards can lead to involuntary discharges among enlisted members, while obesity in the civilian community may be limiting DoD's ability to recruit qualified new personnel. Given the substantial investment that goes into training each new recruit, retention is a major issue for reasons of cost as well as readiness. In fact, thousands of personnel are let go each year for fitness-related reasons – at great cost to taxpayers. In 2012, for example, the Army dismissed 3,000 soldiers and the Navy and Air Force each dismissed 1,300 service members for being overweight or out of shape. The cost to recruit, screen, and train their replacements amounted to nearly half a billion dollars.[viii]

More generally, there is growing awareness of the role that poor diet, obesity, low levels of physical activity, and tobacco use play in the rise of preventable chronic disease. This awareness, combined with a recognition that the U.S. health care system has historically focused more on treating disease than on keeping people healthy, has led to a surge of interest in shifting health care resources to disease prevention and in addressing lifestyle factors (such as diet and physical activity) that play an important role in overall health.

The cost pressures that are currently driving interest in health care reform in the civilian sector are no less urgent for DoD. At close to $50 billion per year, DoD's health care expenses already account for roughly 10 percent of the U.S. defense budget — indeed, military health care spending has been described as "the single largest, uncontrolled cost in the defense budget."[ix] Thus, DoD is keenly interested in exploring how investments in nutrition, physical activity, tobacco cessation, and disease prevention can deliver returns in terms of improved health outcomes and reduced health care costs, while also advancing specific military objectives with respect to mission readiness and retention.

Indeed, DoD has launched a number of initiatives in recent years to promote good nutrition, increased physical activity, and reduced tobacco use among service members with the explicit aim of improving on its ability to deliver on the military's four "Rs": recruitment, retention, readiness, and resilience. One example is the Soldier Fueling Initiative (SFI) introduced by the Army in 2010, which incorporates Go for Green, the Army's stoplight menu labeling system. This initiative is designed to improve health and fitness among new recruits in the course of their 10-week basic training by bringing in athletic trainers and physical therapists, modifying menus and labeling food choices, and providing nutrition education that emphasizes the link between diet and performance. SFI has been implemented at the Army's 38 training bases.[x] The U.S. Marine Recruit Depots have implemented similar nutrition standards, known as "Fueled to Fight."

In early 2012, the Assistant Secretary of Defense for Health Affairs (HA) drafted a set of action items[4] for DoD to implement in response to the President's National Prevention Strategy (NPS). The NPS, which was released by the U.S. Surgeon General in 2011, aims to increase the number of Americans who are healthy at every stage of life. These action items also align with the Quadruple Aim of the Military Health System (MHS), which promotes better health, better care, lower cost, and increased readiness (each year, DoD reports to the National Prevention Council [NPC] on progress with respect to these action items).

[4] More details on the National Prevention Council commitments the Council's annual status reports can be found at: http://www.surgeongeneral.gov/priorities/prevention/about/annual_status_reports.html

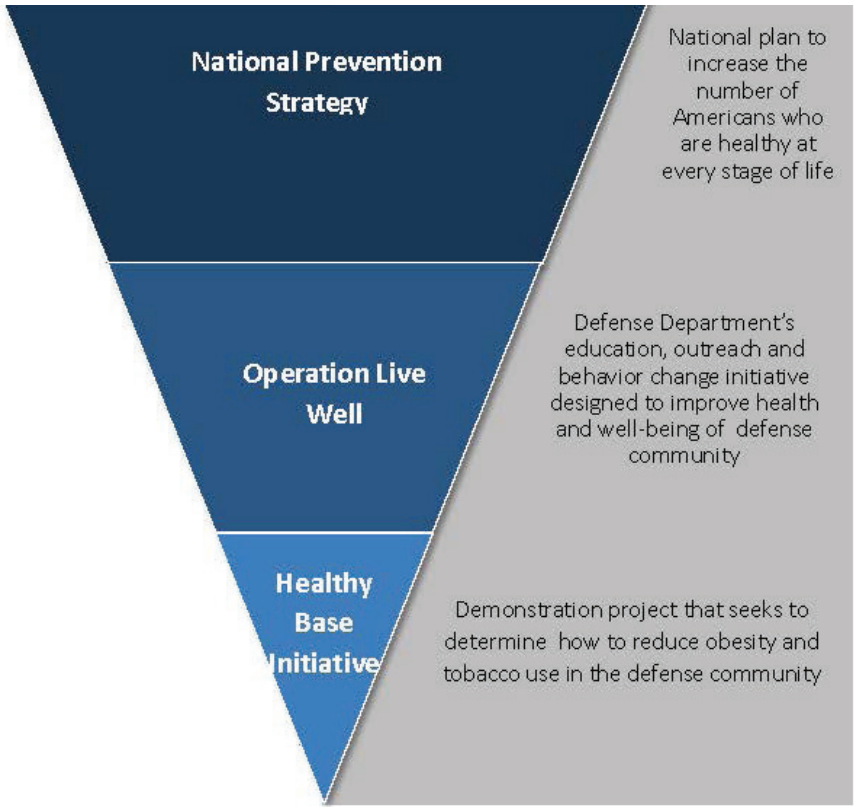
In June 2013, DoD launched a new, long-term wellness campaign called OLW. OLW aligns with the U.S. NPS and is specifically tailored to the unique environments and circumstances of military service. By bringing together the resources and capabilities of the entire military community and by working with other federal agencies and academic and non-governmental institutions, OLW's objective is to:

- Encourage individuals to engage actively in every aspect of healthy living, including proper nutrition, exercise, improved mental health and resilience, and tobacco avoidance/cessation; and,
- Provide information, educational tools, and resources to promote personal health.

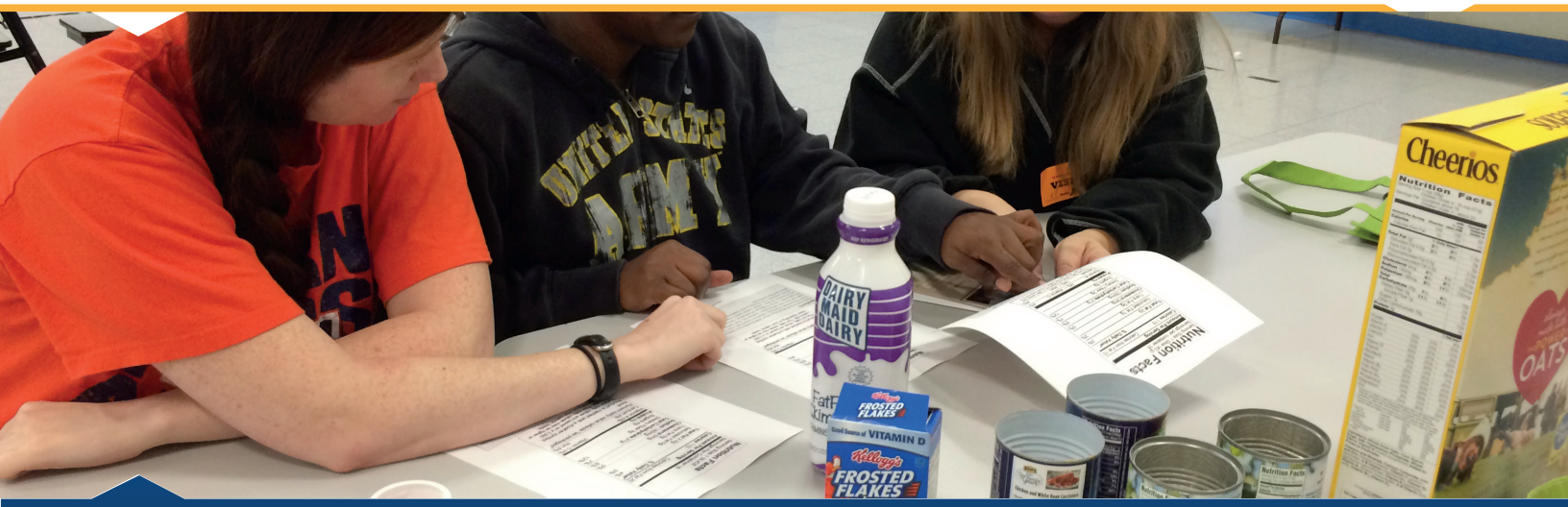
Phase 1 of OLW was comprised of an information, education, and outreach campaign for the entire defense community. It included HBI, which started in September 2013. Phase 2 involves a rigorous process for evaluating and expanding those programs, services, and tools that are shown to be most effective in supporting a healthy lifestyle. Phase 3 involves developing a long-term strategy that provides the infrastructure necessary to support permanent behavior change in which healthy living is the easy choice and social norm.

In sum, HBI was part of a broader effort to support the Services in creating living and working environments that promote sustainable healthy lifestyles among military personnel and their dependents. HBI's specific, near-term objective was to inform DoD's ongoing implementation of OLW.[5]

Figure 2.1. National and Department of Defense Health Initiatives



[5] More details can be found at: http://hprc-online.org/blog/introducing-operation-live-well-2013-a-dod-health-campaign.



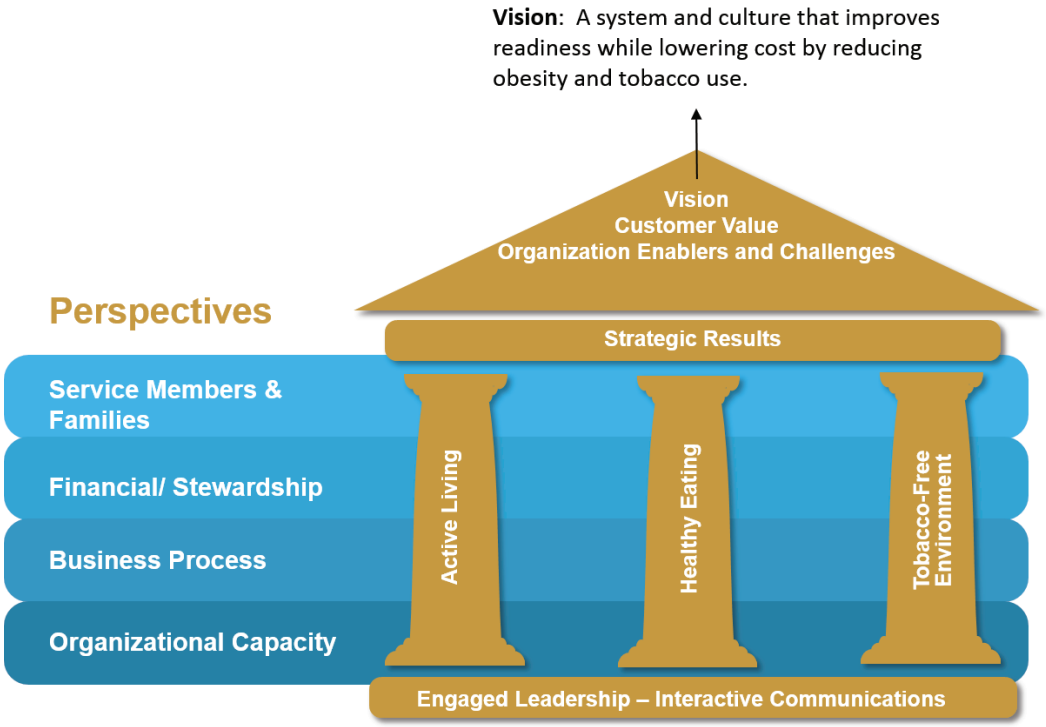
Chapter 3. Overview and Goals

HBI tested "healthy living systems" at the installations and facilities where DoD personnel and their dependents work, learn, live, and play. In the HBI context, a healthy living system was defined as a structure of strategically interconnected assets, behaviors, and values that support personal change, making the healthy choice the easy choice. HBI was not intended to demonstrate a discrete program design as much as it was designed to test strategies and inform OLW. Given its one-year implementation timeframe, HBI was not expected to produce measurable, broad-based shifts in obesity or tobacco use at pilot installations. Rather, the aim was to demonstrate different approaches and programs, while also identifying tools to measure outcomes and effectiveness in ways that would support future DoD efforts to improve force readiness and reduce costs through healthier living in the military community. Going forward, an important ancillary goal of HBI and of OLW more generally, is to share lessons with cities, counties, civilian sector organizations, military installations and organizations, and other federal agencies (lessons learned from HBI are discussed in Chapter 10 of this report). This is particularly important in light of the fact that 70 percent of the DoD beneficiary population lives off-installation. The health of the general population is also an issue for military recruitment.

Before deciding which initiatives the Office of the Secretary of Defense (OSD) would recommend to participating installations, the HBI team worked with the Balanced Scorecard Institute to develop a clear vision, goals, themes, and strategic objectives. This exercise was deemed important, even for this relatively short-term demonstration project, as a way to ensure that any programs or actions taken as part of HBI would usefully inform future DoD efforts to reduce obesity and tobacco use. The vision, goals, themes, and objectives were then combined with the perspectives of different DoD stakeholders to develop a methodology for selecting specific evidence-based interventions to be undertaken as part of HBI. Every proposed element of HBI needed to demonstrate a clear link to the broader vision; it also needed to be implementable within a 12-month period. The HBI team used Quickscore,[6] a web-based metric tracking system to track the Balanced Scorecard objectives and share performance dashboards with the HBI management team.

[6] More details can be found at: http://www.spiderstrategies.com/tour/dashboards/

Figure 3.1. Vision and Themes for HBI



The vision for HBI was to create "a system and culture that improves readiness while lowering costs by reducing obesity and tobacco use." As illustrated by Figure 3.1, three pillars or "themes" supported the broad vision:

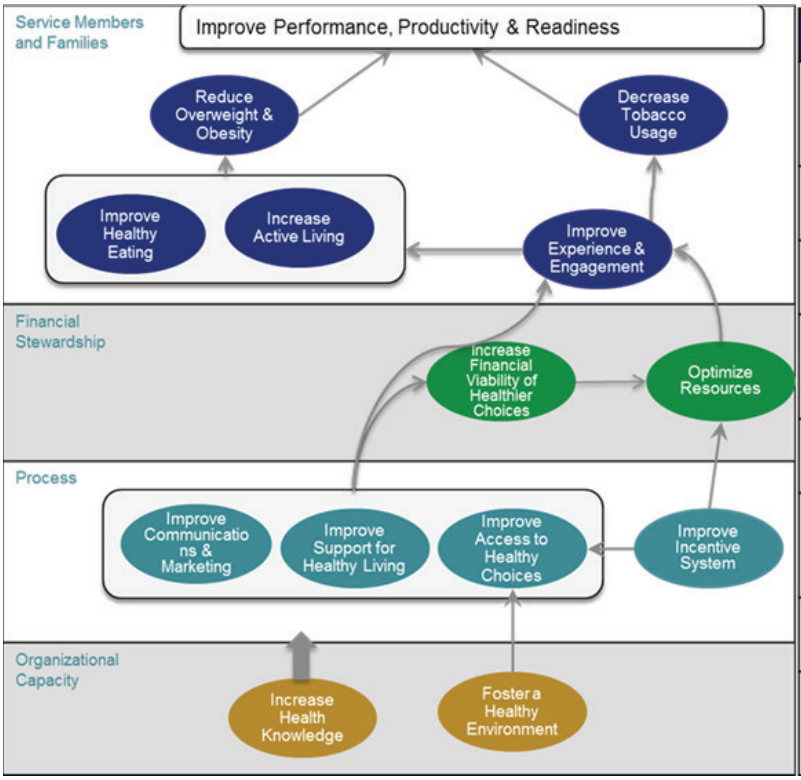
- Healthy Eating
- Active Living
- Tobacco-Free Environments

Once these major themes had been identified, the HBI team worked with the Balanced Scorecard Institute to develop strategic objectives. Figure 3.2 maps the HBI strategy, building on the vision and thematic pillars described previously.

"I was very excited to learn about the Healthy Base Initiative and see it in action when we visited several of the bases that were piloting the program. I am very passionate about health and fitness and this initiative promotes a healthy lifestyle for a better total workforce as it benefits our service members, their families, and civilians. Nutrition and fitness play a key role in the overall health and wellness of our force. Thank you to the Healthy Base Initiative for making our military stronger!"

– Betty Welsh, CSAF Spouse

Figure 3.2. HBI Strategy Map and Performance Measures



Performance Measures	
% Change in Obesity and Overweight Rates	% Change of Wellness Quality Score
% Change in Tobacco Usage	% Fresh Produce Total Sale
% Better-For-You Items Available	% Vendor Breakeven
Count Total Patronage	% Change in Designated Tobacco Areas
$ Total Food Costs Per Transaction	HBI COI Utilization Metrics
% Change of M-Neat Score	% Schools that make a positive change
% Change of M-PAC Score	PT Pass Rate
% Change in Real Age (Ultimate Me)	Participation Rates

Each of HBI's specific strategic objectives is briefly described below.

- **Reduce overweight and obesity.** HBI focused on supporting service members and their families with resources and programs that improve health knowledge and expand access to healthier food choices on the installation.
- **Improve healthy eating** by disseminating knowledge about nutrition and increasing the availability of healthier alternatives. Additionally, improved procurement and healthier food offerings from vendors and buyers were intended to help consumers make better selections.
- **Increase active living** by increasing the utilization of, and satisfaction with, components of an active living environment (e.g., fitness centers, intramural sports, outdoor recreation, walking, biking, built environment, active transportation networks, reduced sedentary behavior, etc.).
- **Decrease tobacco usage** by service members and their families.
- **Improve experience and engagement** by providing ample and appealing options to help service members and their families transition to and sustain healthier lifestyles. This included ensuring that health and wellness opportunities were feasible and utilized.
- **Increase financial viability of healthier choices** by ensuring that the smart choice financially was also the healthier choice.
- **Optimize resources** by relying on evidence-based practices to maximize improvements in health and wellness.
- **Improve communications and marketing** by articulating a bold message about the importance and necessity of maintaining a healthy lifestyle for the benefit of the individual and the nation's defense capabilities.

- **Improve support for healthy living** by ensuring that healthy decisions are supported and encouraged by the broader organization, including by leadership and peers.
- **Improve access to healthy choices** by increasing opportunities to be physically active, eat better-for-you foods, and live tobacco-free.
- **Improve incentive system** by supporting enterprise-level efforts to reward and recognize better-for-you eating, active lifestyles, and tobacco-free living.
- **Foster a healthy environment** by improving the built infrastructure so that it encourages increased physical activity, active transportation, and healthy food options as part of people's daily routines.
- **Increase health knowledge** through the education and training of members of the military community.

To select the best interventions, the HBI team established six working groups,[7] each focused on a particular issue area or "wedge." These wedges — which included healthy eating, active living/physical fitness, built environment, health and wellness, tobacco, and children, schools, and families — also provided the foundation for achieving HBI's goals and objectives. Over the course of a few months in early 2014, the working groups met to discuss HBI implementation. During this time, related initiatives such as the National Association of County and City Health Officials' (NACCHO's) Mobilizing for Action through Planning and Partnerships (MAPP) program, the Centers for Disease Control and Prevention's (CDC's) Healthy Communities Program and the U.S. Surgeon General's NPS also informed the HBI implementation framework.

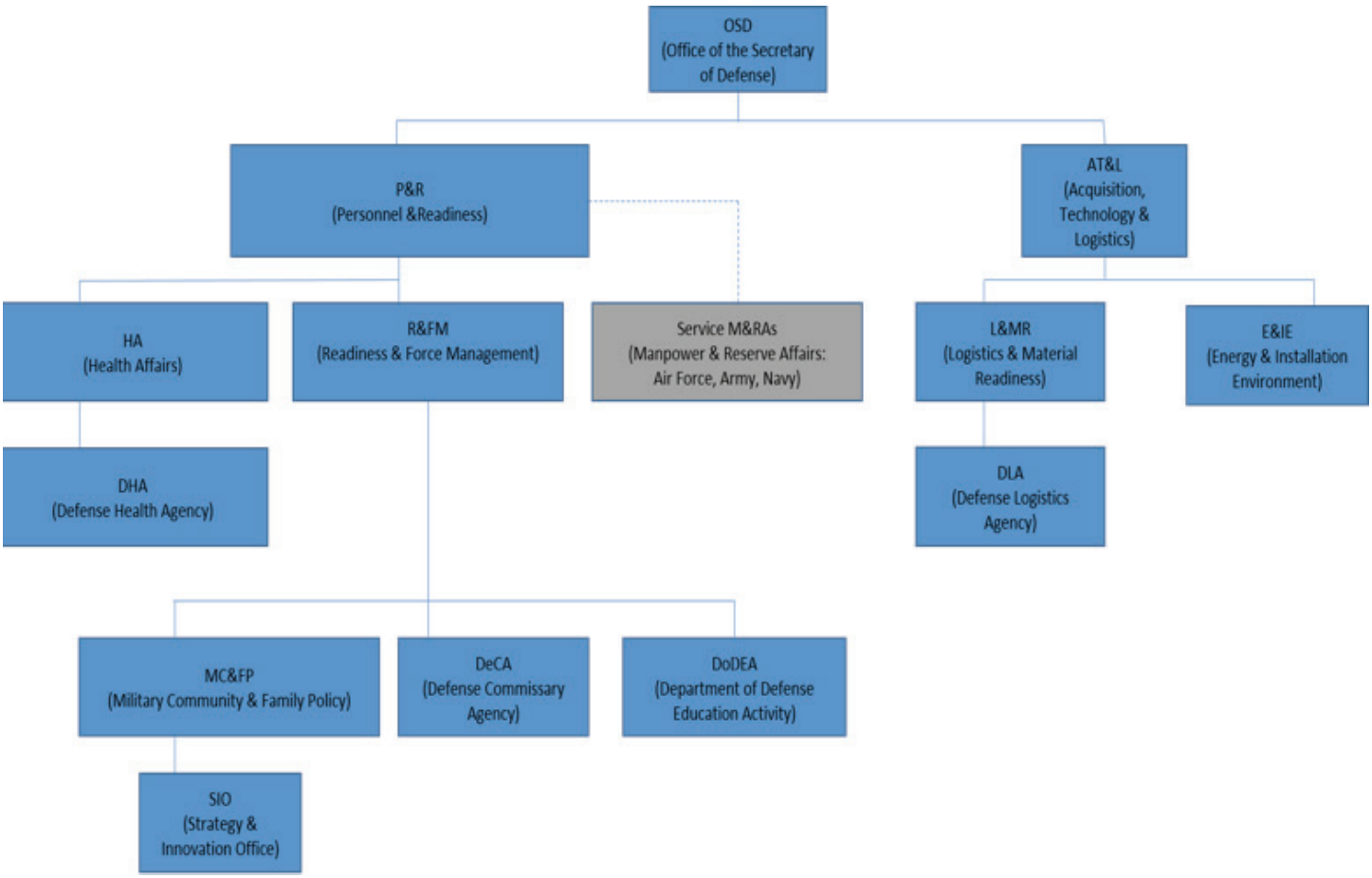
Using the framework provided by the wedges, evidence-based interventions that could be implemented across all HBI sites were identified. Internal sources were used to inform what initiatives should be selected. For example, Altitude Research, a consulting firm, interviewed service members, as well as leading employers with successful workplace wellness programs, to better understand the barriers to better eating habits, increased physical activity, and tobacco cessation. Additionally, 'home grown' initiatives developed by installations to address installation-specific circumstances and needs were reviewed for consideration. In identifying potential initiatives, the HBI team focused first on programs designed to reach service members and their dependents, with the understanding that future efforts would need to include civilian DoD employees, retirees, and other members of the military community. The team also focused first on initiatives that were suitable for implementation at the level of individual installations, recognizing that recommendations for broader, enterprise-level changes would be developed subsequently, using lessons learned from the demonstration project. A further consideration, as already noted, was whether the initiative could be implemented in a 12-month timeframe and whether it was likely to produce changes in the environment at participating installations that could be sustained even after HBI was over.

To encourage installations to participate in an initiative from every wedge, a variety of initiatives were suggested within each wedge. Because not all communities face the same issues, site visits were conducted to better understand the issues and barriers specific to each installation. Information from all of these sources was used to develop an action plan for each installation. These action plans provided the Services and installation leaders with a variety of initiatives to consider from within each wedge, taking into account their specific needs. Once an action plan was established, the HBI team worked with individual installations to execute and evaluate each initiative.

[7] Each working group included representatives from the Air Force, Army, Marines, Navy, and Coast Guard as well as representatives from key departments within OSD, sister federal agencies including the U.S. Department of Agriculture (USDA), the U.S. Department of Health and Human Services (HHS), and the CDC. In addition, the working groups included subject matter experts from academia and the non-profit sector.

Figure 3.3 shows how the Office of Military Community and Family Policy (MC&FP) and HA partnered to implement HBI. MC&FP led the food, active living, child/youth/schools, and physical environment components, and HA led the health/wellness and tobacco cessation components. Although these two departments led HBI, numerous other DoD departments were affected or touched by HBI, as outlined in the chart.

Figure 3.3. HBI Decision Makers within the Department of Defense



"Everyone has to start somewhere, but once you get going you'll be healthier and glad you did. It's a big win for everyone."

–VADM Harnitchek

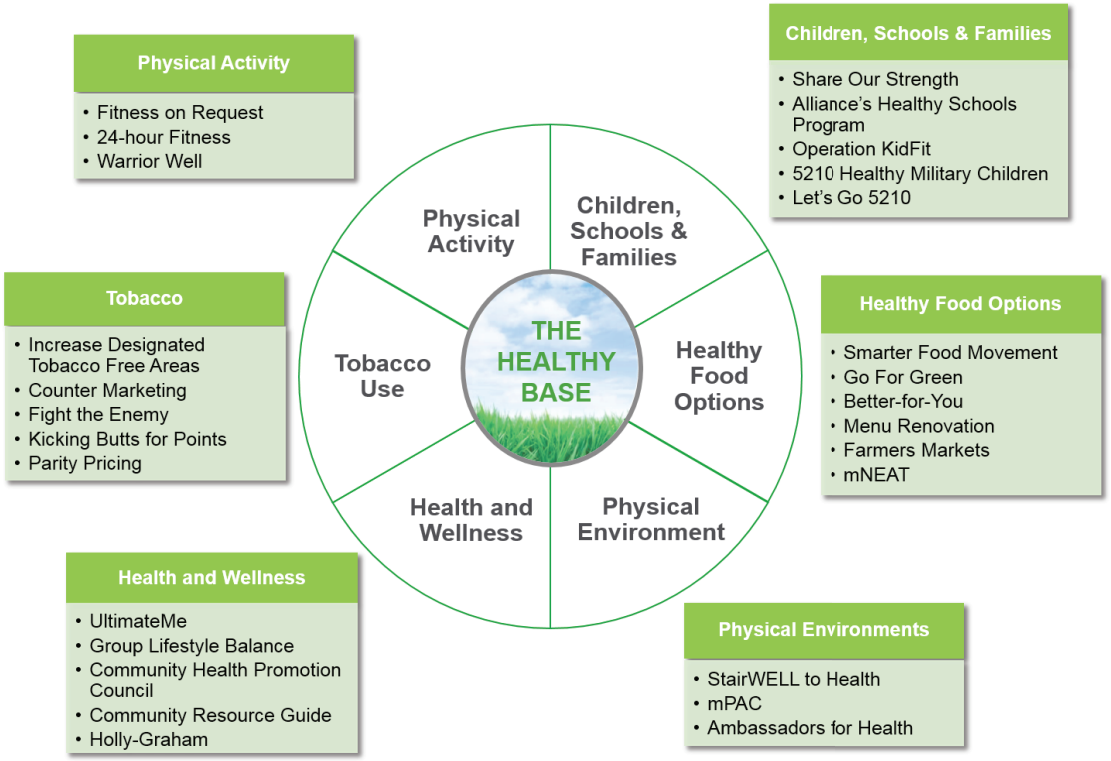
Chapter 4. HBI Initiatives

This chapter provides a brief description of the specific initiatives and programs that were implemented at HBI pilot sites in each of the identified focus areas. Together these initiatives and programs drew on a wide spectrum of experience from within and outside government, including experience from other federal agencies, non-profit organizations, community programs, and corporate efforts. We have grouped the initiatives by wedge (see diagram below). All of the interventions address one or more of the strategic objectives identified in the Balanced Scorecard:

- Reduce overweight and obesity
- Decrease tobacco use
- Improve healthy eating
- Increase active living
- Foster a healthy environment
- Improve access to healthy choices
- Increase health knowledge
- Improve support for healthy living
- Improve incentive system
- Improve experience and engagement
- Increase financial viability
- Optimize resources
- Improve communications and marketing

Figure 4.1 (on next page) shows the different HBI initiatives, organized by wedge.

Figure 4.1. HBI Initiatives by Wedge



Healthy Eating

The infrastructure for providing food for service members and their families at military installations is complex. Moreover, the funding structure for food and dining services adds another layer of complexity, because some funds are appropriated and others are non-appropriated. First, Congress appropriates funds to provide meals for service members (Essential Messing/Subsistence In-Kind), much of which occurs at dining facilities (DFACs). The Defense Commissary Agency (DeCA) also receives funding from Congress to operate commissaries (military supermarkets) that sell food to service members and their families at reduced prices: cost plus a 5 percent surcharge.[8]

In addition to these taxpayer-funded facilities, most installations also operate for-profit snack bars and casual dining operations. These are often located at recreational venues, e.g., bowling centers or golf courses. Other prominent food service locations are managed or operated by military exchanges in the form of branded or independent food concepts, e.g., Burger King or Subway. These for-profit venues are termed non-appropriated fund (NAF) operations and may be patronized by any person granted access to the military installation. In general, HBI included NAF snack bars but not independent fast food outlets. In the Army and Navy, NAF snack bars are designated as Morale, Welfare and Recreation (MWR) locations; the equivalent designations for snack bars at Air Force and Marine Corp installations are Force Support Squadron (FSS) and Marine Corps Community Services (MCCS), respectively. Creating an environment that promotes healthy food choices requires multiple interventions at all the locations where service members and their families eat, from fast food outlets to vending machines and from restaurants to DFACs. Strategies identified by the HBI team for changing DoD's food environment are summarized below.

[8] More details can be found at: www.commissaries.com.

Table 4.1. Types of Food Outlets at HBI Installations

Type of Food Outlet	Key Organizations Involved	Funding
Appropriated Fund (APF) Outlets • Dining venues (DFACs, galleys, and mess halls) • Commissaries (groceries)	• Individual Services • Defense Logistics Agency (DLA) • Prime vendors • Joint Culinary Center of Excellence (JCCoE) • Natick Labs • Defense Commissary Agency (DeCA)	Congress appropriates funding to pay for food provided through these venues and to operate DFACs at a variety of locations. Congress provides appropriated funds to the commissaries each year so that they can offer virtually "no cost added" pricing.
Non-Appropriated Fund (NAF) Outlets • Clubs • Fast food, freestanding restaurants, and food courts • Snack bars • Kiosks • Vending • Concessions • Mobile food	• Army and Air Force Exchange Service (AAFES) • Navy Exchange Service (NEXCOM) • Marine Corps Exchange (MCX) • Morale, Welfare and Recreation (MWR)	These operations function like food service operations in the civilian sector. They need to make enough revenue to cover expenses and maintain solvent operations.
Youth Locations • Schools • Child development centers • Youth centers • Vending in schools and youth centers	• Department of Defence Education Activity (DoDEA) • Public schools on/near military installations • Office of Children and Youth • AAFES	Funding is mixed: USDA reimburses schools in the NSLP and child development centers in the Child and Adult Care Food Program (CACFP). Vending machines are considered NAF environments.

- **Assessment** – HBI piloted the Military Nutrition Environmental Assessment Tool (m-NEAT) to assess the environment at food locations.
- **Food preparation** – The HBI team examined the nutritional content of NAF recipes and hosted healthy cooking seminars for small groups of APF and NAF food personnel. These efforts, which the team called the Menu Renovation Initiative, were based on a "train the trainer" model.
- **Menu labeling** – Two labeling systems were included in HBI: Go for Green®, which was primarily used in DFACs and galleys, and Better For You (BFY), which was developed for NAF (MWR/FSS/MCCS) operations on installations.[9]
- **Food presentation and placement** – HBI included implementation of the Cornell Food and Brand Lab's Smarter Food Movement program, which is rooted in the behavioral economics concept of choice architecture. The team tested how placement and presentation of food could affect customer behavior and sales of designated items.
- **Increasing fruit and vegetable consumption** – By partnering with DeCA in a fresh produce initiative and by establishing farmers markets at key locations, HBI explored ways to increase sales of fruits and vegetables to service members and dependents.
- **Nutrition education** – HBI reached out to the non-profit organization Share our Strength to implement its nutrition education program called Cooking Matters. Cooking Matters teaches individuals and families how to purchase and cook healthy food.

[9] The Marines have a different but similar program called "Fueled to Fight."

Nutrition Environment (m-NEAT) Assessment: To support healthy eating, the HBI strategic plan emphasized "fostering a healthy environment." The HBI team used an existing tool, called the m-NEAT, to assess the current food environment at military facilities and measure changes resulting from HBI Implementation. M-NEAT is based on previous nutrition environment assessment tools developed by the Navy (CHOW) and the Air Force (DINE), as well as evidence-based evaluation tools in the civilian sector. It was developed by the DoD Food and Nutrition Subcommittee Nutrition Environment Enhancement Team (NEET) using the Michigan tool, the UPenn Nutrition Environment Measurement Survey (NEM-S), and the CHOW and DINE tools with the aim of creating a single assessment tool for use across all Services. Army Public Health Center headed the development of m-NEAT, which is housed at the Navy and Marine Corps Public Health website for each Service to use. More generally, HBI's early emphasis on assessment reflected the importance of establishing a baseline as the first step toward designing effective intervention strategies and understanding impacts – both key elements in terms of assuring accountability for outcomes.

Menu labeling, menu renovation, and increasing fruit and vegetable consumption: Increasing fruit and vegetable consumption and following other recommendations from the U.S. Dietary Guidelines is difficult if the food establishments that cater to service members and their families have limited healthy options. In addition, individuals don't always know which foods are healthiest for them and how many calories they should consume each day. The main HBI interventions that addressed the need for improved access to healthy food choices, increased health knowledge, and healthier eating were:

- *Go for Green*®[10]
- Menu Renovation and Culinary Institute of America Healthy Cooking skills workshops
- Better For You (BFY)
- Farmers markets
- DeCA Commissaries

Go for Green®: Go for Green® is a joint service program for DoD DFACs. It is designed to provide quick assessments of the nutritional value of menu offerings and food products at the point of selection. Menu offerings and food items are labeled green (eat often), yellow (eat occasionally), and red (eat rarely). The program includes posters and menu cards for the serving line that explain the color-coding system and make the connection between healthy vs. unhealthy food choices and individual performance.

In short, Go for Green® provides a platform for empowering individuals to assess the nutritional value of menu options and make healthier food choices. In many cases, Go for Green® had been implemented prior to the launch of HBI.

The Army uses the term "Performance Nutrition" to indicate "nutrition's contributions to the sustainable execution of cognitive and physical actions by the human body to the greatest degree attainable under specified conditions and objectives." Thus, Go for Green® does not just focus on health, it also focuses on performance and, more specifically, on the ways that healthy eating is linked to multiple performance benefits:

- Enhanced cognition
- Delayed muscle fatigue

[10] More details can be found at: http://hprc-online.org/nutrition/go-for-green

- Accelerated recovery
- Enhanced nutrient uptake
- Improved overall warfighter readiness
- Sustained health and disease prevention
- Increased resilience

Nutritional fitness means having the appropriate quality, quantity, and timing of foods to sustain and optimize physical and cognitive performance before, during, and after missions.

The Go for Green® system accounts for both the quality and quantity of food using key calorie and fat parameters for each food group. For service members to perform optimally, food quality *and* quantity need to be addressed. Go for Green® coding is based on the most recent nutrition and health research from sources such as the military nutrition reference standards, the 2010 Dietary Guidelines for Americans, and other recognized national nutrition standards.

Table 4.2. The Go for Green Coding System

High-Performance Foods GO	**Go:** Eat often (every day or at every meal). These are generally everyday foods in terms of nutrient density. Many can be eaten without having to worry about portion size, although some do need portion awareness.
Moderate-Performance Foods CAUTION	**Caution:** Eat occasionally (select carefully and eat in moderation). These foods are generally healthy in small amounts. Depending on health and performance goals, individuals can choose more or less of these foods daily.
Performance-Limiting Foods STOP	**Stop/Limit:** Eat rarely (once in a while). These foods have few redeeming nutritional qualities but are often part of enjoying eating. A few red foods each week will still enable most people to meet health and performance goals.

Program Criteria

Table 4.3 shows the nutrition criteria used in the Go for Green® program during the HBI demonstration period. (Although revised criteria were introduced in 2014, the criteria that were in place in 2013 were applied throughout the demonstration period.) These criteria were used to label menu items in food service serving-line and self-serve food venues (the criteria are based on a 2500 kcal daily diet, assuming 3 meals a day plus 2 snacks for moderately active personnel).

Table 4.3. The Go for Green Food Labeling Criteria

Eat Often	Eat Occasionally	Eat Rarely
Entrees **Single Items:** <300 calories <10 g fat **Full Dish:** <500 calories <18 g fat	**Entrees** **Single Items:** 300-500 calories 10-15 g fat **Full Dish:** 500-700 calories 18-25 g fat	**Entrees** **Single Items:** >500 calories >15 g fat **Full Dish:** >700 calories >25 g fat
Starchy Side: <200 calories Higher fiber options	**Starchy Side:** 200-300 calories	**Starchy Side:** >300 calories
Vegetable: <100 calories	**Vegetable:** 100-200 calories	**Vegetable:** >200 calories
Dessert: <150 calories <6 g fat	**Dessert:** 150-300 calories 6-12 g fat	**Dessert:** >300 calories >12 g fat
Beverage: Water, calorie-free/low calorie beverages, 100% fruit juice	**Beverage:** Sports drinks	**Beverage:** Fruit Juice (less than 100% juice), fruit drinks, energy drinks, Kool-Aid
Dairy: Skim or 0-1% fat	**Dairy:** Reduced fat or 2% fat	**Dairy:** Whole or 4% fat

Menu Labeling and Better for You Initiative

In the case of Go for Green®, the Armed Forces Recipe System (AFRS) Services Database already had recipe standards that made it easier to implement menu labeling in dining halls. However, not every food establishment (including snack bars and other NAF facilities) had recipes in a central database, making it more difficult to renovate recipes and label existing menu options. In addition, since many of the NAF facilities need to earn revenue to operate, they were reluctant to use Go for Green® labeling for fear that none of their existing menu options would be green. Working with the Hudson Institute and other subject matter experts, the HBI team developed an initiative called "Better for You," which focused on calories for simplicity. At the same time, the HBI team worked with the Culinary Institute of America to introduce new recipes and offer skills education so that APF and NAF personnel were introduced to healthier menu options and learned healthy cooking skills.

Menu Renovation and Culinary Skills: To start this multi-prong effort, the HBI team assessed the nutritional profile at military DFACs and other food venues (including snack bars and other NAF outlets). This involved assembling the nutritional profiles needed to implement menu labeling and collecting information on recipes and food costs. Gathering this information was a large and laborious undertaking because different branches track nutrition profiles and sales baselines in different ways. In addition, the Services do not always follow the restaurant preparation, food procurement, and sales programs typically used in the food industry. The HBI team

gathered recipes (identifying each ingredient) and used tools like Food Processor[11] to calculate calories and develop a nutritional profile of each menu item available at for-profit food service venues.

Once nutritional profiles were assembled, the HBI team used the Menu Renovation program to draft a recipe guide as a reference tool for military DFACs and snack bar outlets. Installations were also offered options for existing menu offerings. To help staff prepare new recipes, the Culinary Institute of America offered enhanced skills workshops at participating installations. The recipe guide is available to any interested installation and is posted on the HBI Community of Interest (COI) website (described in more detail later in this report).

Better for You labeling system: As noted previously, the BFY labeling system was designed as an alternative to Go for Green®, especially for NAF food venues, which were concerned that Go for Green® would negatively impact their sales. Along with the strategic objectives outlined at the beginning of this section, this initiative also aimed to increase the financial viability of healthier choices. BFY focuses on total calorie count as opposed to Go for Green®, which focuses on nutritional content. Menu items that meet the BFY criteria may be indicated with a physical marker on menu boards or printed menus and by an icon on digital menu boards. The BFY indicator logo is available in many formats and on the HBI COI website.

Table 4.4 shows the calorie criteria used in BFY; for comparison the table also shows nutrition criteria for the green ("eat often") designation under DoD's Go for Green® program. The focus on calorie content in the BFY labeling system is not intended to imply that other nutritional characteristics are unimportant; rather, it reflects the fact that lower calories tend to correlate with lower fat and sugar content. The goal of BFY is to keep labeling simple and easy for the customer, food service staff, and management to understand. Messaging for the program is also kept simple.

Table 4.4. The Better for You Food Labeling Criteria

Item	Better-for-You	Go-for-Green "Eat Often"
Center of the Plate (Full Dish)	≤500 calories	<500 calories
Entrée Single Item	<300 calories	<300 calories
Side	≤150 calories	<200 calories
Appetizer	≤150 calories	N/A
Vegetable	<150 calories	<100 calories
Dessert	≤150 calories	<150 calories
Beverage	≤50 calories/8 oz. servings	Water/Calorie-free Flavored Water
Dairy	Skim or 0-1% Fat	Skim or 0-1% Fat
Children's Full Meal (entrée, side, beverage)	<600 calories	N/A
Children's Side Item	<200 calories	N/A

[11] More details can be found at: http://www.esha.com/product/food-processor

Nutrition analysis is key to labeling and offering healthier food options, including healthier alternatives to existing recipes. The HBI team supported nutrition analysis of menu items at participating HBI installation NAF food outlets using the ESHA Food Processor software. The ESHA software was selected after comparing five products with similar capabilities based on functionality, ease-of-use, and cost. In addition, this tool is recommended by the National Restaurant Association's Director of Nutrition and Healthy Living and is used by leading private-sector restaurant companies. The HBI contract support staff collected recipe cards from participating NAF dining outlets and worked closely with food outlet managers/chefs to ensure that menu items were correctly characterized and labeled.

To track the success of the BFY program, participating NAF food outlets provided data at pre-determined intervals. These data included quantity of BFY items sold, total items sold, and, as available, information on the total number of BFY items available, total items available, total cost of sales, total sales, and number of transactions.

FOOD LABELING AND RATING SYSTEMS

Defining what constitutes a "healthier" food item is a challenge that has vexed government agencies, retailers, and restaurants alike. Although the Departments of Agriculture (USDA) and Health and Human Services (HHS) provide general dietary guidelines, it is difficult to directly apply these guidelines to say whether a particular food item qualifies as "healthy" or not. It is also difficult to categorize a food item as "healthy" for the entire DoD population, subsets of which have different nutritional requirements (e.g. Special Operations Forces). Government, non-profit, and private organizations have developed a variety of different food rating systems, nutrition guidelines, and menu labeling standards — the concern is that the sheer number of different systems that now exists could confuse consumers, retailers, and food service operators.

Labeling systems dictate what nutrients or ingredients are identified on a package or menu. For example, the Grocery Manufacturers Association's voluntary "Facts Up Front" initiative aims to list calories and three "nutrients to limit" (sodium, saturated fat, sugar) on the front of retail food packages. The Nutrition Labeling and Education Act (NLEA) requires labeling on most foods to provide information about nutrient content. Health and nutrition claims on food packaging are also subject to specific requirements. Current labeling requirements apply to most food sold in retail settings, but exclude prepared foods that are served in restaurants, cafeterias, etc. Some states and localities (e.g., California, Philadelphia, New York City) have passed legislation to address this gap. Additionally, some retailers voluntarily post calorie information (e.g., Starbucks, McDonald's). This practice will become more widespread as a result of the Affordable Care Act, which requires nearly all restaurants or similar retail establishments (including vending machines) with 20 or more locations nationwide to adhere to labeling standards developed by USDA. Many fast food outlets on military bases (e.g., Burger King, Subway) will fall under the Affordable Care Act rule.

Nutrition guidelines aim to help consumers, retailers, or food service operators decide which foods to procure or serve. Sometimes these guidelines provide quantitative cutoffs (e.g. maximum sugar or sodium content); in other cases they take the form of general principles (e.g., only low- or no-fat milk). Rating systems, such as those used by NuVal and WalMart, often rely on nutrition guidelines. NuVal is a nutritional scoring system developed by an independent panel of nutrition and medical experts, while Walmart's "Great for You" rating system incorporates nutrition criteria developed by several authoritative organizations.

Rating systems attempt to simplify food choices by providing clear summary indicators rather than listing specific quantities of ingredients or nutrients; they are generally used to rate individual food items. Some systems make a simple binary distinction between items that meet the criteria for "healthier" and items that don't (e.g., WalMart's Great for You, Hudson Institute's BFY, American Heart Association Heart Check). Other rating systems, similar to Go for Green®, use multiple discrete ratings (e.g., red, yellow, green lights or Hannaford's Guiding Stars system, which rates items with one to three stars). The most complex rating systems use a continuous numerical scale from 0 to 100 (or even 1000) (e.g., NuVal, ANDI, Nutrisavings).

Apart from Go for Green®, existing government programs mostly provide guidelines for procurement and preparation rather than systems for rating the nutritional quality of foods. The standards for National Park Service concessions are one exception, as these are designed to offer guidelines and indicate "healthy choices" on menus.[xi]

The retail setting has the greatest proliferation of competing rating systems. Many grocery store chains offer their own proprietary version of a rating system (of these, Hannaford's Guiding Stars program is the most similar to Go for Green®). In addition, the Choose Healthy Options Program (CHOP™), which is being used in food banks and food pantries around the country, closely resembles Go for Green® in its use of the "traffic light" system.

All of the rating systems currently being used in restaurant settings rely on a simple binary distinction and designate "healthier items." Some of these systems only consider calorie content (e.g., BFY) whereas others account for factors like fat, sodium, and cholesterol content. Examples include the National Restaurant Association's Kids LiveWell program, which uses a red apple icon and Walt Disney Co.'s Mickey Check Mark, which appears on qualifying children's menu items and is based on the American Heart Association's Heart Check program. Restaurants are unlikely to want to label menu offerings as "unhealthy" or as items to be eaten "sparingly" or "in moderation" (e.g. red or yellow items in the Go for Green® labeling system).

Smarter Food Movement: The Smarter Lunchrooms/Smarter Food Movement has been deployed in approximately 20,000 schools across the U.S. as well as in other settings, including college campuses and corporate dining facilities. Implementing Smarter Lunchroom principles has been shown to increase the consumption of fruits, vegetables, and lean proteins with a corresponding reduction in the consumption of less healthful items. Notably, these results have been achieved at many venues without a decline in participation and without damaging the retailer's bottom line.

The Smarter Food Movement employs the techniques of behavioral economics and choice architecture to influence and promote the selection and consumption of targeted items, in this case healthier foods (such as lean proteins, fruits, and vegetables) offered in installation dining venues, MWR locations, and commissaries. Behavioral economics studies how psychological, social, cognitive, and emotional factors affect the economic decisions of individuals and institutions.[xii] Choice architecture focuses on how decisions may be (and can be) influenced by the way choices are presented.[xiii] Implementing these approaches as part of HBI, the first step was to conduct an environmental scan of each location or venue. The next step was to develop a set of tailored suggestions for reorganizing the items offered, redesigning menu boards, and addressing other factors that impact food choices. Examples include placing salad bars at the entrance to DFACs to encourage more vegetable consumption, removing candy from check out aisles and replacing unhealthy items like candy with water and fruit, and putting zero-calorie beverages at eye-level while making higher-calorie beverages more difficult to see. This type of "stealth health" intervention addressed many of HBI's strategic objectives including improving access to healthier choices and fostering a healthier environment.

DeCA Fruit and Vegetable Initiative: The Fruit and Vegetable Initiative was designed to promote sales of fruits and vegetables in the commissaries. Produce could be sold in raw, canned, or frozen form to suit different budgetary and lifestyle needs. The initiative has many elements:

- Provide audience-appropriate nutrition education materials in the commissary, near fruit and vegetable displays.
- Execute a marketing campaign that promotes fruits and vegetables.
- Promote the "Half Your Plate" message (i.e., that fruits and vegetables should comprise half the plate at every meal) at least quarterly through in-store food demos, community health and wellness events, etc.
- Make audience-appropriate food preparation materials (e.g., recipes, tips, etc.) available near fruits and vegetables.
- Train commissary staff on the fruits and vegetables initiative.
- Position fruits and vegetables near cash registers or in a grab-and-go section to promote sales.

DeCA's Fruit and Vegetable Initiative applies to all commissaries, not just HBI locations.

Farmers markets: Many military installations are like towns, with schools, day care centers, retail stores, restaurants, pharmacies, medical clinics, gyms, residential housing, transient lodging, industrial areas, office space, and other infrastructure. A number of installations were very interested in hosting farmers markets and increasing access to fruits and vegetables. However, questions about whether farmers markets could open on military property in light of the DeCA's primary role in food sales arose early in HBI implementation. This issue was settled when the Deputy Assistant Secretary of Defense issued a clarification of policy, [xiv] stating that: *"Farmers markets are defined as an assembly of farmers…selling directly to consumers...Farmers markets may be operated by the DeCA; a Military Service MWR program, a military exchange or by a non-Federal entity. Farmers markets hosted on military installations must comply with all applicable merchandise, public health and other DoD policies…"* Once this policy clarification was communicated, interested installations pursued farmers markets with the help of the HBI team. Some locations worked directly with the non-profit organization Wholesome Wave, while others hired farmers market managers directly.

Share Our Strength's Cooking Matters at the Store (CMATS): The Share Our Strength initiative seeks to empower individuals and families to purchase and prepare healthy food on a budget. The initiative has two components: grocery store tours, called "CMATS," and signature "*Cooking Matters*[12]" cooking classes offered by a network of community partners across the country. The regular course is six weeks long and includes the grocery store tour as part of the fifth week. The target class size is 8-15 service and family members.

CMATS targets the primary food shopper in the household. The aim is to teach adult participants key food shopping skills such as buying fruits and vegetables on a budget, comparing unit prices, reading food labels, and identifying whole grain foods. The store tour takes 45–60 minutes and is led by a trained facilitator. Participants then have 15–20 minutes to use the skills they learned to shop for a meal that serves a family of four for $10 or less. As with Cooking Matters courses, the target tour size is 8–15 service and family members.

[12] More details can be found at: http://www.cookingmatters.org

Active Living/Physical Activity/Built Environment

Although there is a perception that military personnel are among the nation's fittest citizens, individual service members and their families face the same challenges as other Americans when it comes to making time for physical activity in their everyday lives. The CDC recommends 30 minutes of physical activity a day for adults and 60 minutes a day for children. Most Americans do not meet these recommendations. Barriers to physical activity include lack of access to physical fitness facilities, lack of time, lack of childcare, and an environment that is built around the automobile. Strategies that incorporate physical activity into daily life can help boost fitness. One of the easiest ways to increase daily physical activity is to replace driving with walking and biking for trips to school, work, and to run errands. But not every installation is suited to walking and biking. Another option for promoting physical activity is to expand access to fitness facilities and increase the number of fitness programs available to service members and their families.

A growing body of research suggests that the design of the physical environment can encourage or discourage physical activity. Public health officials like to say that a person's zip code has a greater influence on his or her health than the person's genetic code. The proximity and mix of destinations, parks and sports fields, shopping, eating, and transit facilities can influence physical activity at the population level, which in turn is crucial for combating some of the most insidious public health epidemics of our time: obesity and related chronic diseases such as diabetes and high blood pressure.[xv] Even the layout of the street grid can impact health. In the Journal of Transport and Health, Garrick and Marshall report[xvi] that cities with more compact street networks — specifically, increased intersection density — have lower levels of obesity, diabetes, high blood pressure, and heart disease. According to these researchers, "The more intersections, the healthier the humans."[xvii]

To address these opportunities, public health and urban design professionals have joined forces to support efforts by developers, planners, and architects to provide urban designs that can increase regular physical activity. Known as the Active Design Movement, the idea is to build communities where people find it safe and convenient to walk or bicycle to work, school, the store, or just for fun. In these communities, bicyclists are respected and roads are built for all forms of transportation, not just for cars. Recreation opportunities and healthy food options are accessible – outdoor recreation areas, playgrounds, and various types of sports facilities are located near people's homes and worksites, and integrated pedestrian and bicycle networks provide safe access to these facilities for all residents. New York City has been at the forefront of this movement; the city has developed *Active Design Guidelines*[13] and even provides incentives, like expedited permits, to increase the uptake of these strategies.

Military installations suffer from the same problems as other American cities and towns in terms of supporting alternatives to driving. Older military installations — specifically, those built in the late 1940s and early 1950s — were designed to have compact and walkable town centers, but subsequent development at most installations has tended toward sprawl and encouraged greater dependence on automobiles for transportation. Large surface parking lots and single-use zoning have resulted in large areas of lower density and higher traffic in which walking or bicycling is unpleasant or impractical. Much of the resident population at most installations cannot access food, fitness, or recreation outlets within walking distance. Children cannot safely walk or bike to school. As a short-term demonstration project it was not realistic to expect that HBI could have a significant impact on these long-term trends; nonetheless the HBI team identified strategies for improving the built environment at military installations over time.

[13] More details can be found at: http://centerforactivedesign.org/dl/guidelines.pdf

These initiatives are divided into four focus areas:

- **The built environment** – The military Promoting Active Communities (m-PAC) tool was used to assess the built environment at installations; specifically, m-PAC was used to consider aspects of the built environment that encourage or discourage physical activity.
- **Active transport** – The HBI team looked at how existing elements of the built environment could be used to encourage people to move. For example, one program, called StairWELL to Health, encouraged stair use. Another program, Bikeshare, was originally intended to offer an alternative mode of transport for getting around on installations (as opposed to driving) but ended up as a recreational program.
- **Enhanced fitness facilities** – HBI explored whether enhancing fitness opportunities would increase physical activity. One program, 24-Hour Fitness, gave individuals round-the-clock access to fitness facilities, like gyms; another program, called Fitness on Request (also known as WELLBEATS), aimed to increase the number of fitness programs on installations.
- **Comprehensive programming with coaches** – HBI also tested a comprehensive program, called Warrior Well, targeted to individuals that encompassed physical activity, nutrition counseling, sleep metrics, and a team coach. The question was whether this kind of direct, multi-faceted intervention would have a greater impact on behavior than leaving individuals to try to get fit on their own.

Physical Activity/Built Environment (m-PAC) Assessment: To increase physical activity, the HBI strategic plan emphasized fostering a healthy environment. The HBI team used an existing tool, called m-PAC to assess the current physical or "built environment" at HBI pilot sites. M-PAC was adapted from work conducted by the Michigan Department of Community Health (MDCH) PAC. It measures the accessibility of physical activity options and assesses environmental factors, policies, and actions that support active living. M-PAC assessments involved multiple stakeholders at each installation, including master planning officials, public health proponents, recreational services, and housing staff.

StairWELL to Health: The StairWELL to Health initiative helps installations improve population health by providing information about and opportunities for incorporating physical activity into daily routines. It is based on a CDC program called *StairWELL to Better Health.*[14]

Stairways present an opportunity to increase daily physical activity at low personal cost and with a high degree of convenience. The program uses directional and motivational signs to encourage stair use. These signs are placed at 'point-of-decision' locations where people confront the choice of whether to use the stairs or take the elevator. Sign messages may be inspirational, factual, health-related, or humorous, to appeal to a large audience and should be changed periodically to maintain interest in the program. In some locations, stairway appearance and accessibility may need to be improved for this program to have the greatest impact.

Bikeshare Programs: Bikeshare programs are on-installation programs that provide bicycles in one or more convenient locations for base personnel to use for transportation or recreation around the installation. A bikeshare program creates opportunities to incorporate exercise in daily routines while also contributing to environmental and economic sustainability goals, and reducing traffic congestion. Cycling even just 15 minutes or 2.5 miles twice per day — less than the average commuting distance for working Americans — can burn the caloric equivalent of more than 10 pounds annually. Moreover, biking is convenient, flexible, and appropriate for all ages.

[14] More details can be found at: http://www.cdc.gov/nccdphp/dnpao/hwi/toolkits/stairwell/index.htm

Installations interested in implementing this option can choose from a variety of models for funding and operating a bikeshare initiative. A number of commercial vendors provide complete packages including equipment, reservation systems, and maintenance programs. A more informal and less costly approach might be to assemble a fleet of bikes using donated or shared equipment and then have volunteers or local bike clubs manage the fleet.

24-Hour Fitness Program: 24-Hour Fitness provides a platform for helping people incorporate physical activity into their daily routines. The aim is to change exercise habits by making it possible for service members to work out at times and/or locations that best fit their schedules.

Responding to a request from service members and their families to provide fitness facilities that are open 24 hours a day, HBI offered the 24-Hour Fitness program to HBI installations. The program provides access to the main fitness center or a small "satellite" fitness facility, located around the installation, on a 24-hour-per-day, 7-days-per-week basis. Satellite facilities contain limited equipment. The main fitness center is unmanned after regular operating hours; satellite centers are always unmanned. Service members gain access by swiping a common access card (CAC). Typically these facilities deploy safety systems, such as remote-monitored security cameras, to address safety concerns. The aim is to offer another exercise option, especially for people whose schedules limit their ability to use the main fitness center during regular hours.

Fitness On Request: Fitness On Request is a program that was already being implemented at some installations prior to HBI; as part of HBI, it was extended to HBI pilot sites. The program provides videos of exercise classes in lieu of a live instructor. Users can go to a workout room in the fitness center (either alone or as part of a group), select the class, and play the video. Having fitness videos available on demand allows people to work out at the times that best fit their schedules while also providing the opportunity to participate in group exercise regardless of the fitness center class schedule. This program is not designed or intended to replace group aerobic classes with in-person instructors, it is meant to increase options for personnel who are unable to attend regularly scheduled classes.

Warrior Well/Basefit: Warrior Well enlists a select team of military professionals to create sustainable strategies for improving and maintaining the health and fitness of soldiers, airmen, sailors, marines, and their families. The training utilizes a proven engagement experience, modeled to effect behavior change through mindfulness, sleep, exercise, and nutrition. Warrior Well is led by coaches who are veterans or active military personnel and who embody the military ethos of service to country and community. Coaches have access to a system that allows them to monitor progress, create specific team and individual assignments, and report real-time progress to military leadership. The system is designed around total team success, not individual achievement alone. Teamwork is integral to the success of the participant and vital to the mission. Team interactions are facilitated through team meetings, which can be virtual or in-person. Team meetings include goal setting, consultations, fitness and nutrition training, fitness testing, team challenges, and body composition analysis. The major strength of Warrior Well is that it focuses on improving behaviors known to relate to health, such as healthy diet, physical activity, sleep, and stress reduction. Additionally, Warrior Well includes components that may help participants further improve their health behaviors, including social support, goal setting, self-monitoring, and stress management. Improvements are expected in body mass, body composition, Army Physical Fitness Test (APFT) scores (which directly relate to readiness/deployability), healthy eating habits, and ability to maintain a healthy weight.

Health and Wellness

As a member of the National Prevention Council, DoD is committed to implementing the vision, goal, priorities, and recommendations of the nation's first-ever NPS, which seeks to increase the number of Americans who are healthy at every stage of life. DoD's efforts range from contributing to safe community environments and improving access to recreation areas to supporting safe and healthy workplaces — all actions intended to make health and wellness a priority not just in the doctor's office, but where service members and their families work, live, learn, and play. HBI aimed to showcase the value of prevention by promoting healthy lifestyle changes, such as reduced tobacco use, increased physical activity, and healthier eating, HBI's objectives were consistent with a broader, nationwide movement to shift U.S. health care to a system and approach that aims to get and keep people well, rather than simply focusing on treating people once they become ill.

The health and wellness initiatives tested during HBI fall into these categories:

- **Assessment** – HBI tested the tool UltimateMe as a way to help individuals learn more about their "real age" and how to improve it. It also tested whether comprehensive, real-time data on the entire military community would be useful to leadership in enabling a more efficient and effective allocation of resources.
- **Replicating successful programs** – The HBI team tested programs like Group Lifestyle Balance, which is modeled on the CDC's successful *Diabetes Prevention Program (DPP).*[15]
- **Leveraging assets** – The HBI team looked for ways to leverage community and installation assets, while also looking for ways to "cross silos" within installations through initiatives such as the Community Resource Guide (CRG) and the Community Health Promotion Council (CHPC).
- **Using technology to help individuals** – The HBI team tested the technology-based hologram program, Holly-Graham, as a way to deliver messages around nutrition, physical activity, and tobacco-free living.
- **Improving the environment at military hospitals** – Ambassadors for Health, a program that utilizes a civilian, place-based improvement tool called *WorkHealthy America*[SM], was tested at Military Treatment Centers.[16]
- **Addressing children's health and wellness** – The HBI team tested several programs aimed at increasing the health and wellness of children, including Operation KidFit (OKF) and *5210 Healthy Military Children.*[17]

Assessment – UltimateMe: UltimateMe is a web-based tool that takes an innovative approach to motivating individuals to make healthier behavior choices with respect to nutrition, physical activity, and tobacco use. At baseline, participants completed a health assessment, received a biological age score and an individualized risk profile, and selected risk factors for modification. UltimateMe's self-activation program[18] was then tested to determine its effectiveness in influencing behavior change and evaluated for its ability to provide comprehensive, real-time data on the entire military community, including service members, their families, civilians, and retirees. A specific change in behavior is the first outcome measure that can be assessed to estimate the effect of health and wellness initiatives. Biometric changes like improved weight or blood pressure are secondary outcome measures, while longer-term morbidity and mortality rates are considered lagging or tertiary measures.

[15] More details can be found at: http://www.cdc.gov/diabetes/prevention/
[16] More details can be found at: http://forprevention.org/p2/solution/workhealthy-america/
[17] More details can be found at: http://5210.healthymilitarychildren.psu.edu
[18] The program makes use of the "trans-theoretical model" of behavior change, which sees the process of adopting healthier behaviors as a progression through distinct phases or stages, from contemplation to action and maintenance.

Prior to HBI, DoD had only limited data for assessing the impact of prevention and wellness initiatives. While the military's periodic health assessments do generate a number of data points on the Active Duty population, the purpose of these assessments is to identify health risks. As such, these data are less useful for measuring health outcomes. Moreover, while additional health-related data are gathered from a limited segment of the DoD population, these data are made available months later and do not provide the capability to track behavior changes or responses to specific initiatives. The main existing sources of health data on DoD health care beneficiaries are:

1. **Military Treatment Facilities (MTF) Medical Records** – These data include medical information about individuals treated at MTFs but exclude medical records for individuals treated in non-military facilities. This information is available approximately three months after it is collected.
2. **TRICARE® Administrative Records** – These data include administrative information from MTFs and external providers but exclude non-TRICARE® beneficiaries such as DoD civilian employees. These data are available approximately three months after they are collected.
3. **Health-Related Surveys** – The surveys most often used for health and wellness information are the Healthcare Survey of DoD Beneficiaries and Health Related Survey of Active Duty Military Personnel. The Healthcare Survey of DoD Beneficiaries is conducted on a quarterly basis and is available six months after the survey is complete. The Health Related Survey of Active Duty Military Personnel is conducted every three years and is available 18 months after it is conducted. Both surveys include TRICARE® beneficiaries only. This means all non-TRICARE® beneficiaries, such as DoD civilian employees, are excluded.

In sum, existing sources of population-level health data do not reach the entire DoD community and do not provide real-time information to stakeholders and decision makers about the needs of the community. Meaningful and up-to-date information on population issues would assist leadership in allocating resources more efficiently and effectively. Real-time information is also needed to identify systemic and local health challenges, and to better understand the root causes of poor behavior choices.

UltimateMe was made available to communities at HBI pilot sites, including service members, civilians, and dependents. In addition to providing a baseline assessment and a calculation of the participant's health age (the later calculation accounts for years of life gained or lost as a result of individual behavior life choices, weight, and physical fitness), the program offered personalized tips and recommendations, access to medical experts, workouts, nutrition and activity trackers, and a platform for creating supportive social communities. Self-guided programs included a 16-week weight loss program and information on how to quit tobacco use, as well as resources for tobacco cessation. Besides promoting individual health, this initiative is designed to support a more integrated community and to reach family members who play a huge role in influencing home environments.

Replicating successful programs – Group Lifestyle Balance™: The Group Lifestyle Balance™ program is based on the *DPP.*[19] The DPP was developed after a national study, funded by the National Institutes of Health (NIH), found that small changes in lifestyle (such as healthy eating and increased physical activity) could lower the chances of developing type 2 diabetes among individuals at high risk[xviii] for the disease. Healthy lifestyle changes were also found to reduce risk for metabolic syndrome.[xix] The evidence-based Group Lifestyle Balance™ program is designed to help patients make lifestyle changes aimed at both preventing diabetes and preventing or treating metabolic syndrome.

[19] More details can be found at: http://www.diabetesprevention.pitt.edu/dpp.aspx

At Mountain Home Air Force Base, Group Lifestyle Balance™ was implemented as part of the Air Force's Healthcare to Health (H2H) initiative. As such, the Health Promotion team at Mountain Home partnered with the MTF's Patient-Centered Medical Home, offering the Group Lifestyle Balance™ program to provider-identified individuals through a referral process. Through this program, the health promotion team provided participants with support and guidance for addressing health issues by addressing nutritional and physical activity behavior over time. This partnership allowed the Group Lifestyle Balance™ program to serve as a force multiplier for the Patient-Centered Medical Home.

Leveraging assets – Community Health Promotion Councils (CHPC): This HBI initiative sought to build on existing wellness coalition models by cross pollinating lessons learned from each of the Services and by putting an emphasis on gathering and generating outcomes. Among the HBI installations, there were many opportunities to improve wellness and readiness programs that addressed nutrition, physical activity, and tobacco cessation; there were also opportunities to evaluate these programs in collaboration with stakeholders. CHPCs serve as a platform for all decision-makers on an installation to improve collaboration and effectively leverage available resources. Each of the Services has in place some version of a wellness coalition to align and promote population health efforts on installations.

The U.S. Army Public Health Center's (USAPHC's) model is called the CHPC, a data-driven wellness model currently in place at nearly 30 Army installations. A standardized CHPC is chaired by the Senior Commander (SC) and facilitated by a dedicated Health Promotion Officer (HPO). HPOs work with SCs to facilitate the CHPC process and coordinate health and wellness activities across the installation. This includes facilitating integration across medical, mission, and garrison operations through the CHPC, thereby ensuring that all customers are supported through coordinated programs, policies, and processes. CHPCs elevate and prioritize public health status, targets, and standards, ensure that resources are clearly aligned to strategic goals, and promote strategic integration to shift the paradigm from reaction to prevention. CHPCs and HPOs play an essential role at the command, installation, and regional levels to coordinate "Ready and Resilient" (R2) activities, analyze trends, integrate proactive measures, and assure unity of effort across medical, mission, and garrison operations.

The Navy and Marines have their own version of this collaborative model called the Health Coalition. Specifically, the Navy Medical Department's Health Promotion and Wellness program works with Navy Medicine Regional Commanding Officers and the Navy and Marine Corps Public Health Center. The Health Promotion and Wellness Director is responsible for ensuring that all programs to address health, wellness, and readiness are represented and participate in the Health Coalition. Directors are responsible for creating a scorecard, goals, and a strategic plan for each year, while also ensuring that programs are measurable (produce outputs) and that outcome measures are available to assess impacts on clients' health, wellness, and readiness. Directors also seek to demonstrate value of services provided, including costs avoided. Existing tools like PRISM, ALHTA data, health risk assessments, and the Population Health Navigator Program are used to conduct baseline and ongoing assessments at the installation level.

The Air Force's model is the Community Action Information Board (CAIB). CAIBs provide a forum for identifying issues that impact force readiness, retention, and resiliency and for designing and implementing actions to address these issues. The CAIB uses the Integrated Delivery System (IDS) to propose and implement solutions, identify and monitor metrics, and document actions.

The HBI team also referred to the NACCHO MAPP framework as an additional model for bringing together diverse community health stakeholders to improve public health outcomes. The MAPP framework provides a way for the community to identify key public health problems, develop long-term solutions, and implement those solutions in a coordinated fashion, thereby increasing the efficiency and effectiveness of the response. These efforts are data driven to ensure that actions are tailored to achieve desired long-term impacts.

Leveraging assets – Community Resource Guides (CRG): CRGs provide a "one-stop" link to social services and health and wellness services, thereby strengthening the relationship between installations and communities. A collaborative working relationship between the installation and the surrounding community is beneficial to both parties. It enables those living on and off the installation to gain knowledge of valuable resources and may potentially increase the utilization of community resources and programming. Typically, installations provide printed and/or electronic guides to the community. A more comprehensive approach involves providing a web-based search engine that connects users to services and resources on and off the installation. Information on services, locations, points of contact, and cost (e.g. TRICARE benefit, delivered free or with a military discount) is made available. Additionally, installations can partner with local providers of community information and referral services (e.g. *211*[20]) to broaden the scope of resources offered.

Technology – Holly-Graham Virtual Assistant: The Holly-Graham Virtual Assistant goes beyond brochures and traditional push communications, using a holographic, three-dimensional, life-size projection to communicate engaging health messages. The technology creates the effect of a live person who talks to users. Holly-Graham delivers 16 messages covering topics around nutrition, physical activity, and tobacco-free living. Each message includes a QR code that can be scanned for additional information. The QR codes link to local and national tobacco cessation websites, nutrition resources, and apps that encourage physical activity.

Improving the environment at military hospitals – Ambassadors for Health: Health care employees, whether in the civilian or military sector, are one of the least healthy groups in the United States, with health care costs that are 9 percent higher, on average, than the general population.[xx] Challenging work shifts and environments that are not supportive of healthy choices contribute to the poor health of many hospital personnel. Members of the clinical staff who are in poor health are also less likely to counsel healthy behaviors for their patients. The aim of this program is to empower clinical staff to serve as ambassadors for health within their MTF communities and installations and to serve as role models for the broader DoD community. Anticipated long-term benefits include a healthier, more productive workforce, a better workplace environment, and improvements in hospital scores and recruitment, retention, readiness, and resilience.

The Ambassadors for Health initiative was made available to military installations and MTFs as part of OLW and HBI. A total of five MTFs, with 5,480 active duty and civilian employees, participated.[xxi] Participating MTFs utilized Prevention Partners' WorkHealthy America (WorkHealthy) assessment and improvement tool to guide their efforts and to access the latest scientific evidence in support of staff health and wellness. The WorkHealthy assessments include 120 questions across several topic areas: culture of wellness, physical activity, nutrition, and tobacco use. Specific questions cover issues such as environments, benefits, policies, and programs. A team of public health experts developed the assessments based on evidence reviews and practice testing; work was overseen by national advisors. The questions are tiered and weighted based on the strength of the evidence for each surveyed element, and grades are given ranging from A's to F's. Tailored reports that are accessible through the online portal provide direction on how to reach "A" grades; in addition, webinar trainings, toolbox resources, newsletters, and one-on-one coaching provide guidance and technical

[20] 211 is a free, 24/7 helpline that connects community members with health and social services in the region. The implementation of 2-1-1 is spearheaded by United Ways and information and referral agencies in states and local communities. United Way Worldwide (UWW) and the Alliance for Information and Referral Systems (AIRS) are committed to providing national leadership so that every American has access to this essential service. (More details can be found at: http://www.211us.org/)

assistance to make improvements. As of July 2015, most of the MTFs had received a grade of "B" or "C" across the topic areas and no "F" grades had been reported.[xxii]

Using results from the WorkHealthy assessment and tailored recommendations, in conjunction with online and phone-based training through Prevention Partners' worksite coaches, MTFs developed action plans for creating a workplace culture and environment that is supportive of physical activity, nutritious eating, and tobacco-free living. Examples of changes implemented under this program include providing healthier options in vending machines, expanding access to physical activity opportunities, and promoting tobacco cessation programs and benefits.

HA has demonstrated extraordinary commitment to engaging with MTFs on the health, wellness, readiness, and resilience of their staff. By encouraging MTFs to participate in WorkHealthy, DHA was able to collect aggregate data and make progress toward the goal of a more ready, resilient military.

Addressing children's health and wellness – 5210 Healthy Military Children: The 5210 Healthy Military Children marketing campaign is a primary prevention strategy that aims to increase the consumption of fruits and vegetables to five (5) servings per day, reduce screen time to under two (2) hours per day, increase physical activity to one (1) hour or more per day, and reduce consumption of sugar-sweetened beverages to zero (0) per day. The campaign partners with teachers, doctors, childcare providers, and community organizations to help promote these four healthy habits. The *5210 Healthy Military Children* marketing campaign was created by the Office of the Deputy Assistant Secretary of Defense for MC&FP and the Clearinghouse for Military Family Readiness (Clearinghouse) at Pennsylvania State University.[21]

Addressing children's health and wellness – Let's Go 5210: The Air Force is implementing Let's Go 5210 through its H2H pilot initiative that is being implemented at six Air Force installations. The one H2H Air Force installation participating in HBI is Mountain Home. As a positive parenting program, Let's Go 5210 utilizes campaign materials from the 5210 Healthy Military Children program to inform families about healthy habits and suggest ways to achieve the 5210 goals with respect to fruit and vegetable consumption, physical activity, and decreased screen time. Unlike the other H2H pilot sites which have focused largely on outreach activities such as hanging posters and distributing handouts among the various 5210 venues, Mountain Home has focused its efforts on providing individual-level 5210 services to children and networking activities. One of their successful collaborations is connecting with local organizations such as Be Outside Idaho, which allows the H2H team to expand materials and resources for the participants in 5210 Healthy Military Children program.

Addressing children's health and wellness – Operation KidFit (OKF): A substantial barrier to progress in the area of childhood obesity is the lack of evidence-based interventions. While a variety of approaches to combating childhood obesity are being implemented in schools, communities, and families, almost none have been scientifically evaluated to determine their effectiveness.

The OKF demonstration project involves implementing the evidence-based, "Lifestyles Triple P" (LTP) (the "Triple P" refers to Positive Parenting Program). Specifically designed to address the needs of families of overweight and obese children, LTP is a parent-focused intervention that includes a series of small group sessions and individualized phone calls. The program utilizes motivational interviewing to enhance parents' commitment to change, and teaches specific strategies such as heightened attention to nutrition and ways to increase

[21] More details can be found at: http://5210.healthymilitarychildren.psu.edu/about-5210

physical activity and reduce sedentary behavior such as TV watching. Additionally, parents are taught basic behavioral management strategies (e.g., how to set and enforce limits around food choices, positive reinforcement for healthy lifestyle behaviors, etc.). In a randomized controlled trial conducted in Brisbane, Australia, LTP was found to have significant effects in terms of parents' confidence at managing weight-related issues, reductions in coercive parenting strategies, reductions in children's BMI, and decreased rates of weight-related child behavioral problems at a one-year follow-up.[xxiii]

Despite these promising findings, LTP has never been replicated in the U.S. or with military families. The OKF demonstration project aims to assess the feasibility and effectiveness of LTP with military families. The project will also explore modified program delivery models and options for using technology to increase program accessibility.

Addressing children's health and wellness – Kurbo: Similar to the Go for Green® System used by the DoD nutrition program, the Kurbo app utilizes a proven "Traffic Light" food classification system to categorize foods into reds, yellows, and greens. Rather than focus on calorie count, which is neither safe nor effective for kids, the Kurbo system focuses on teaching users to understand their food choices and gradually decrease their consumption of reds (unhealthy foods) over time. The Kurbo program is based on years of research on pediatric weight control and is licensed by the Stanford Packard Pediatric Weight Control Program. At their core, both programs are structured around color-based food tracking and utilize Dr. Leonard Epstein's Traffic Light Diet, one of the most effective and well-researched programs for children. The app's data-driven platform provides users with feedback via push notifications, text messages, and emails. It is supplemented by weekly live interaction with a Kurbo behavioral coach. Coaches check in with families for 15 minutes once a week via video, phone, or text. They provide personalized recommendations, feedback, encouragement, and third-party accountability. Coaches support both parents and children through the program.

Healthy Schools

Children of military personnel can attend a variety of types of schools, including private schools, public schools off military property, public schools on military property, and DoD Education Activity (DoDEA) schools. Recognizing that one-third of American children are either overweight or obese and that children of military families account for a large share of new recruits entering military service, interventions with school-age children were identified as particularly important to the HBI project.

The HBI team identified one initiative in this wedge area: The Alliance for a Healthier Generation's *Healthy Schools Program (HSP)*.[22]

Alliance for a Healthier Generation's Healthy Schools Program: HSP works to create and sustain healthy school environments where students can learn more and flourish. The Program provides evidence-based guidance and support to schools interested in implementing policies and practices that meet federal requirements and further local health and wellness goals. It includes assessment tools and resources to implement changes and provides recognition in the form of bronze, silver, or gold designations for achieving "Healthy Schools" status.

[22] More details can be found at:https://www.healthiergeneration.org/take_action/schools/

Some of the key questions asked as part of HSP include:

1. **What are the district's/school's wellness policies?**
   District and school policies shape the school environment. Policies such as making drinking water available free of charge at all times during the school day are part of the foundation for a healthy school environment. Has the school built a diverse wellness council? How is wellness policy implemented and evaluated? How is progress toward health and wellness goals communicated to staff, teachers, parents, and students?
2. **What is the snack and beverage policy and how well is it being implemented?**
   The Smart Snacks in School[23] standards published in 2014 by USDA establish science-based nutrition standards for all foods and beverages sold to students during the school day. Is the school meeting those standards? Has the school created food guidelines and tools for school fundraisers, celebrations, and rewards?
3. **Is the school meeting federal breakfast and lunch guidelines?**
   The Healthy Hunger-Free Kids Act made many changes to the NSLP and other nutrition programs. Presentation and implementation are key to success. Are nutritious school meals fully accessible to all students? Are healthy food choices being effectively encouraged through placement and marketing? Is there collaboration between nutrition services staff and teachers to reinforce classroom lessons?
4. **Does the school provide quality health education?**
   Comprehensive health education programs use skill-based instruction to teach kids about important health behaviors like good nutrition and physical activity. How is the school's health education curriculum developed and evaluated? How is it delivered in the classroom, and does it meet state standards?
5. **Does the school provide quality physical education (PE)?**
   PE teaches motor skills, exercise, and the benefits of physical activity. Quality PE programs give students the skills and motivation to remain active on a lifelong basis. How many minutes per week do students get PE? Is the school's PE program providing moderate to vigorous activity? Is it assessing students and sharing the results?
6. **How is physical activity incorporated into the school day?**
   Schools can support active lifestyles by creating an environment that encourages movement at all times throughout the day. Does the school promote walking and biking to school? Do students have access to physical activity opportunities before and/or after school? Do classes participate in daily physical activity breaks? Does the school withhold recess as a punishment?
7. **Does the district/school support employee wellness?**
   Teachers, administrators, and other school personnel are role models for kids. Healthy employees are also more productive, have more energy, and can better manage stress. Does the district/school provide staff with physical activity and healthy eating opportunities? Is there staff buy-in and school district support?

Implementing HSP equipped HBI pilot installations with the tools and resources needed to create healthier school environments. HSP managers provided in-person workshops and ongoing virtual technical assistance to help participating schools create a culture where healthy eating and physical activity are the norm – not the exception. Following a continual improvement process, schools completed a baseline and follow-up assessment to identify the strengths and weaknesses of their policies and programs, and developed an action

[23] More details can be found at: http://www.fns.usda.gov/sites/default/files/allfoods_flyer.pdf

plan for improving student health and safety. In addition, schools received, at no cost, access to a customer support center, success stories, and evidence-based resources, as well as virtual and in-person training with school health experts.

HSP has helped more than 25,000 schools increase quality physical activity, health education, and healthy eating and has reached nearly 15 million students. In 2012, the CDC's Journal for Preventing Chronic Disease published the findings of an evaluation of the first four years of HSP, which revealed that the model works and produces positive impacts on students' health. In one key finding, the study concluded that 80 percent of participating schools that were evaluated made substantial progress toward creating a healthier school environment. Several additional findings from studies of schools that received assistance from the Alliance's field staff are noteworthy:

- Nearly all participating schools (95 percent) met or exceeded federal nutrition standards for school meals.
- More than 60 percent dedicated at least 20 percent of their afterschool program time to physical activity.
- More than 80 percent of the elementary schools provided at least 20 minutes of recess.

Tobacco Cessation

Tobacco is still the leading cause of death in the United States. Rates of smoking in the military remain substantially higher than in the civilian population and the costs of tobacco use to DoD in medical care, hospitalizations, and lost work days is estimated to exceed $1.6 billion annually.[xxiv]

Tobacco use in today's military remains high despite efforts to promote a tobacco-free lifestyle through public education campaigns, commander training, bans on all tobacco use during basic training, access to nicotine-reduction therapy, and prohibitions on tobacco use by instructors in the presence of students. According to active duty personnel, the fact that many service members start smoking in the military may be attributable to multiple factors, including: (1) the ready availability of tobacco products (both in terms of the number of places where tobacco is sold on installations and in terms of the discounted prices charged for tobacco products); (2) the perception that smoking affords an opportunity to break down social barriers and socialize with military leaders; (3) the perception that tobacco use provides an acceptable reason to take a break; and (4) the effects of tobacco as a stimulant.

Tobacco avoidance/cessation is a key component of HBI. HBI's tobacco cessation initiatives build on recommendations developed by the CDC for community-based tobacco use prevention programs. The CDC recommendations focus on three elements:

1. Preventing initiation and encouraging youth and young adults to quit using tobacco,
2. Eliminating exposure to secondhand smoke, and
3. Identifying and eliminating tobacco-related disparities among population groups.[xxv]

HBI addressed the first element (preventing initiation and promoting tobacco cessation among youth and young adults) through three concerted efforts:

1. Increasing the unit price of tobacco products through the Price Parity for Tobacco Products initiative,

2. Conducting mass-media education campaigns in combination with other community interventions through UltimateMe, Holly-Graham, and Fight the Enemy, and
3. Mobilizing the community to restrict access to tobacco products via counter-marketing initiatives, CHPCs, and the Kicking Butts for Points initiative.

HBI pilot installations made major strides in eliminating exposure to secondhand smoke by reducing the number of designated tobacco areas (DTAs), and supporting the designation of all DoD hospitals and clinics as tobacco-free. Lastly, HBI initiatives assisted installations with developing a community infrastructure that helps identify and eliminate tobacco-related disparities among population groups. The Ambassadors for Health initiative, CHPCs, and HBI youth initiatives all supported service members, their families, and their communities in reducing tobacco use.

Prompted by the challenges encountered in fully implementing several of these tobacco-related initiatives, the Defense Advisory Committee on Tobacco (DACT) was established in June 2014 to explore policy options for strengthening DoD's tobacco prevention and cessation efforts. The ultimate goal of the DACT is to develop a comprehensive tobacco policy that helps prevent the initiation of tobacco use, assists those who want to quit using tobacco, and reduces exposure to second-hand smoke for the whole DoD community. The Committee brought together representatives from each of the Services and key stakeholders from DoD components to develop policy options with respect to tobacco sales, designated tobacco use areas, and tobacco use in uniform, among other topics, for consideration by senior leaders.

Detailed descriptions of the HBI tobacco cessation initiatives follow.

Reduce number of designated tobacco areas: Reducing the number of DTAs — and, conversely, increasing the number of tobacco-free areas — is an effective strategy for reducing exposure to secondhand tobacco smoke. It may also reduce the prevalence of tobacco use, with associated benefits in terms of reducing tobacco-related morbidity and mortality. Interventions that make it less convenient to smoke may increase the number of tobacco users who quit and may discourage young people from taking up the use of tobacco products.

As part of this initiative, participating HBI installations agreed to catalogue the number of DTAs on site. Installation commanders then committed to reducing the number of DTAs over time while simultaneously increasing the distance between DTAs and buildings. In addition, signs announcing tobacco-free zones and DTA's were posted as part of the initiative. Locating DTAs further away from work places and exposing DTAs to the elements makes the personal choice to use tobacco less convenient and discourages tobacco use without being seen as taking away individuals' right to smoke.

Smoke-Free Military Treatment Facility (hospital and clinic): This initiative sought to promote and protect the health of patients, staff, and visitors, and enhance the mission readiness of DoD service members through restricting or prohibiting the use of tobacco products on MTF campuses. Smoke-free policies were introduced at Air Force and Navy MTFs before the launch of HBI. At the beginning of HBI, the Army was in the process of drafting policy on tobacco use on MTF campuses. Participating HBI locations were asked to assess their current policies and expand upon them to include all tobacco products, and expand tobacco-free areas to the entire MTF campus (i.e. parking lots, and sidewalks).

Price Parity for Tobacco Products: According to the CDC's Best Practices for Comprehensive Tobacco Control Programs, increasing the unit price of tobacco products has been documented to be effective as part of a comprehensive tobacco control effort "to protect the public from secondhand smoke exposure, promote cessation, and prevent initiation."[xxvi] When HBI was launched, DoD policies allowed military exchanges to sell tobacco products at 5 percent below the lowest commercial price found in the local community. Tobacco products sold through military exchanges are also exempt from state sales taxes that apply to commercial businesses. This further reduces the cost of tobacco products bought through the DoD exchanges.

The Navy has been most proactive in changing pricing policies for tobacco products. In 2013, the Navy conducted a demonstration to assess the impact of pricing tobacco products at the lowest commercial price found in the community – that is, without the additional 5 percent discount.

Counter-Marketing: The MCX developed a comprehensive point-of-sale (PoS) counter-marketing initiative for tobacco products. This initiative involves positioning anti-tobacco messages so that they are seen by consumers in the moment when these products are actually being purchased. The messages seek to communicate the catastrophic health risks and adverse performance impacts associated with tobacco use; the high personal expense of maintaining a tobacco habit; and an understanding of the physical, emotional, and sensory issues inherent in tobacco addiction. At the same time, the program aims to raise awareness of venues that are committed to being smoke-free.

Fight the Enemy: Fight the Enemy is a contest that empowers DoD beneficiary teens to develop effective video counter-marketing messages aimed at changing knowledge, attitudes, and beliefs surrounding tobacco use among their peers. By promoting edgy yet appropriate messages, HBI's goal is to help "de-normalize" tobacco use within the military. Fight the Enemy leverages the creative capacity of DoD beneficiary youth to use "teen-friendly" technology to communicate a tobacco counter-marketing message to a youth audience.

Teens on eight HBI installations were invited to participate in this program by submitting 29-second videos. After a round of public voting to narrow the selections, a leadership panel, including Dr. Woodson, the Director of the Defense Health Agency (DHA), Air Force Lt. Gen. Douglas Robb, and the acting U.S. Surgeon General Rear Admiral Boris Lushniak, selected the first place winners, which were announced on the Great American Smokeout. Future rounds of this contest will be open to any teen related to a DoD service member and will have widespread reach.

Kicking Butts for Points: Kicking Butts for Points is a unit-level, installation-based competition that is designed to motivate and inspire individuals to achieve tobacco-free living through competition and incentives. It also refers participants to ucanquit2.org for tobacco cessation resources. Participants earn points by completing educational modules, amassing self-test scores, and self-reporting tobacco-use status over the course of the initiative. Close-knit military units with high numbers of tobacco users are the target audience.

The HBI team ran this competition in partnership with the National Institutes of Health (NIH), which delivers other text message anti-smoking interventions such as SmokefreeMIL and Text4Baby. To enroll, participants texted in a keyword and their chosen team name, after which, they received 13 trivia messages over a one-month period. The winners were announced via text message at the end of the contest. Both smokers and nonsmokers could participate. Though the contest was targeted toward junior enlisted, each site had discretion over whether to limit participation to only active duty service members.

Eighteen teams (64 participants total) enrolled from 5 installations; on average, 56 people answered each trivia message with an average of 68 percent answering correctly.[xxvii] Fifty of these participants answered the evaluation survey questions sent after the contest. Though only 18 tobacco users competed, 13 of them (72 percent) answered "Yes" in response to the game motivating them to quit using tobacco and 15 of 18 (83 percent) found the resources to quit.[xxviii]

"March ARB has reaped many benefits since the HBI project was deployed two years ago! Successful initiatives reigned from HBI Health & Wellness (Better Eating)—implementing Better for You Menu Selection at the Back Street Café; WellBeats (menu of fitness videos, ranging from spin, aerobics, yoga, etc)—Reservists, Civilians and Retirees attend the fitness events during the week; and we have completed more than 40hrs on the WellBeats systems since deployed in June 2015! Our PA staff does a great job publicizing HBI fitness and health articles in our weekly Beacon newsletter! The HBI project gave us the opportunity to strengthen our mission partnerships with our community such as DeCA (promotes purchasing and intake of fresh fruits and vegetables). Internally, the HBI project gave us the opportunity to form our own March HBI Team (Lt Col Scipia Curtis, Pam Smith, Iris Alexander, Tim Hecke, Linda Welz, Capt Covington, Michael Gaines, Lt Col Lisa Hess, Olga Valentine, Valerie Fioretta, Chief Keller—Key Spouses, Madeline Stroud (DeCA) and Melanie White (AAFES)). The March HBI Team diligently provided monthly HBI inputs, implemented many initiatives (recognized for the Bike Share program) and provided data collections (Tobacco—DTAs; and Embedded PTLs) for the HBI project. Some of the March HBI initiatives implemented such as WellBeats, DTAs and Embedded PTLs, we look forward to increasing resources not only to better Reservists' fitness scores, but to increase the overall health and wellness for the March community!"

-Col. Muncy, March ARB

Chapter 5. Promising Practices

As the HBI team identified potential initiatives for implementation during the first phase of the demonstration project, it became clear that many installations, and the Services, were already implementing their own "home grown" programs to address installation-specific circumstances and needs. In an effort to recognize, promote, and scale innovation across the Services, the HBI team sought to identify and highlight these initiatives — called promising practices — that were being undertaken at the level of individual installations to encourage health and wellness. As opposed to other initiatives that were implemented on a top-down basis under direction from OSD, promising practices were developed by those individuals working on installations on a daily basis who intimately know the environment and needs of their communities. These programs were organically developed based on the identified needs of service members, their families, civilian employees, and others stationed on the installation. Fueled by the passion of leaders who are on the ground, promising practices offer creative, sustainable solutions to problems found at many installations interested in effectively promoting improved nutrition, increased physical activity, weight management, and tobacco cessation. Further, by studying promising practices, the HBI team not only learned about new initiatives that could be shared with other installations and Services, but also established a true subject matter exchange with installation stakeholders and acknowledged the value of ongoing efforts in the local communities. The aim of promising practices was to build a partnership to achieve more effective implementation, unified management, and, ultimately, better and more enduring HBI outcomes. Table 5.1 offers a summary description of each of the 21 promising practices identified and evaluated through HBI.

Table 5.1. Promising Practices included in HBI

Promising Practice	Description
Adult Sports Program	Intramural sports program specifically designed for adults and led by the Coast Guard. The program has had excellent participation rates and offers a wide range of activities and levels of involvement.
Baby Hot Wheels	Circuit training program for mothers and their young children, held rain or shine in the gym or track. The program is free of charge and serves as a social connector within the base community, with several playgroups forming as a result.
Club 2150	A 10-week afterschool program based on 5210 curriculum that teaches elementary students about healthy eating and exercise in a hands-on, engaging manner.
Community Health Promotion Council	Council that works to establish a community of health promotion experts on the installation to integrate, synchronize, and increase the effectiveness of public health programs on base. Developed and monitored by the Army Public Health Center.
Community Resource Guide	An integrated, easy-to-access guide to connect people on base with existing community and military health resources (includes San Diego's Integrated Health Community Portal [IHCP] and Fort Sill's CRG).
Comparison of Tobacco Cessation Programs Across the Services	A comparison of best practices from current tobacco cessation programs in operation across the Services. *Note: several HBI sites maintain tobacco cessation programs; a sample of sites was selected for study.*
Evaluation of Weight Remediation Programs Across the Services	Best practices and evaluation derived from Active Duty weight remediation programs including: • *Dump Your Plump (Army)*–A high-impact weight loss competition run by the Army Wellness Center (AWC) at Fort Meade, open to everyone and offering attractive prizes. The 18-week competition improves visibility and utilization of other AWC resources. • *ShipShape (Navy)*–A program run by Navy for Active Duty personnel who do not pass their weight requirements. The program, which runs for 2 hours per week over roughly 8 weeks, is led by coaches who work with participants to design individualized action plans addressing the major components of nutrition, physical activity, psychological preparedness, and application of these concepts into daily living, including stress/emotional eating, supplements, and crash diets. • *Body Composition Program (Marines)*–Weight remediation program run by the Marines for Active Duty personnel who don't meet physical fitness standards.
Fort Meade Alliance (FMA) and Fort Meade Covenant Council (FMCC)	Coordination between the FMA and FMCC serves to promote Fort Meade as a growing regional economic asset and to increase transparency, communication, and community action.
Functional Fitness Training: NOFFS	Functional fitness program for improving physical combat readiness, adapting to the space available for Navy personnel, and integrating nutrition education.
High-Intensity Tactical Training (HITT) and Aquatic Maximum Power Intensive Training (AMP-IT)	HITT is a functional fitness program that improves combat readiness while reducing the likelihood of injury through physical fitness training and nutritional guidelines. AMP-IT is an aquatics-based fitness alternative for individuals who require a challenging but low-impact alternative to land-based training or PT.

Promising Practice	Description
Impact of a Dietitian	Effort to measure the impact of dietitian services on health of beneficiaries and financial cost to the installation and MHS. *Note: several HBI sites maintain registered dietitians on the installation; a sample of sites was selected for study.*
Impact of Tobacco-Free MTF Campus Policy	A comparison of the relative success of tobacco-free campus policies on hospital grounds across the Services. *Note: several HBI sites maintain registered dietitians on the installation; a sample of sites was selected for study.*
Inventory & Reduce Number of Designated Tobacco Areas (DTAs)	Yokota's initiative to blueprint the current smoke-free spaces on the installation and strategically reduce the number of DTAs to promote a healthy environment.
Leadership Driven Fitness Initiatives	Best practice fitness initiatives being led by officers and leadership across the Services, including: • *7AM Leadership-Led Workouts*–Early morning leadership-led workouts at Cape Cod (Coast Guard) motivate service members, who participate in a variety of fitness activities alongside leaders. • *Commander's Wellness Challenge*–A weight loss and healthy living challenge in which participants pledge to lose 15 pounds during a 3 month timeframe and successfully complete two 5K Walk/Run Events at Fort Sill.
Mission Nutrition	Standardized, science-based 2-day/16-hour course focused on improving nutritional knowledge and awareness. Course is delivered by MWR and culinary specialist professionals who receive a 4-day training from a registered dietitian.
Mobile Health Van	Mobile health van with equipment, information, and tools that allows Health Promotions staff to travel across the installation offering to service members physical fitness and wellness screenings and information about a variety of health topics, including heart health, stress education, and tobacco cessation.
Recess Before Lunch	Initiative to improve child nutrition and reduce waste by changing school schedules so that recess takes place prior to lunch.
Value of Embedded Physical Training Leaders	High-impact program that embeds expert trainers with command groups to lead and improve physical training for reservists.
Army Wellness Centers (AWC)	Best practices from AWCs located on base. Centers provide integrated and standardized primary prevention programs and services that promote enhanced and sustained healthy lifestyles to improve the overall well-being of soldiers and family members.
WIC and New Parent Support Program (NPSP) Integration	NPSP and WIC (Women, Infants and Children) Program, both located on the installation, actively work to integrate and disseminate resources, materials, and programs. The aim is to improve the health and nutrition of mothers, fathers, and children, with a specific focus on pregnancy and children up to age 5.
Youth Sports Program	Comprehensive, year-round youth sports program for kids age 3-15 at 29 Palms that teaches participants skills in a variety of sports and overall functional movement, while also instilling lessons of leadership and responsibility.

To assess the effectiveness of promising practices, the HBI team initially worked with Pennsylvania State University (PSU) to evaluate whether existing installation-specific initiatives provided adequate metrics for tracking outcomes and, if so, whether they could be applied at other installations (PSU had an existing relationship with DoD via the University's role in curating the Clearinghouse for Military Family Readiness). To determine whether potential initiatives were evidence-based, PSU conducted an assessment for the HBI team using the PSU Rapid Evaluation Assessment tool. PSU also furnished a resource guide, which served as a library of evidence-based programs that align with the goals of HBI.

For each of the 21 promising practices identified across the 14 pilot sites, the HBI team conducted in-person and virtual interviews with program leads. The team documented best practices for each initiative and analyzed quantitative and qualitative data to measure program effectiveness. Specific data points collected included costs and resources required for the initiative, lessons learned as documented by program leads and feedback from participants, and output and outcome measures that reflect change in the target population pre- and post-program implementation. It is worth noting that as promising practices varied greatly in their maturity and in the amount and quality of data collected at the installation level to measure their effectiveness, not all data points were available for all programs. As such, the team leveraged existing data points from as many sources as possible in order to comprehensively evaluate the practices.

Based on the data gathered, initiatives were sorted into three categories — Promising, Promising Plus, and Proven — according to an evaluation framework developed by the HBI team using PSU's Rapid Evaluation Assessment tool as a guide. The evaluation framework takes into account program outcomes, as well as academic and peer-reviewed studies that provide additional evidence of effectiveness – it serves to objectively assess the degree to which practices are ready for scaling. In line with the framework, those programs that meet the criteria for "Proven" exhibit the greatest degree of rigor and reporting and are backed by substantial qualitative and quantitative evidence indicative of program effectiveness. "Proven" practices were recommended for scaling across HBI installations, the Services, or, in some cases, DoD-wide. Table 5.2 provides a summary of each category used to sort promising practices.

Table 5.2. Categories for Sorting Promising Practices

Category	Description
Promising	Backed by some qualitative evidence indicative of program effectiveness. Requires additional qualitative and quantitative evidence to measure full impact. Demonstrated success on at least one site.
Promising Plus	Backed by substantial qualitative evidence indicative of program effectiveness. Requires additional quantitative evidence to measure impact. Demonstrated success over time on at least one site.
Proven	Backed by substantial qualitative and quantitative evidence indicative of program effectiveness. Greatest degree of rigor and reporting. Demonstrated success over time on at least one site.

Throughout the documentation and evaluation process, the HBI team identified needs expressed by stakeholders and facilitated cross-Service collaboration by sharing relevant promising practices. For example, after learning of the logistical challenges that reservists stationed at March Air Reserve Base faced in terms of working out due to limited access to fitness facilities, the team shared the Navy Operational Fitness and Fueling System (NOFFS) mobile application, a tool specifically designed to help service members maintain fitness in confined environments. As a result, reservists gained easy access to in-home fitness techniques. An important lesson learned

in this example is that although promising practices are by nature implemented from the bottom up, assistance from OSD can play an important role in identifying connections and transferring best practices across the Services.

Vital to the cycle of innovation is diffusing those practices that proved most successful at their original site; thus, collaboration efforts are underway with a myriad of HBI stakeholders to scale the most effective practices. In some cases, scaling consists of "beta testing" the practice at additional pilot sites in other Services, where additional data and lessons learned may be generated. Scaling across the Services is also important for understanding unique aspects of the various environments and adapting programs to meet the needs of the local target audience. For example, Yokota Air Base took the lead in conducting an inventory of all DTAs on the installation and developing a map and comprehensive plan for reducing DTAs over time. Working with the Civil Engineering Squadron on the installation, Yokota's Health Promotions team is on track to achieve its goal of decreasing the number of DTAs by 10 percent annually. The HBI team is actively promoting this initiative at HBI sites across the Services, not all of which have DTA maps and plans for reduction in place.

Other promising practices poised to be scaled were also supported by substantial academic evidence that documents their effectiveness. One example is Recess Before Lunch, a low- to no-cost school wellness initiative, endorsed by the CDC, that advocates a simple change — scheduling recess before lunch as opposed to afterwards — and generates a wide range of positive impacts, including:

- Increased student consumption of fruits and vegetables and significantly decreased food waste
- Fewer discipline referrals and injuries
- Improved cafeteria behavior
- Increased focus in afternoon classes

These benefits have been well-documented in several large-scale academic studies; after learning about Recess Before Lunch, the school nurse at Yokota West Elementary school worked with school administrators to implement this change in 2011. Since then, other DoD Education Activity (DoDEA) schools have expressed interest in Recess Before Lunch and are proactively implementing this schedule change, which is already in many non-DoDEA schools across the country. To continue this momentum, the HBI team is currently working with DoDEA to explore policies that would promote Recess Before Lunch throughout DoDEA elementary schools.

Evaluating promising practices across multiple factors allowed for the easy identification of the most evidence-backed, successful initiatives. Analyzing qualitative and quantitative factors in a single, standardized manner allowed for all of the practices to be considered objectively across a common framework; further, standardized assessment clarified the technical successes of the initiatives, reducing bias and other confounding factors, such as personality, that may otherwise have clouded the assessment. Ultimately, this evaluation enabled the "proven" practices that were best positioned for expansion to rise to the top and allowed for scaling efforts to begin.

Chapter 6. Installation Highlights

Every HBI location was offered a menu of evidence-based HBI initiatives for potential implementation based on initial site visits and analysis of current community health trends, existing wellness programs, and potential resource needs. Initiatives were presented to installations as part of a community health improvement process. Commanders identified priority issues and worked collaboratively with the HBI team, and with their staff, to identify the initiatives that would be most useful and appropriate for their installations. This interactive process aligns with the NACCHO MAPP community-driven strategic planning process.

This chapter describes which initiatives were implemented at each location and notes specific issues and/or highlights from the implementation experience at each location. The initiatives and promising practices themselves are described in Chapters 4 and 5; details about the initiatives are noted here only insofar as they were unique to the implementation experience at a particular HBI pilot site. The initiatives are highlighted by wedge area according to the following key:

Wedge	Color
Healthy Eating	Green
Active Living/Built Environment	Orange
Health and Wellness	Blue
Healthy Schools	Purple
Children and Families	Yellow
Tobacco Cessation	Red
Promising Practices	Grey

Agency HBI Pilot Sites

Defense Logistics Agency

As America's combat logistics support agency, the DLA provides the Army, Marine Corps, Navy, Air Force, other federal agencies, and partner nation armed forces with a full spectrum of logistics, acquisition, and technical services. DLA sources and provides nearly all of the consumable items America's military forces need to operate – from food, fuel, and energy to uniforms, medical supplies, and construction material.

DLA also supplies nearly 90 percent of the military's spare parts, manages the reutilization of military equipment, provides catalogs and other logistics information products, and offers document automation and production services to a host of military and federal agencies. Headquartered at Fort Belvoir, Virginia, DLA is a global enterprise – wherever the United States has a significant military presence, DLA is there to support.

As one of the first pilot sites to implement HBI, DLA Headquarters in Fort Belvoir undertook several initiatives (see table). DLA leadership was enthusiastic about HBI and intends to continue efforts to promote healthy eating and active living. DLA is also exploring initiatives that could be undertaken at its regional offices.

In a *summary report*[24] on its experience with HBI, DLA identified several key elements that contributed to HBI's success at DLA headquarters:

- Support of key leadership
- Creation and management of an HBI Committee to oversee efforts at DLA headquarters
- Attention to strategic communications
- Hosting kick-off event at headquarters
- Using HBI to re-energize existing programs
- Introducing new evidence-based HBI programs
- Partnering with MWR
- Measuring the impact of HBI initiatives

[24] The DLA's report about HBI is available at http://download.militaryonesource.mil/12038/MOS/Reports/DLA-HBI-Report.pdf; an accompanying video can be accessed at https://www.youtube.com/watch?v=GNdlI514liE.

Defense Logistics Agency **Location:** Fort Belvoir, Virginia **Personnel:** Approximately 6,000, of which approximately 2,500 are Active Duty military and DoD civilian employees and remainder are tenant employees.	
HBI Initiatives	
Better For You	Implemented in the McNamara Headquarters Complex (HQC) Café; well-received and expected to continue.
Farmers market (Self-Op by DLA)	2013 Season 29MAY–13NOV; 2014 Season 7MAY–29OCT 2015 Season 29APR–28OCT (estimated end) DLA expects to continue its farmers market in the future.
Smarter Food Movement	Implemented in the HQC Café. DLA will continue Smarter Food Movement efforts.
StairWELL	Implementation at this site included contests, such as Mount Everest Team Challenge.
Bikeshare	2013 Season JUN–OCT 2014 Season MAY–OCT 2015 Season APR–OCT DLA will continue this program.

Defense Health Agency Headquarters

The DHA is a joint, integrated Combat Support Agency that enables the Army, Navy, and Air Force medical services to provide medically ready service members and a ready medical force to Combatant Commands in both peacetime and wartime. The DHA supports the delivery of integrated, affordable, and high-quality health services to MHS beneficiaries and is responsible for driving greater integration of clinical and business processes across the MHS by:

- Implementing shared services with common measurement of outcomes;
- Enabling rapid adoption of proven practices, helping reduce unwanted variation, and improving the coordination of care across time and treatment venues;
- Exercising management responsibility for joint shared services and the TRICARE Health Plan; and
- Acting as the market manager for the National Capital Region (NCR) enhanced Multi-Service Market, which includes Walter Reed National Military Medical Center (WRNMMC) and Fort Belvoir Community Hospital (FBCH).

Defense Health Headquarters (DHHQ) implemented several HBI initiatives. As with the DLA Headquarters pilot site, a challenge encountered at this location was identifying a means to support not just service members but also DoD's large population of civilian employees. DoD's Office of General Counsel addressed this challenge by developing guidance concerning health and wellness programs for the entire DoD community.

Defense Health Headquarters **Location:** Falls Church, Virginia **Personnel:** Approximately 3,500 Active Duty, civilian employees, and contractors.	
HBI Initiatives	
Better For You	BFY initiative could not be implemented with the current cafeteria vendor primarily due to its limited IT production and record-keeping capabilities.
Farmers Market (Self-Op by DHHQ)	2013 and 2014 markets were successful; 2015 market MAY–OCT. There were some complaints about prices being higher than in the commissary; however prices were competitive relative to area farmers markets.
StairWELL	Began January 1, 2014 with multiple courses that ranged in difficulty. DHHQ hopes to continue StairWELL.
24-Hour Fitness	Began January 1, 2014 and will continue after HBI.
UltimateMe	UltimateMe was first introduced to the DHHQ in May of 2014. Beginning in May 2015, DHHQ joined the UltimateMe PALA+ Challenge in partnership with the President's Council on Fitness, Sports, and Nutrition to promote increased utilization of this initiative.

Army HBI Pilot Sites

Fort Bragg

The largest post in the Army by population, **Fort Bragg** was founded as a field artillery site near Fayetteville, North Carolina in 1918. It houses five major commands. Numerous facilities exist at Fort Bragg, including two exchanges, multiple DFACs, two commissaries, multiple clubs, cafés, fast food restaurants, snack bars and concessions, two bowling alleys, two golf courses, fitness centers, child development center, youth center, and a health and wellness center.

Under the guidance of installation leadership and senior leaders from tenant organizations, Fort Bragg provided a supportive environment for successful HBI implementation. Leadership indicated that even though some of the programs operated independently from one another, it was helpful when programs reinforced each other, such as the Smarter Food Movement, Go for Green®, and BFY. To further this point, Fort Bragg has around 600 existing programs, not limited to health and wellness, which often function in a disparate manner. Coordinating these programs, as was frequently possible with HBI, would allow for a more efficient use of time and resources.

For example, Fort Bragg implements a program called *Comprehensive Soldier and Family Fitness (CSF2)*[25] as part of the Army's Ready and Resilient Campaign to promote physical and psychological fitness. The goal of CSF2 is to increase resilience and enhance performance by building on five dimensions of strength: physical, emotional, social, spiritual, and family. The program is comprised of three components: online self-development, training, and metrics and evaluation. The online self-development component involves taking the Global Assessment Tool (GAT) and using the ArmyFit™ site to access experts in fields related to the five dimensions of

[25] More details can be found at: http://www.bragg.army.mil/82nd/4bct/Pages/ComprehensiveSoldierFitness.aspx

strength. The training component focuses on developing cognitive and fitness skills in conjunction, while tracking vitals during activities at a specific heart rate. Results from CSF2 are being evaluated through joint research with an Army research evaluation team and through the use of Army Resilience Training Unit Status Reporting requirements.

Fort Bragg **Location:** North Carolina (near Fayetteville) **Area:** 26.71 square miles **Population:** Approximately 140,000 including more than 50,000 Active Duty military	
HBI Initiatives	
Go for Green®	As an Army program, Go for Green®, was already being implemented at installation DFACs and will continue after HBI. The program was augmented at buildings 41832, 35103, and 25112. Building 25112 closed in November 2014.
Smarter Food Movement - DFAC	Based on recommendations from Cornell's Food and Brand Lab, changes were implemented in the DFACs. Most notably, foods were rearranged so desserts were more hidden. A separate effort to develop healthy "grab and go" items for busy service members was also successful. Smarter food movement principles were implemented at buildings 41832, 35103, and 25112.
Share our Strength Cooking Matters at the Store	Very popular program; the Fort Bragg Commissary hosted 42 tours with 209 participants. Classes were interrupted in October 2014 due to the departure of the tour coordinator. After the HBI demonstration period ended, Fort Bragg and the SOS coordinator worked with USDA's Food and Nutrition Service (FNS) regional office[26] and the state Supplemental Nutrition Assistance Program-Education (SNAP-Ed) director to continue offering the program to WIC-eligible families using existing federal funding and leveraging resources from local food banks. Share our Strength Tours were held at the South Commissary, while the cooking programs were held in one of the housing community centers. Due to popularity, this initiative will continue.
Culinary Institute of America Healthy Food Preparation Course/ Menu Renovation	Education for APF and NAF personnel was completed in July 2014. Recipes, and subsequent guide, were developed to support this initiative. There was interest in menu renovation at the DFACs, but implementation was restricted by calorie requirements and food ordering criteria. Feedback from Fort Bragg indicated interest in continuing this education and menu changes if possible.
Better For You	BFY was implemented at the Dragon Lanes bowling facility and will continue after HBI.
Farmers Market	Held in conjunction with monthly installation 5k race on a year-round basis; largely considered successful and will continue after HBI concludes.
Smarter Food Movement - MWR Foodservice	Provided recommendations to installation in November 2014. Some changes based on these recommendations may continue after HBI.
Better For You in the Commissary	DeCA used BFY logo on signs for qualifying items; provided link to BFY webpage and BFY sales flyer on commissaries.com. DeCA also created infographics, posters, shelf talkers, and ceiling danglers. Will continue post-HBI.
Smarter Food Movement - Schools	Cornell Food and Brand Lab implemented Smarter Food Movement principles in the cefeteria at Butner school at Fort Bragg. Data to quantify results is not available, but observations indicate a shift towards healthier foods being selected by students.

[26] More details can be found at: http://www.fns.usda.gov/fns-regional-offices

Commissary: DeCA Fruit and Vegetable Initiative, Smarter Food Movement Initiatives and 5210 Healthy Military Child, Family Fun Festival and Natural/Organic section	Fort Bragg commissaries held a Fun and Family Fitness Festival featuring farmers market, fitness events, and other activities. Also, Fort Bragg commissaries actively participated in the 5210 Healthy Military Child program by conducting tours of commissary produce departments for child development centers, especially during April, the Month of the Military Child. The tours aimed to educate children about the benefits and tastiness of fresh fruits and vegetables. Fort Bragg was one of four commissaries to participate in the Smarter Food Movement. Inspired by HBI, the Fort Bragg South Commissary also created a Natural and Organic Segregated/Integrated section that incorporated over 25 food categories throughout the commissary. Section markers were used to alert customers to these items (channel strips and blades).
Fitness on Request	Training for Fort Bragg fitness personnel was held in May 2015. The program was implemented in November 2015 after the renovation of the Hercules Fitness Center and will continue post-HBI.
UltimateMe	UltimateMe was first introduced to Fort Bragg in April of 2014. The installation has been promoting this initiative through the AWC on the installation and the CSF2 training facilities. Beginning in February 2015, Fort Bragg joined the UltimateMe PALA+ Challenge in partnership with the President's Council on Fitness, Sports, and Nutrition to promote increased utilization of this initiative.
Community Resource Guide	Fort Bragg already offers a web-based CRG. To bolster the usability of the site, the installation is exploring models such as San Diego's IHCP and Fort Sill's CRG. The key features offered through these models are enhanced data tracking and analysis of the site's traffic. Fort Bragg hopes to continue use of this site in the future.
Ambassadors for Health	Ambassadors for Health was introduced as an initiative at Fort Bragg in February 2014. The initiative received support from MTF leadership, which was already tackling the issue of health and wellness among hospital staff through its own initiatives.
Parity Pricing	New legislation (NDAA FY15) prohibits the sale of a tobacco product at a price below the most competitive price in the local community. Implementation of this new policy is pending. Any further action is on hold, pending a decision from the DACT.
Tobacco Counter Marketing at Point of Sale	This initiative is on hold, pending a decision from the DACT.
Tobacco Free Areas	This initiative is pending an update to the Fort Bragg Master Policy (last updated in 2011). The update will include restrictions on the use of e-cigarettes on installation. Fort Bragg will continue implementing tobacco-free areas after HBI concludes.
Fight the Enemy	Fort Bragg had no entries.
Kicking Butts for Points	Fort Bragg has decided to delay implementation until staff can identify a prize.
Alliance for a Healthier Generation Healthy School Program (HSP)	HSP worked with nine schools on post. After completing the HSP assessment, the schools implemented a number of changes. For example, there was interest in exploring ways to make it easier for kids to walk to school. The schools created action plans and updated their websites. AHG visited Fort Bragg on several occasions (March 2014, June 2014, April 2015). AFHG was implemented at the following schools: Albritton Middle School, Bowley Elementary, Butner Primary, Devers Elementary, Gordon Elementary, Hampton Primary, Irwin Intermediate, Shughart Elementary, and Shughart Middle.

Operation KidFit	Classes started in July 2014. Participant feedback was generally positive, but lack of childcare was an issue for many parents because it restricted their ability to attend classes.
Promising Practices	
Recess Before Lunch	Taking lessons learned from promising practices at other HBI locations, the HBI team brought this this program to Fort Bragg for implementation. DoDEA does not require recess at all for elementary students, but Fort Bragg is committed to implementing Recess Before Lunch to the fullest extent possible in grades 3-5 during the 2015-16 school year. Fort Bragg District leadership has said that the effort will include Bowley Elementary, Devers Elementary, Irwin Intermediate, Gordon Elementary, and Shughart Elementary. Principals will implement Recess Before Lunch as much as possible considering staffing constraints and available playground space.
Comparison of Tobacco Cessation Programs across the Services	Review of tobacco cessation programs across the Services to identify best practices. Nearly half of those who successfully completed a program based on the American Cancer Society's Freshstart tobacco-free curriculum remained tobacco-free 12 months later.
Army Wellness Center	AWCs provide integrated and standardized primary prevention programs and services that promote enhanced and sustained healthy lifestyles to improve the overall wellbeing of soldiers and family members. This initiative acted as a force multiplier for clinicians who used electronic health records to facilitate communication between the clinics and AWC. Further, this initiative provided longitudinal support to beneficiaries, which is needed to sustain behavior changes related to weight loss, nutrition and sleep.
Community Health Promotion Council	The CHPC is responsible for integrating and synchronizing health-promoting activities at the installation level; setting public health priorities, championing the base's health programs, identifying program gaps and overlap, and measuring program impact.
Impact of a Dietitian	Researched benefits associated with stationing registered dietitians on the installation, from community health, individual health, and financial perspectives.

Fort George G. Meade

Fort George G. Meade is the largest employer in the state of Maryland and has the third largest workforce among Army installations in the continental United States. It hosts 117 tenant units/organizations and is DoD's primary operational platform for cyber defense. The installation itself comprises an area of more than 5,000 acres with more than 1,200 buildings, including an exchange mall, bank, credit union, post office, commissary, dining facility, conference center, bowling alley, fitness center, and field house, among other facilities. Fort Meade also has child development and early education centers, a high school, two middle schools, and three elementary schools.

At Fort Meade, HBI implementation was limited to a relatively small subsection of the installation, mainly the Army's Garrison operation. However, future efforts to expand healthy eating, active living, and tobacco cessation programs to all tenants are possible.

HBI was very well received by Garrison Command and enjoyed the support of the community and groups like the Fort Meade Alliance. The table lists specific initiatives implemented at Fort Meade.

Fort George G. Meade **Location:** Fort Meade, Maryland **Area:** 7.9 square miles **Population:** More than 50,000 working on post including more than 14,000 Active Duty military and more than 37,000 contractor and civilian employees. Approximately 10,000 resident on post; total supported population greater than 140,000 (including dependents)	
HBI Initiatives	
Go for Green®	Implemented in the Freedom Inn dining facility; well-received and will continue in the future.
Smarter Food Movement	Various Smarter Food Movement recommendations were implemented in the Freedom Inn dining facility and Fort Meade High School cafeteria. These changes will remain after HBI.
Culinary Institute of America Healthy Food Preparation Course/ Menu Renovation	Training seminars were conducted in May 2014 for APF and NAF foodservice personnel. Recipes, and subsequent guide, were developed to support this initiative.
Better For You (Morale Welfare and Recreation)	Because the primary vendor transitioned to another company and a new point-of-sale system was introduced during the demonstration period (both changes occurred in winter 2014/2015), too few months would be available for measurement in The Conference Center at Fort Meade or The Lanes at Fort Meade.
Farmers Market (Market Manager 2014 & Self-Op 2015)	Ran successfully from May through October in 2014; running every Wednesday from June through early September (estimated end) in 2015. Significant implementation challenges posed by Public Health Command (PHC). As a result, some vendors that did not want to go through the DoD certification process chose not to participate. Once the initial 2014 market was underway, meetings were held with various members of DoD's public health community and new memoranda and guidance were issued specifically for farmers markets, which more clearly defined and supported this activity. As a result, the Fort Meade Farmers market will continue in the future.
Share our Strength Cooking Matters at the Store	Commissary tours were conducted from August 2014 through June 2015; the tours were popular because they were considered unique. Over this period, 107 tours with 1317 participants were conducted at the Fort Meade commissary. Tours will continue after HBI through the Share Our Strength, No Kid Hungry- Maryland chapter, which began leading tours after June 2015.
Commissary: DeCA Fruit and Vegetable Initiative and 5210 Healthy Military Child, Better for You at the Commissary and Family Fun Festival.	The Fort Meade commissary actively participated in the 5210 Healthy Military Child program by providing tours of the produce departments for child development centers, especially during April, the Month of the Military Child. The tours educated children on the benefits and tastiness of fresh fruits and vegetables. Fort Meade also held a Fun and Family Fitness Festival featuring a farmers market, fitness events, and other activities. DeCA used the BFY logo on signs for qualifying items; it also provided a link to BFY webpage and BFY sales flyer on commissaries.com and developed infographics, posters, shelf talkers, and ceiling danglers. Inspired by HBI, the Commissary also created a Natural and Organic Segregated/Integrated section that incorporated over 25 food categories throughout the commissary. Section markers were used to alert customers to these items (channel strips and blades). These changes will continue after HBI.
24-Hour Fitness	Funding for 24-Hour Fitness was secured in late 2014; implementation was scheduled for fall 2015 in the Murphy Field House.
Fitness on Request	The equipment was installed in the spring of 2015 and fitness instructors used it through June 2015. The equipment was made available for the general public beginning July 2015. Fort Meade will continue to offer Fitness on Request in the future.

Alliance for a Healthier Generation School Initiatives	Seven Fort Meade schools participated. Pershing Hill Elementary is working with the Fort Meade Alliance to develop a prototype program to become an Anne Arundel County Public Schools Wellness School of Distinction. The plan is to develop a prototype that can be shared with all Fort Meade schools. Pershing Hill Elementary was selected as a Wellness School of Distinction from the Alliance for a Healthier Generation. Macarthur Middle is focusing on staff wellness and has added two items to its action plan. Manor View Elementary is working with staff to find alternatives to withholding recess as a form of punishment due to the connection between physical activity and academic achievement. Meade Heights Elementary is working to increase the availability of before- and after-school physical activity opportunities. Meade Middle is focusing on staff wellness and supporting staff with modeling healthy eating and physical activity behaviors. Both Pershing Hill and Meade Heights Elementary Schools have been awarded the Bronze National Healthy Schools Award for the 2014–2015 school year and they plan to keep working on this initiative post-HBI.
UltimateMe	UltimateMe was first introduced to Fort Meade in April of 2014. The installation has been promoting this initiative through the AWC and at Kimbrough Ambulatory Care Center. Beginning in February 2015, Fort Meade joined the UltimateMe PALA+ Challenge in partnership with the President's Council on Fitness, Sports, and Nutrition to promote increased utilization of this initiative.
Community Health Promotion Team	The Community Health Promotion Team (CHPT) brings together key stakeholders across the tenant organizations on the installation in order to integrate and synchronize health-promoting activities. CHPT continues to operate and briefs regularly with the installation commander and the Military District of Washington (MDW) commander. The Community Health Promotion Team at Fort Meade reports to the CHPC at the MDW command at Fort McNair.
Community Resource Guide	The web-based CRG at Fort Meade is in development. The Community Health Promotion Team is exploring features from other CRGs. Ft. Meade is looking at an app-based solution currently being used at Fort Rucker. This tool will not replace the CRG at the moment but will help promote programs.
Ambassadors for Health	Baseline assessment was completed in September 2014.
Holly-Graham	Set up in August 2014 in the Fitness Center. Holly-Graham was at the Fort Meade commissary for a few weeks in September 2014 with specific commissary messages.
Parity Pricing	New legislation (NDAA FY15) prohibits the sale of a tobacco product at a price below the most competitive price in the local community. Implementation of the new policy is pending. Any further action is on hold until the DACT issues findings.
Tobacco-Free Areas	Army regulation 600-63 prohibits the use of tobacco products in all Army-occupied workplaces, except for designated smoking areas, which are to be located at least 50 feet from common building doorways. Garrison command policy No. 63, which was released in late January 2015, prohibits the use of vapor producing devices, or e-cigarettes, within 50 feet of any government buildings on post. Starting July 16, 2015, The Garrison Tobacco Free MTF Campus, includes all Garrison HQs and MEDCOM buildings, not just Kimbrough Ambulatory Care Center (KACC).
Tobacco Counter Marketing at Point of Sale	This initiative is on hold, pending a decision from the DACT.
Fight the Enemy	Competition winners were announced on 11/20/14. Fort Meade had no entries.
Kicking Butts for Points	The promotion for Kicking Butts for Points began 2/23/15. The text-message based trivia contest ran through 3/30/15. No participants from Fort Meade enrolled.

Promising Practices	
Army Wellness Center	First AWC was developed due to a need identified by CHPC. AWCs Provide integrated and standardized primary prevention programs and services to soldiers and their families. Members of the community are entitled to a standard health assessment that includes body composition test, metabolic rate test, fitness test, and nutrition and sleep information, and a 90-day follow-up.
Impact of Dietitian	Researched benefits associated with stationing registered dietitians on the installation, from community health, individual health, and financial perspectives.
Evaluation of Weight Remediation Programs Across the Services: Dump Your Plump	Annual weight loss competition harnesses the power of prize motivation and New Year's resolutions. This Program is run by the Director, Family and MWR and competitors are given information about the AWC as part of the program.
Fort Meade Alliance (FMA) and Fort Meade Covenant Council (FMCC)	The FMA is a 501(c)4 non-profit independent community membership organization created to promote and support Fort Meade, its 117 government agencies and organizations and surrounding areas as an economic asset. The FMCC is comprised of the installation commander and leaders of local community organizations and provides a forum for enhanced communication between the installation and key community partners. Coordination between the FMA and FMCC serves to promote Fort Meade and increase transparency, communication and community action.
Community Health Promotion Council	At Fort Meade, the CHPC was established as a Community Health Promotion Team in a network with of other CHPTs in the area that reported to a single umbrella CHPC. The larger council is responsible for integrating and synchronizing health-promoting activities at the region level; setting public health priorities, championing the region's health programs, identifying program gaps and overlap, and measuring program impact.

Fort Sill

Fort Sill is a U.S. Army post in Lawton, Oklahoma, about 85 miles southwest of Oklahoma City. Originally established in 1869 to protect settlers in Texas, Fort Sill later served as home to one of the Army's largest field artillery units. Its role has continued to evolve – today, the field artillery unit has been joined by the air defense artillery and electronic warfare branches to create the Fires Center of Excellence.

Fort Sill leadership was strongly supportive of HBI from the beginning and successfully implemented a number of HBI initiatives (see table). For example, Fort Sill's Geronimo Road Elementary School became the first school with a large military population to achieve the Alliance for a Healthier Generation's "bronze" award in 2014; with further efforts to improve nutrition and physical activity, Geronimo Road Elementary reached the "silver" award level in 2015.

In addition to its school-based initiatives, Fort Sill's child development centers revamped their menus to increase nutritional density and the MWR director led a team effort to standardize child development center menus into a six-week cycle. Since implementing these changes, the centers have seen a reduction in behavioral issues, realized cost savings, and increased customer satisfaction. Since 2006, Fort Sill has also been participating in a community coalition to combat childhood obesity called Fit Kids Coalition. This group has focused on implementing programs like Safe Routes to School; it has also looked to expand playgrounds, sidewalks, and opportunities for outdoor recreation. In June 2015 Fort Sill introduced the Kurbo initiative, a web-based, youth-focused active living and nutrition intervention. By reaching out to parents through a variety of venues, including through presentations at the school age center and flyers distributed at child development centers, fitness centers, community centers, bowling alleys, and other venues, the Kurbo team was able to enroll 138 families by early August 2015. Preliminary results show that families who are engaged in the program are developing healthier eating patterns, exercising more, and have started to lose weight. Parents appreciate Kurbo's help in improving their child's health. A full report on the Kurbo pilot is forthcoming. To further promote healthy eating, Fort Sill is also interested in pursuing the *Wholesome Wave Fruit and Vegetable Prescription program*[27] and the Double Couple Value program,[xxix] which allows consumers to increase their produce buying power. Fort Sill's MWR staff has had several conference calls with Wholesome Wave to explore Fruit and Vegetable Prescription.

[27] More details can be found at: https://www.wholesomewave.org/our-initiatives/fruit-and-vegetable-prescription-program/

Fort Sill **Location:** Lawton, Oklahoma **Area:** 146 square miles **Population:** Approximately 9,000 Active Duty military; 3,000 retirees; 7,000 students; 7,000 civilian employees and contractors; 63,000 family members and others.	
HBI Initiatives	
Go for Green®	Implemented at all 4 DFACs (Bldgs 3720, 2755, 5684 & 5965/6); will continue after HBI.
Smarter Food Movement – DFAC	Implemented at Garcia DFAC only
Share our Strength - Cooking Matters at the Store	CMATS tours were provided in the commissary and via pop-up model. There were 39 tours with 303 participants at the Fort Sill commissary. Fort Sill will work to continue these tours after HBI concludes.
Culinary Institute of America Healthy Food Preparation Course/ Menu Renovation	Culinary skills training seminars were conducted in June 2014 for APF and NAF foodservice personnel. Recipes, and subsequent guide, were developed to support this initiative. Fort Sill expressed interest in continuing this initiative in the future.
Better For You (Morale, Welfare, and Recreation)	Launched in January 2015 at Mulligans & Strike Zone; will continue in the future.
Commissary: DeCA Fruit and Vegetable Initiative; Family Fitness Festival; 5210 Healthy Military Child	The Fort Sill commissary actively participated in the 5210 Healthy Military Child program by conducting tours of the produce departments to child development centers, especially during April, the Month of the Military Child. The tours educated children about the benefits and tastiness of fresh fruits and vegetables. The Fort Sill commissary held a Fun and Family Fitness Festival featuring farmers market, fitness events, and other activities.
Fitness on Request	Equipment received and installed by January 2015 at Goldner Fitness Center. The equipment will continue to be used after HBI.
UltimateMe	UltimateMe was first introduced to Fort Sill in May 2014. The installation has been promoting this initiative through its Fires Center of Excellence social media outlets and the FMWR office. Beginning in February 2015, Fort Sill joined the UltimateMe PALA+ Challenge in partnership with the President's Council on Fitness, Sports, and Nutrition to promote increased utilization of this initiative.
Ambassadors for Health	Assessment was initiated but not completed. No further action is expected
Holly-Graham	Implemented but eventually discontinued because of negative feedback.
Tobacco Counter Marketing at Point of Sale	This initiative is on hold, pending a decision from the DACT.
Tobacco-Free Areas	Recent legislation banning all tobacco products from city property in Lawton, Oklahoma, together with CVS's recent decision to end the sale of tobacco in their stores has inspired the Fort Sill community to change tobacco policies. The CHPC has organized a Tobacco Working Group to draft policy to ban tobacco use in various "zones" across the installation. The most recent news is that the Commanding General has approved the policy's first zone targeting playgrounds and parks. Fort Sill will continue to work to enforce tobacco-free areas.
Kicking Butts for Points	Promotion began 2/23/2015. The text-message based trivia contest will run through 3/30/2015. Among HBI pilot sites, Fort Sill had the most participants for this program: 79 enrollees.

Fight the Enemy	Competition winners were announced on 11/20/14. Fort Sill had five entries, the most of any HBI pilot site, and would like to see this initiative continue.
Alliance for a Healthier Generation School Initiatives	Technical workshop completed 1/5/15. Two Fort Sill schools participated; one in particular, Geronimo Road Elementary School, was awarded bronze status in the 2013-2014 school year, the first school with a high military population to achieve this designation. After further improvements in nutrition and physical activity, Geronimo Road E.S. achieved silver status by the next school year (2014-2015). HBI leader Brenda Spencer-Ragland has challenged all surrounding schools to strive for bronze status and will continue to help currently participating schools work toward gold status.
Operation KidFit	Offered through Fort Sill's MWR office as an extension of the local community's Fit Kids Coalition of Southwest Oklahoma (FKSO). FKSO has taken a comprehensive approach to reaching children where they live, learn, and play in order to meet two goals: increase physical activity and promote healthy eating habits. Classes started in July 2014.
Kurbo	Kurbo was introduced at one HBI pilot site, Fort Sill, in June 2015. While it was a late addition to HBI, the decision to implement Kurbo at Fort Sill was motivated by DoD leadership's interest in exploring whether a dynamic and web-based, youth-focused active living and nutrition intervention could complement other initiatives already underway. A total of 138 members participated in the pilot program. Ages ranged from 3 to 69 years of age with significant membership coming from participants below 18 years of age. Engaging with coaches, families were able to see positive behavior changes in both diet and exercise, weight loss, and overall improvement in health. The program saw a particular change in behavior for eating red foods and customer satisfaction with the program was high. Personalized coaching sessions proved to be powerful interactions in creating and reinforcing these behaviors. To further the success of Kurbo and HBI, efforts in ensuring first contact between coaches and families could be improved. Marketing could be improved by email campaigns aimed towards recruiting children between the ages of 8 and 18. Because the recruitment began over the summer months, children's schools were out of session and could not be used as points of access for Kurbo and interested families.
Promising Practices	
Community Health Promotion Council	Council will integrate and synchronize health-promoting activities at the installation level, set public health priorities, champion health programs, identify program gaps and overlap, and measure impact.
Community Resource Guide	An online, "one-stop shop" that describes all of the community resources available at Fort Sill in a standardized format. Includes convenient features, such as an interactive map of the most commonly used resources and an intuitive search capability. Resources listed cover support through all levels, from initial entry through basic training, transitions, employment, deployment, and exit. Site is updated every 6 months and embedded into the Fort Sill website for easy user access. Google Analytics is being used to track traffic on the site over time; users may also submit feedback through a direct link on the site.
Leadership Driven Fitness Initiative: Commander's Wellness Challenge	A weight loss and healthy living challenge in which participants pledge to lose 15 pounds during a 3-month timeframe and successfully complete two 5K Walk/Run Events at Fort Sill. This program aims to highlight command support and engage large segments of the Fort Sill population, including civilians.
Army Wellness Center	First AWC was developed due to a need identified by CHPC.
Comparison of Tobacco Cessation Programs Across the Services	As of January 2015, all soldiers enrolled in Basic Training and Advanced Individual Training (AIT) are being surveyed concerning their tobacco-related attitudes and behaviors. This will provide a baseline for developing future programs.

Army National Guard Base, Camp Dodge

Camp Dodge is located in the city of Johnston, Iowa, near Des Moines; it currently serves as the headquarters of the Iowa National Guard and has a permanent, full-time complement of approximately 400 personnel. The table summarizes HBI initiatives and promising practices implemented at Camp Dodge.

Army National Guard Base, Camp Dodge **Location:** Johnston, Iowa **Area:** 8.6 square miles **Population:** Approximately 900. Of these 900, there are approximately 400 full-time military personnel and mix of 500 traditional Guardsmen and civilian employees.	
HBI Initiatives	
Warrior Well	Fully adopted, with final in-person session conducted in May 2015. To date, Camp Dodge participants have lost an average of 4.5% body fat and 4.1 lbs. of fat mass; additionally, they have increased their APFT pass rate by 32% (from 55% pass rate to 87% pass rate). The majority of Warrior Well participants were from the 400 full-time military personnel assigned to Camp Dodge. Camp Dodge had a positive response to Warrior Well and would be interested in continuing this program in the future if possible.
UltimateMe	UltimateMe was introduced to Camp Dodge leadership in August of 2014. This initiative was tested but leadership eventually decided not to pursue it because of the lack of a mobile access component. Given the dispersed and disparate nature of the National Guard and Reserve populations, there was concern about how users would access the platform if they couldn't use DoD computers on personal time. Leadership also noted that given the relatively young age of the Guard's population, other commercially available health and wellness mobile apps might be more popular. In follow-up site visits, the installation emphasized the challenges of reaching a part-time population and of changing the environment and the health behavior of that population.

Air Force HBI Pilot Sites

Mountain Home Air Force Base

Mountain Home Air Force Base is a United States Air Force installation located in southwestern Idaho. It is the home of the 366th Fighter Wing (366 FW), which reports to Air Combat Command (ACC). HBI was received positively by the Mountain Home community and enjoyed strong support from base leadership. In addition to the programs listed in the table, base leadership has been working with the civil engineering squadron to develop a walk/run/bike path on the installation. There is strong interest in implementing this plan and OSD MC&FP has provided limited funding in support of this effort.

Mountain Home Air Force Base **Location:** Elmore County, Idaho **Area:** 9.4 square miles **Population:** Approximately 4,700 military and civilian; 4,600 family members.	
HBI Initiatives	
Go for Green®	Go for Green® was implemented at the Wagon Wheel Dining Facility. The program is well known but there is an impression that many items are labeled red. Dining facility operators feel there is little flexibility to change the menu. The DFAC reports that it can add a "local favorite" dish to the menu a few times a week, but regular items and the menu rotation are prescribed by the Air Force, with recipes derived from the Armed Forces Recipe Service database. More comprehensive menu changes would need to happen at a higher level in the Air Force, but Mountain Home is interested in continuing Go for Green®.
Share our Strength, Cooking Matters at the Store	Conducted at the Mountain Home commissary, CMATS tours were popular and integrated well with other programs including Group Lifestyle Balance and another existing weight loss program, "Better Bodies, Better Life." There have been 70 tours and 469 participants at the Mountain Home commissary. The $10 food coupon was a popular incentive. Mountain Home took over running the tours in March 2015 with assistance from The Smarter Food Movement's local lead partner, the Idaho Foodbank, will continue to provide tours in the future.
Smarter Food Movement	Smarter Food Movement report was provided to the installation, which then considered actionable items from the report. There is interest in incorporating smarter food layouts at DFACs, but funding is a major barrier. The base reports including recommendations from the Smarter Food Movement report in its plans for a new DFAC project
Better For You	Implemented at the Bowling Center. Strikers Grill redesigned its menu to highlight BFY items, and will keep the changes after HBI.
Culinary Institute of America Healthy Food Preparation Course/ Menu Renovation	Education for APF and NAF personnel was completed in June 2014. Recipes, and subsequent guide, were developed to support this initiative.
Commissary: DeCA Fruit and Vegetable Initiative, 5210 Healthy Military Child; Family Fun Festival	The Mountain Home commissary actively participated in the 5210 Healthy Military Child program by providing tours of the produce departments to child development centers, especially during April, the Month of the Military Child. The tours educated children on the benefits and tastiness of fresh fruits and vegetables. Mountain Home held a Fun and Family Fitness Festival featuring farmers market, fitness events, and other activities.
24-Hour Fitness (measurement only)	Implemented at the Mountain Home Fitness Center, numerous issues arose in connection with the Center's 24-Hour fitness hardware systems — in particular, the CAC reader was inoperable for an extended period of time. Accurate measurement data are not available, but it appeared that 45 people, on average, used the 24-Hour area after the main fitness center closed. Mountain Home is planning on purchasing more equipment to make the operation even better and plans to continue offering 24-Hour fitness.
Fitness on Request (measurement only)	Implemented at the Mountain Home Fitness Center, numerous issues arose in connection with Fitness on Request hardware systems. Accurate measurement data for this initiative are unlikely to become available, but the base reports that the program was not well utilized. Nonetheless there is interest in continuing the initiative to try and improve utilization.
Indoor Children's Gym and Playground	HBI funding was used to build an indoor playground. Approximately, 3,500 children used the indoor gym the first 30 days it was open. Indoor space for physical activity is especially valuable in the wintertime, where the nearest off-base option is more than 50 miles away.

UltimateMe	UltimateMe was first introduced to Mountain Home in April of 2014. In February 2015, Mountain Home was able to participate in the UltimateMe PALA+ Challenge in partnership with the President's Council on Fitness, Sports, and Nutrition to promote increased utilization of this initiative. Mountain Home opted to hold off on promoting this initiative until access was made available through mobile devices. In June 2015, a mobile friendly version was launched.
Holly-Graham	Program was discontinued based on negative feedback.
Group Lifestyle Balance™	Among the most successful initiatives at this location, this comprehensive 12-week long program is designed for individuals suffering from pre-diabetes, overweight, obesity, hypertension, etc. The 68 patients who participated in the program lost, on average, 2.3% of their body weight over the course of two months. Mountain Home hopes to continue this initiative. See: www.health.mil/News/Articles/2015/01/07/Program-Brings-Balance-to-Lifestyles
Parity Pricing	New legislation (NDAA FY15) prohibits the sale of a tobacco product at a price below the most competitive price in the local community. Implementation of this new policy is pending. Any further action is on hold, pending a decision from the DACT.
Tobacco Counter Marketing at Point of Sale	This initiative is on hold, pending a decision from the DACT.
Fight The Enemy	Competition winners were announced on 11/20. Mountain Home did not have an entry.
Alliance for a Healthier Generation School Initiatives	Limited success engaging the local school district, despite initial interest. Even with numerous attempts to reengage, the local school district has not followed through on implementation.
Let's Go 5210	Mountain Home has focused its efforts on providing individual-level 5210 services to children and to large groups through networking activities. One of their successful collaborations is connecting with local organizations such as Be Outside Idaho, which allows the H2H team to expand materials and resources for participants in the 5210 Healthy Military Children program. Outreach completed to more than 500 families, as well as community centers and organizations, and health care professionals. Through pediatrician referrals, the H2H team has conducted over 240 individual consults with families. Initiative champions and Service leads are working together to identify viable outcome measures for this initiative, which will continue in the future.
Promising Practices	
Impact of Tobacco-Free MTF Campus Policy	Understanding the impact of policies to eliminate tobacco use on MTF campuses, which promote the hospital as a healthy environment and improve air quality for all. Following implementation of its tobacco-free MTF campus policy in November 2012, Mountain Home's tobacco use rate dropped 0.8% within three months, which represents the largest decrease of any quarter in 2012.
Comparison of Tobacco Cessation Programs Across the Services	At this location, 96 people in 2014 quit tobacco resulting in the highest quit rate in the ACC and one of the highest in the Air Force. Between 2010 and 2014, the percentage of tobacco users among the active duty population at Mountain Home has declined by over one-third (36% to 23.2%). Dorms are smoke-free areas and the number of designated tobacco use areas on the base has been reduced from 170 to about 45.
Impact of Dietitian	Researched benefits associated with stationing registered dietitians on the installation, from community health, individual health, and financial perspectives. Additionally, there was a dietitian hired at Mountain Home as a result of HBI.

March Air Reserve Base

March Air Reserve Base, formerly known as March Air Force Base (March AFB), is located in Riverside County, California between the cities of Riverside and Moreno Valley. It is home to multiple units of the Air Force Reserve Command and to units from the Army Reserve, Navy Reserve, Marine Corps Reserve, and the California Air National Guard.

Since March is a reserve base, the reservists and their families live off base and in the surrounding areas. HBI has been well received and has benefited from extensive coverage in the local paper. For example, March successfully modified its club menu, conducted a number of fitness events, and added several members to the original HBI March Team. There is interest in implementing further improvements and in incorporating concepts from programs like the Smarter Food Movement, Go for Green®, and Menu Renovation. March is also interested in continuing Culinary Institute of America training on healthy food preparation.[28]

March Air Reserve Base **Location:** Riverside County, California **Area:** 12 square miles **Population:** Approximately 5,000 Active Duty military; 1,750 civilian employees.	
HBI Initiatives	
Smarter Food Movement	March leaders successfully used the Smarter Food Movement report, which contained a number of recommendations, to apply for a $200,000 grant to implement kitchen renovations at the Back Street Café.
Culinary Institute of America Healthy Food Preparation Course/ Menu Renovation	Training seminars were conducted in September 2014 for APF and NAF foodservice personnel from the Back Street Café and Hap Arnold Club. They were widely considered helpful. Recipes, and subsequent guide, were developed to support this initiative, which the installation hopes to continue.
Better For You (Morale, Welfare, and Recreation)	Launched 1/1/15 at the Back Street Café, this initiative was very successful and allowed March to implement a substantial revamping of its menu. In addition, March ran 90-day promotions for BFY food items–if these items sold well, they replaced less healthy items. March plans to continue improving its menu in the future.
Commissary: DeCA Fruit and Vegetable Initiative; Better for You are the Commissary; 5210 Healthy Military Child and Family Fitness Festival	DeCA used BFY logo on signs for qualifying items; provided links to BFY webpage and BFY sales flyer on commissaries.com; and created infographics, posters, shelf talkers, and ceiling danglers. The March commissary participated in the 5210 Healthy Military Child program by providing tours of the produce departments to child development centers, especially during April, the Month of the Military Child. The tours educate children on the benefits and tastiness of fresh fruits and vegetables. March also held a Fun and Family Fitness Festival featuring farmers market, fitness events, and other activities.
Fitness on Request	The chief implementation barrier for this initiative was finding a permanent location to hold classes. Instead, March implemented a portable system that could be set up quickly at the fitness center and easily moved into different spaces as they became available. This program will continue to be offered in the future.
UltimateMe	UltimateMe was first introduced to March ARB in May 2014. The installation provided feedback that users experienced difficulty with accessing the UltimateMe platform.
Community Resource Guide	The HBI Team reviewed the existing Community Resources Guide and developed recommendations based on lessons learned from HBI. March ARB opted to not pursue further changes in the existing community resources guide.

[28] Like the DLA, March developed a video to document its HBI implementation efforts: https://youtube/Ru02t2BFJIE.

Tobacco Counter Marketing at Point of Sale	This initiative is on hold, pending a decision from the DACT. At present, March does not have a specific installation policy on tobacco. However, March will be implementing recent Air Force-wide changes in policy to discourage tobacco use.
Tobacco Free Areas	March ARB was able to inventory the number of tobacco use areas by conducting a survey of facility managers. The survey identified over 45 tobacco use areas around buildings. Given current policies, March ARB was unable to expand upon current policies to restrict tobacco use areas. March ARB specifically noted issues with incidence of e-cigarette use indoors and around buildings and requested OSD-level support for guiding policies on electronic tobacco products. There is interest in continuing work to expand tobacco-free areas.
Promising Practices	
Value of Embedded Physical Training Leaders (PTLs)	High-impact program that embeds expert training leaders with command groups to lead and improve physical training for reservists. The HBI team studied the impact of embedding PTLs into Reservist units. HBI POC, Lt Col Curtis, directed and made available through the COI several HBI surveys that looked at Reservists' attitudes and satisfaction with fitness and nutrition on base.

Yokota Air Base

Yokota Air Base is a United States Air Force base in Fussa, Japan, one of 26 cities in the Tama Area of Western Tokyo. It is home to the 374th Airlift Wing, which currently operates airlift missions throughout East Asia. HBI was well received at Yokota, which was already a leader in implementing a variety of health initiatives. In fact, a number of the promising practices identified through HBI originated at Yokota. For example, Yokota implemented a number of homegrown initiatives such as Warrior Run and Unit Fitness Scorecards; the base also put a gym in its medical facility. It was also a leader in implementing Recess Before Lunch and Club 2150, which have both received the attention of leadership at DoDEA headquarters and have the potential to be extended to other sites. Most notably, various organizations on the base have been able to coordinate and partner effectively – for example, Club 2150 involves volunteers at the fitness center, elementary schools, hospital, etc.

Yokota Air Base **Location:** Fussa, Japan **Area:** 14 square miles **Population:** Approximately 3,800 Active Duty military; 2,900 civilian employees and contractors; 4,100 military family members.	
HBI Initiatives	
Smarter Food Movement - DFAC Only	Report delivered from Cornell on DoD's Schools. Report did not include recommendations for MWR foodservice venues. Cafeterias and Samurai Café Dining Facility will decide how the base will take action.
Go for Green®	This program pre-dated HBI and was already in place at the Samurai Café Dining Facility. It will continue after HBI concludes.
Culinary Institute of America's culinary skills training seminars /Menu Renovation	The Culinary Institute of America's culinary skills training seminars were conducted in July 2014 for APF and NAF foodservice personnel from the Enlisted Club and the Samurai Café Dining Facility. Recipes, and subsequent guide, were developed to support this initiative, which Yokota leadership hopes to continue.

Better For You (Morale, Welfare, and Recreation)	Launched 1/1/15 at Charlie T's, one of several dining venues within the Enlisted Club. Depending on the season, 3-4 items met the eligibility criteria to be labeled "BFY." Some challenges arose with the PoS reporting system
Commissary: DeCA Fruit and Vegetable Initiative; 5210 Healthy Military Child and Family Fun Festival	The Yokota commissary held a Fun and Family Fitness Festival featuring farmers market, fitness events, and other activities. The Yokota commissary participated in the 5210 Healthy Military Child program by providing tours of the produce departments to child development centers especially during April, the Month of the Military Child. The tours educate children on the benefits and tastiness of fresh fruits and vegetables.
Fitness on Request	This initiative pre-dated HBI at the Yokota AB Fitness Center. Utilization ebbs and flows monthly and user feedback has been positive. It will continue post-HBI.
24-Hour Fitness	Added hours at the fitness center were greatly appreciated, especially by shift workers who otherwise could not access fitness facilities because of work conflicts. But there was some frustration that the facility was only open to service members, and not to family members. 24-Hour Fitness will continue after HBI.
StairWELL	Initiative implemented. Results are found in Chapter 8.
UltimateMe	UltimateMe was first introduced to Yokota AB in March 2014. General connectivity issues exist on the installation—these caused problems with access to the UltimateMe site.
Ambassadors for Health	Work is underway with initiative champions to identify action items for improving Wellness Scorecard scores and to assess the CACHE tool as an assessment to be included in the Ambassadors for Health initiative.
Fight the Enemy	Competition winners were announced on 11/20/14. Yokota had one entry, which was recognized with the "Special Effects" award. Yokota leadership hopes this initiative continues in the future.
Kicking Butts for Points	This initiative is not viable at Yokota because it is managed through text messaging. Given that Yokota is overseas, users would incur large roaming charges.
Promising Practices	
Recess Before Lunch	Recess Before Lunch at Yokota AB has been very well received by parents, teachers, and students. The initiative spread organically to other DoDEA schools in Japan, and through HBI DoDEA is exploring ways to promote the initiative across its elementary schools.
Inventory and Decrease Designated Tobacco Areas	This policy takes the cooperation and dedication of many different components on base, most notably facility managers. Yokota AB has been very successful in implementing this policy; the Health Promotions team worked with the Civil Engineering Squadron to create a DTA map which includes a plan for strategically reducing the number of DTAs on the installation over time.
Club 2150	Club 2150 has shown positive results in terms of improving health attitudes, behaviors, and physical fitness at several elementary schools on Yokota AB. The installation is now exploring an extended program in coordination with the Youth Center and Pediatrics Clinic.
Comparison of Tobacco Cessation Programs across the Services	Tobacco cessation program at Yokota AB consists of a weekly 1-hour group class for four weeks and is based on Freshstart curriculum from American Cancer Society. The program supports individuals through group classes and personalized follow-up in their journey towards tobacco-free living. The inclusion of a Military Family Life Counselor (MFLC) in the sessions fosters a sense of community. In 2014, of the 31 individuals who successfully completed program, 85% remained tobacco-free 6 months later.

Navy HBI Pilot Sites

Naval Submarine Base New London

Naval Submarine Base (SUBASE) New London is the Navy's primary East Coast submarine base (it is also known as the "Home of the Submarine Force"). Located in Groton, Connecticut, the 687-acre base is home to more than 70 tenant commands and employs more than 9,500 Active Duty, Reserve, and civilian personnel.

HBI was well received at SUBASE New London, which was already implementing a number of programs to promote health and wellness within the base community – some of these existing efforts were re-branded under HBI.

In addition to the HBI initiatives listed in the table, SUBASE New London implemented several other programs with a similar focus on improving health and wellness:

- **Family Fitness Room** – This Navy initiative allows parents to work out while watching their kids play. It addresses the need for childcare while providing opportunities for parents to be active.
- **Suitable Substitute SuperBowl Party** – Inspired by the Culinary Institute of America workshop, the base provided a training on how to provide healthy substitutes for SuperBowl snacks.
- **Base Wellness Committee** – This group pre-dated HBI, but HBI implementation invigorated its efforts.
- **Healthy Heart Fair** – In February 2015, SUBASE New London held a fair that involved the dietitian, hospital staff, other medical staff, and fitness staff. The fair offered recipe makeovers and information about stress management, massages, and heart health.
- **Walking/Running Routes** – Base leadership created four running/walking routes on base and publicized these routes within the military community.

Naval Submarine Base New London **Location:** Groton. Connecticut **Area:** 3.5 square miles **Population:** Approximately 6,500 military personnel; more than 300 drilling Reservists; approximately 12,000 family members; approximately 12,000 retirees; 1,000 civilian employees; more than 1,000 civilian contractors.	
HBI Initiatives	
Go for Green®	Fully implemented at Cross Hall Galley. Pre-dates HBI and will continue post-HBI.
Smarter Food Movement	Smarter food Movement report provided to installation MWR foodservice venues including Goose Run Snack Bar, Reunions Deli and Bellisimo's Café.
Share Our Strength – Cooking Matters at the Store	Fully implemented, with tours conducted at the Commissary and via the Pop-Up model. Very well received; tours were integrated with the Mission Nutrition program. New London had 41 tours with 275 participants. Installation leadership is interested in continuing the program but lacks access to the $10 gift card incentive and is not in a position to conduct tours as frequently without a coordinator.

Culinary Institute of America Healthy Food Preparation Course/ Menu Renovation	Training was conducted in September 2014 at the Cross Hall Galley for APF and NAF foodservice personnel. Program generated considerable enthusiasm and prompted efforts to experiment with menus. It helped that a Commander Navy Installations Command (CNIC) person was on loan to the installation; in theory such a person could rotate to other installations as well. Feedback indicated interest in regular recurrences of the workshops, to address staff turnover. Recipes, and subsequent guide, were developed to support the initiative and will be used in the future.
Better For You (Morale, Welfare, and Recreation)	Launched 1/1/15 at Belissimo's Café and Reunion's Deli. MWR leaders would like to pair this program with the Navy's Smart Receipt Program, which alerts customers to calorie and nutrient content and suggests healthier alternatives.
Farmers Market	Operated by privatized housing contractor (branded outside of HBI)
Commissary: DeCA Fruit and Vegetable Initiative, Family Fun Festival and 5210 Healthy Military Child	New London held a Fun and Family Fitness Festival featuring farmers market, fitness events, and other activities. The New London commissary participated in the 5210 Healthy Military Child program by providing tours of the produce departments to child development centers, especially during April, the Month of the Military Child. The tours educate children on the benefits and tastiness of fresh fruits and vegetables.
Fitness on Request	System was installed April 2015 and will continue to be used in the future.
UltimateMe	The installation has been promoting this initiative through the Navy Exchange on the installation. Beginning in February 2015, New London joined the UltimateMe PALA+ Challenge in partnership with the President's Council on Fitness, Sports, and Nutrition to promote increased utilization of this initiative. In addition, UltimateMe was used as part of the Biggest Loser challenge. All Biggest Loser participants asked to participate in Ultimate Me to see how their movement changed over the time of the challenge.
Community Resource Guide	Base leadership hopes to continue this initiative post-HBI.
Community Health Promotion Council	Base leadership hopes this effort will continue.
Ambassadors for Health	Completed baseline assessment 9/2014.
Holly-Graham	Holly Graham was at the New London commissary for four months with specific commissary messages and received positive comments from patrons. In September 2014, Holly-Graham was set up in Morton Hall at New London. The image and voice of the avatar was not well received by small children and some adults in this location. The possibility of shipping Holly-Graham to Europe Regional Medical Command (ERMC) was being explored as ERMC had expressed interest in the display.
Tobacco Counter Marketing at Point of Sale	This initiative is on hold, pending a Defense Tobacco Advisory Council decision.
Tobacco-Free Areas	The installation provided maps to locate areas where children live, learn, and play and successfully reduced DTAs by two when the MTF became tobacco-free. Additional changes ran into opposition.
Parity Pricing	
Kicking Butts for Points	Promotion for Kicking Butts for Points began 2/23/15. The text-message based trivia contest ran through 3/30/15.

Fight the Enemy	Competition winners were announced on 11/20/14. New London had one entry. Inspired by this initiative, the youth center put together a "Walking Lung" life-size diorama of a smoker. Visitors walked through and stopped in different areas to experience how difficult life would be as a heavy smoker. (Jumping jacks with straw in mouth, etc.). Hospital staff brought people to talk about harmful effects. Local school nurses were involved and were so impressed they sent local schools to visit as field trips. Base leadership hopes to continue this initiative in the future.
Promising Practices	
Impact of Dietitian	The installation has a dietitian who plays a major role in the implementation of a whole set of nutrition/fitness/wellness programs. Having conducted commissary tours for Cooking Matters, the dietitian will maintain the relationship with the commissary after HBI's conclusion.
Baby Hotwheels	This workout class provides a free and convenient opportunity for new parents to get in shape and meet others without hiring a childcare provider. The class includes circuit training, strength training, and core workouts and meets year-round, engaging an average of 15-25 adults (with 1-2 children each) per session. The classes also help connect participants to other health and wellness resources on base, such as the registered dietitian, commissary tours, and healthy cooking tips.
Impact of Tobacco-Free MTF Campus Policy	Understanding the impact of policies to eliminate tobacco use on MTF campuses, which promote the hospital as a healthy environment and improve air quality for all.
Mission Nutrition	A standardized, science-based 16-hour course focused on improving nutritional knowledge and awareness. The course is delivered by MWR and culinary specialists who receive a 4-day training delivered by a registered dietitian. Well-received. This 8-week program measured body composition and conducted a physical readiness test. Participants were measured once per week during a weekly class (reading labels, managing stress, nutrition, etc.). Ultimate Me was used to self-report at the beginning and end of the program
Functional Fitness Training (NOFFS)	An evidence-based performance tool that addresses injury prevention by training safe operational job movement patterns. Meets needs of sailors in the sense that exercises can be performed in confined spaces. Program has been shown to have a statistically significant positive effect on weight-loss and waist-inches lost in comparison to traditional PT.
Evaluation of Weight Remediation Programs Across the Services: ShipShape	ShipShape is the official Navy weight management program for Active Duty and Reserve service members, beneficiaries, and civilian employees.

Joint Base Pearl Harbor–Hickam

Joint Base Pearl Harbor–Hickam combines the U.S. Air Force's Hickam Field and the U.S. Navy's Pearl Harbor Station (the two bases were merged in 2010). The Navy has the lead on operating the joint base. Pearl Harbor is one of the Navy's busiest harbors; the joint base is home to more than 175 tenant commands, 11 ships, 18 submarines, and 6 fixed-wing aviation squadrons.

HBI was initially well received at Pearl Harbor-Hickam; this is an installation with many individuals who are very dedicated to improving the health of the community. Challenges emerged around programming that sometimes appeared to be in conflict with Service-level directives or that was viewed as duplicative with existing initiatives. Both the HBI team and the installation worked hard to address concerns and improve communication; these efforts have been valuable in terms of informing the long-term strategy for improving coordinated health and wellness initiatives. In addition to the initiatives listed in the table, the commanding officer at the start of HBI directed considerable resources to hiring a master planner (a civil engineering firm) to make suggestions for active living for the two installations combined. At present, the Air Force side is much more walkable, while the Navy side is more industrial in appearance. Funding was the main barrier to implementing the active living plan designed by the master planner, especially given that HBI was never set up to fund major changes in the base environment.

Joint Base Pearl Harbor–Hickam **Location:** Oahu, Hawaii (adjacent to Honolulu) **Area:** 22 square miles **Population:** 19,100+ Active Duty military; 22,100+ dependents; 11,400+ DoD civilians; 700 selected reserves; 12,700 retirees and family members; total population more than 66,000.	
HBI Initiatives	
Better for You (Morale, Welfare, and Recreation)	BFY launched at Wright Brother's Café on 4/30/15.
Go for Green®	Implemented at the Hale Aina DFAC and Silver Dolphin Bistro Galley. Continued after HBI.
Smarter Food Movement	Smarter Food Movement report provided to installation on 11/3/14. Installation is assessing what items from the report can be implemented.
Culinary Institute of America Healthy Food Preparation Course/ Menu Renovation	Education for APF and NAF personnel completed in July 2014. Recipes, and subsequent guide, were developed to support this initiative.
Commissary: DeCA Fruit and Vegetable Initiative, Family Fun Festival and 5210 Healthy Military Child	Pearl Harbor-Hickam held a Fun and Family Fitness Festival featuring farmers market, fitness events, and other activities. The commissary participated in the 5210 Healthy Military Child program by providing tours of the produce departments to child development centers, especially during April, the Month of the Military Child. The tours educate children on the benefits and tastiness of fresh fruits and vegetables.
24-Hour Fitness	Augmented four existing 24-hour fitness venues. Measurement data not available due to lack of CAC readers at fitness facilities, but access will continue in the future.
UltimateMe	UltimateMe was first introduced to Joint Base Pearl Harbor-Hickam in June 2014. The installation experienced issues with accessibility and recommended that the initiative allow for mobile access.
Community Resource Guide	The HBI Team reviewed the existing Community Resources Guide and developed recommendations based on lessons learned from HBI. The installation opted not to pursue further changes to the existing community resources guide.
Community Health Promotion Council	Joint Base Pearl Harbor-Hickam has had an established Health Coalition since 2005. Through a partnership with MWR, medical, and DeCA, the Health Coalition plans and executes community events and programs, focusing on a particular topic each month. The HBI team shared recommendations based on lessons learned from HBI. The installation opted not to pursue further changes to the existing Health Coalition.
Holly-Graham	Feedback received on Holly-Graham from other installations led to this initiative being discontinued before it was launched at Joint Base Pearl Harbor-Hickam.
Tobacco Counter Marketing at Point of Sale	This initiative is on hold, pending a Defense Tobacco Advisory Council decision.
Tobacco-Free Areas	The team worked with the installation to develop a map of DTAs. Efforts to reduce the number of DTAs have run into resistance from unions, but installation leadership hopes to continue the effort in the future.
Kicking Butts for Points	Promotion began 2/23/15. The text-message based trivia contest ran through 3/30/15. Participation was not overwhelming because the Bureau of Navy Medicine was also promoting a program called “Kicking Butts.” Navy bases were required to participate in the Navy program to qualify for an award. This likely confused many about HBI’s Kicking Butts for Points.

Promising Practices	
Mobile Health Van	This program, which is unique to Pearl Harbor, brings health services such as immunizations, blood draws, nutrition coaching, body fat measurement, physical assessment screening, and health promotion education, direct to sailors' workplace(s), including the docks.
Evaluation of Weight Remediation Programs Across the Services: ShipShape	ShipShape is the official Navy weight management program for Active Duty and Reserve service members, beneficiaries, and civilian employees.
Functional Fitness Training (NOFFS)	An evidence-based performance tool that addresses injury prevention by training safe operational job movement patterns. Meets needs of sailors in the sense that exercises can be performed in confined spaces, such as submarines and ships. Program has been shown to have a statistically significant positive effect on weight loss and waist-inches lost in comparison to traditional physical therapy. A new, 12-week NOFFS pilot program was conducted at Pearl Harbor in Spring 2015. Data on the pilot program were not yet available at the time of report publication, but program engagement was high, with an average of 150 sailors participating in each session.
Mission Nutrition	A standardized, science-based 16-hour course focused on improving nutritional knowledge and awareness. The course is delivered by MWR and culinary professionals who receive a 4-day "train the trainer" course delivered by a registered dietitian.

Marines HBI Pilot Sites

Marine Corps Air Ground Combat Center Twentynine Palms

The **MCAGCC**, also known as **Twentynine Palms**, is a United States Marine Corps base located in San Bernadino County, California. HBI was well received at Twentynine Palms, where it was largely driven at the level of MCCS and Semper Fit. The primary focus of the Semper Fit Program is to provide healthy lifestyle activities and education that assist the "commander" in optimizing mission readiness. HBI also benefited from the enthusiastic support of the installation's commanding generals, chief of staff, and the HBI point of contact (POC).

In addition to the HBI initiatives listed in the table, several other fitness programs support a culture of physical activity for children and Active Duty service members at Twentynine Palms. The home-school fitness program offers comprehensive PE and extra sports training (including activities like rock climbing, skateboarding, bowling, and desert survival) to military children who are homeschooled. It began in March 2014. Active Duty service members have access to a High Intensity Tactical Training (HITT) program that is designed to improve combat readiness by training Marines in an operational environment and preventing injury. This type of training was originally designed for elite athletes but can be tailored to a range of fitness and ability levels.

Marine Corps Air Ground Combat Center Twentynine Palms

Location: Twentynine Palms, San Bernardino County, California
Area: Main cantonment is 5.4 square miles; total area of installation is 936 square miles
Population: Approximately 14,000 Active Duty military; 11,000 Active Duty family members; 50 attached Reservists; more than 2000 civilian employees; 21,000 contractor employees.

HBI Initiatives	
Go for Green®	The Marine Corps is developing its own Fueled to Fight program, which is similar to Go for Green®. The Marine Corps opted not to implement Go for Green® in mess halls.
Smarter Food Movement – Marine Corps Community Services Foodservice	Report provided to installation on 12/2/14. Next step was for Installation to identify actionable items from the report
Share our Strength: Cooking Matters at the Store	Tours began in October 2014 and were very popular. Twentynine Palms Commissary hosted 96 tours with 1,800 participants. MCCS – Recreation & Fitness, Semper Fit took over the tours in June 2015 to sustain the program.
Culinary Institute of America Healthy Food Preparation Course/ Menu Renovation	Training for APF and NAF personnel completed in August 2014. Recipes, and subsequent guide, were developed to support this initiative.
Better For You	Implemented at Officers' Club on 4/20/15.
Farmers Market	Not implemented because the base was unable to secure a market director and there is already a farmers market in a nearby community off base. Twentynine Palms is exploring the potential to implement a Community Supported Agriculture (CSA) share program.
Commissary: DeCA Fruit and Vegetable Initiative; Family Fun Festival and 5210 Healthy Military Child	Twentynine Palms held a Fun and Family Fitness Festival featuring farmers market, fitness events, and other activities. Twentynine Palms commissary participated in the 5210 program by providing tours of the produce departments to child development centers, especially during April, the Month of the Military Child. The tours educate children on the benefits and tastiness of fresh fruits and vegetables.
24-Hour Fitness	24-Hour Fitness was installed in buildings 1403 and 1607. The first priority was creating a safe environment for users to prevent injuries from weight lifting. Many options fell through but eventually this initiative was coordinated with Semper Fit, which arranged for the installation of hotel-like fitness rooms with cardio equipment and weight-lifting machines with parts that can't be dropped. Three locations were set up, and will continue to operate in the future.
Fitness on Request	Wellbeats (Fitness on Request) units installed March 2015. Utilization began the day after training and units reportedly continue to be well-utilized. They will be kept after HBI.
UltimateMe	UltimateMe was first introduced to Twentynine Palms in September 2014. The installation has been promoting this initiative through MCCS and Semper Fit. Beginning in February 2015, Twentynine Palms joined the UltimateMe PALA+ Challenge in partnership with the President's Council on Fitness, Sports, and Nutrition to promote increased utilization of this initiative. The installation also reported that users were not receptive to providing social security numbers for registration; however, there seemed to be less resistance to providing military ID numbers.
Community Resource Guide	Twentynine Palms has had a community resource directory since 2000 and will continue to support the directory after HBI.
Community Health Promotion Council	Twentynine Palms will continue this effort after HBI.

Holly-Graham	Feedback on Holly-Graham led to this initiative being discontinued.
Tobacco-Free Areas	The initiative POC compiled a map illustrating existing tobacco-free areas.
Tobacco Counter Marketing at Point of Sale	Will continue after HBI concludes.
Tobacco Free MTF Policy	Implemented in 2010 and will continue after HBI.
Kicking Butts for Points	Promotion for Kicking Butts for Points began 2/23/15. The text-message based trivia contest ran through 3/30/15. Sign-up rate was low. Potential participants expressed concern about getting spam texts afterward and in some cases also didn't want to be bothered by texts during the program. Others were just not interested in information on tobacco. And there was a competing Navy program with the same name ("Kicking Butts"), which puts posters near tobacco products in stores – it is being continued.
Fight the Enemy	Competition winners were announced on 11/20/14. Twentynine Palms had no entries due to lack of interest in 2014. However, home school phys ed took up the program in 2015 and began producing 30-second videos about it. This effort could be continued relatively easily in the home school context and there is interest in continuing the program after HBI.
Alliance for a Healthier Generation School Initiatives	AHG attempted to work through the school liaison officer with Condor Elementary. The school has some initiatives of its own and opted not to participate.
Promising Practices	
Evaluation of Weight Remediation Programs Across the Services: Body Composition Program (BCP)	Weight remediation program that facilitates healthy body composition in active duty Navy personnel who have failed that part of the Physical Readiness Test.
HITT/AMP-IT	High-impact functional fitness initiatives that improve combat readiness while reducing the likelihood of injury through physical fitness training and nutritional guidelines.
Impact of Tobacco-Free MTF Campus Policy	Understanding the impact of policies to eliminate tobacco use on MTF campuses, which promote the hospital as a healthy environment and improve air quality for all. The policy was implemented in January 2010 and has received positive feedback from patients and visitors alike.
Comparison of Tobacco Cessation Programs Across the Services	Review of tobacco cessation programs across the Services to identify best practices. Twentynine Palms offers exemplary tobacco cessation program; it was selected as a best practice site and studied as part of TRICARE-NIH research project.
Evaluation of Weight Remediation Programs Across the Services: ShipShape	The ShipShape Program is the official Navy weight management program; it serves Active Duty and Reserve service members, beneficiaries, and civilian employees.
Community Resource Guide	Effort to incorporate base resources into San Diego's ICHP is currently on hold. Encountered problems with gathering extensive information from program managers and with lack of clear communication with leadership regarding purpose and value of the initiative.
Youth Sports Program	Comprehensive youth sports program that engages over 350 youth in co-ed sports programs year-round. Improvements in physical fitness capabilities of participants are collected through FitnessGram data pre-and post-season. Program provides coaches with materials to deliver a different targeted message each week to team (topics include self-confidence, nutrition, leadership).

Marine Corps Base Quantico

MCB Quantico is located near Triangle, Virginia. Established in 1917 and known as the "Crossroads of the Marine Corps," MCB Quantico is home to the Marine Corps Combat Development Command and numerous tenant organizations. The base staff provides infrastructure, operational, and community services support to these organizations and to the military members, families, and civilians who live and work on base. The base is also a key player in support of overall Marine Corps objectives and programs and plays host to scores of training events, conferences, symposia and other special events. HBI was well received at Quantico, especially the farmers market and the Cooking Matters commissary tours.

Marine Corps Base Quantico **Location:** near Triangle, Virginia **Area:** 92 square miles **Population:** Approximately 6,500 Active Duty military; 3,500 Active Duty family members; more than 1,200 attached reservists; 3,000 civilian employees; more than 3,000 contractor employees.	
HBI Initiatives	
Smarter Food Movement	The Clubs at Quantico used Smarter Food Movement principles to reorganize their lunch buffet food layout. These changes will stay in place after HBI.
Go for Green® (Fueled to Fight for USMC)	The Marine Corps is developing its own Fueled to Fight program, which is similar to Go for Green®. USMC opted not to implement Go for Green® in the mess halls.
Better For You (Morale, Welfare, and Recreation)	MCBQ implemented BFY in the Clubs at Quantico and Mulligan's restaurant at the golf course clubhouse. These changes will continue after HBI.
Culinary Institute of America Healthy Food Preparation Course/ Menu Renovation	Education completed in August 2014. The Clubs at Quantico is working on redesigning menu offerings to include additional healthier items. Recipes, and subsequent guide, were developed to support this initiative.
Share our Strength – Cooking Matters at the Store	Quantico Commissary hosted 53 tours with 724 participants. The program was very popular and there is interest in continuing it if funding can be obtained.
Commissary: DeCA Fruit and Vegetable Initiative and 5210 Healthy Military Child and Better for You at the Commissary and Family Fun Festival, Natural and Organic sections	DeCA used BFY logo on signs for qualifying items; provided links to BFY webpage and BFY sales flyer on commissaries.com; and created infographics, posters, shelf talkers, and ceiling danglers. The Quantico commissary participated in the 5210 Healthy Military Child program by providing tours of the produce departments to child development centers, especially during April, the Month of the Military Child. The tours educate children on the benefits and tastiness of fresh fruits and vegetables. Quantico held a Fun and Family Fitness Festival featuring farmers market, fitness events, and other activities. Inspired by HBI, the Quantico Commissary created Natural and Organic Segregated/Integrated sections that incorporated over 25 food categories throughout the commissary. Section markers were used to alert customers to these items (channel strips and blades).
Farmers Market	Extremely popular
Fitness on Request	Fitness on Request units delivered. Training on units occurred 4/14/15. The Fitness on Request units were to be deployed in August 2015 following renovations to the building where they will be located. These units will continue to be operational after HBI concludes.
UltimateMe	UltimateMe was first introduced to MCB Quantico in June 2014. Beginning in February 2015, MCB Quantico joined the UltimateMe PALA+ Challenge in partnership with the President's Council on Fitness, Sports, and Nutrition to promote increased utilization of this initiative. The installation had the highest number of sign-ups throughout the promotion.

Community Health Promotion Council	The installation is expanding the Quarterly Coalition to include aspects of a CHPC.
Holly-Graham	As of 3/4/15, Holly-Graham is no longer on Quantico MCB.
Tobacco Free Areas	The team is waiting for feedback on whether a proposal establishing tobacco free areas around areas where children live, learn and play would be feasible. There have been challenges to increasing tobacco-free areas from unions.
Tobacco Counter Marketing at Point of Sale	This initiative was developed and executed by the MCX. The exchanges used a comprehensive communications campaign targeted specifically to Marines to support tobacco cessation and tobacco use prevention. Through various communication channels, such as print, email, social media, and point of purchase marketing, the exchanges increased awareness about the health impacts and financial costs of tobacco use.
Kicking Butts for Points	Promotion for Kicking Butts for Points began 2/23/15. The text-message based trivia contest ran through 3/30/15.
Fight the Enemy	Competition winners were announced on 11/20/14. Quantico had one entry, which won the spirit award. Quantico leadership hopes this initiative will continue.
Alliance for a Healthier Generation Schools Initiatives	AHG supported two DoDEA schools at Quantico. Because these schools are part of the NY/PR/VA region, DoDEA schools from NY and PA also took advantage of the program, sending representatives to participate virtually in HSP trainings. The district contact expressed interest in utilizing the HSP assessment with all schools in this larger region in the future.
Promising Practices	
HITT/AMP-IT	High-impact functional fitness initiatives that improve combat readiness while reducing the likelihood of injury through physical fitness training and nutritional guidelines.
Impact of Dietitian	Researched benefits associated with stationing registered dietitians on the installation, from community health, individual health, and financial perspectives.
Evaluation of Weight Remediation Programs Across the Services: ShipShape	The ShipShape Program is the official Navy weight management program; it serves Active Duty and Reserve service members, beneficiaries, and civilian employees.
Impact of Tobacco-Free MTF Campus Policy	Many of the HBI sites have tobacco-free MTF campus policies. The HBI team sought to understand the impact of policies to eliminate tobacco use on MTF campuses, which promote the hospital as a healthy environment and improve air quality for all. At Quantico, several staff members took advantage of the extra tobacco cessation classes offered prior to policy implementation; as a result, at least one civilian staff member quit tobacco.
Comparison of Tobacco Cessation Programs Across the Services	Quantico offers cessation services from specialists located at both Medical Home Port and Health Promotion (Semper Fit). Program is based on providing one-on-one counseling session (1-1.5 hours) to help individuals understand addiction and to discuss what they may expect if they try to quit and how to avoid common pitfalls. Participants receive a resource packet, which includes academic articles.
WIC and NPSP Integration: Milk for Life	The NPSP Center and Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), both located on the installation, actively work to integrate and spread their resources, materials, and programs, to improve health and nutrition, with a particular focus on pregnancy and children up to age 5. The coordinated approach of both organizations is unique to Quantico.

Coast Guard HBI Pilot Site

U.S. Coast Guard Base Cape Cod

U.S. Coast Guard Base Cape Cod is located in Sandwich, Massachusetts. It is the only Coast Guard aviation facility in the Northeast, with an area of operations stretching from New York City to the Canadian border. The station was founded in 1970 as a replacement to Coast Guard Air Station Salem. HBI was well received at Coast Guard Base Cape Cod. The base held a kickoff event to launch HBI that included the Coast Guard Exchange. In addition to the initiatives listed in the table, Cape Cod also implemented the Runway 5K and a one-day New England Patriots recreation program in the spring of 2014.

U.S. Coast Guard Base Cape Cod **Location:** Sandwich, Massachusetts **Area:** 30 square miles **Population:** Approximately 300 Active Duty; 400 Active Duty family members; 150 civilian employees.	
HBI Initiatives	
Go for Green®	Implemented at Coast Guard Dining Facility; will continue after HBI.
Share Our Strength – Cooking Matters at the Store	Implemented at Coast Guard Marketplace
Smarter Food Movement	Implemented at Coast Guard Dining Facility. The galley implemented the Smarter Food Movement recommendations they could; other recommendations could not be implemented, in some cases because they involved moving equipment and semi-permanent fixtures. However, Cape Cod is building a new barracks and galley and leaders will work to incorporate some Smarter Food Movement recommendations as the renovation gets underway.
Better For You (Morale, Welfare, and Recreation)	Fully implemented at Falcon Golf Course Snack Bar, where it was well received by staff and customers. BFY labeling has been successful at MWR Facilities and will continue in the future.
Culinary Institute of America Healthy Food Preparation Course/ Menu Renovation	Culinary skills training seminars were conducted in August 2014 at the Coast Guard Dining Facility for APF and NAF foodservice personnel. Enthusiasm for this training was high, even though many personnel had received basic culinary training before. But the "Performance Feeding" theme struck a chord and prompted considerable interest in adjusting recipes to reduce calories and increase nutritional content. Recipes, and subsequent guide, were developed to support this initiative and will be utilized in the future.
Fitness on Request	AFNAFPO contract awarded but ultimately a location could not be secured so the initiative is being transferred to Coast Guard Station Kodiak in Alaska. However, base leadership responded positively to this idea.
UltimateMe	UltimateMe was first introduced to USCG Base Cape Cod in September of 2014. USCG Base Cape Cod joined the UltimateMe PALA+ Challenge in partnership with the President's Council on Fitness, Sports, and Nutrition to promote increased utilization of this initiative.
Tobacco Counter Marketing at Point of Sale	Implemented in June 2014 and will continue. In addition, changes in tobacco pricing were implemented at Cape Cod in February 2015 as a result of new legislation (NDAA FY15) prohibiting the sale of a tobacco product at a price below the most competitive price in the local community.

5210 Healthy Military Children	Initial baseline data was collected prior to starting the 5210 Healthy Military Children program. The program itself has been enthusiastically implemented by the child development center with modifications to address concerns about collecting BMI or weight measurements. Instead, the child development center director chose to focus on the content of lunches being sent from home to see if the 5210 messages were having an impact. The director also used the MyPlate program as an educational tool and incorporated health messaging into the school day. The center also acquired pedometers for a walking program that started in the summer of 2015 and is looking into creating a community garden. This initiative will continue in the future.
Promising Practices	
Leadership Driven Fitness Initiatives: 7AM Workout Wednesdays	Mandatory early-morning workouts with leadership effectively connects senior leadership with junior enlisted; program contributes to morale of the unit and gives officers and enlisted the opportunity to build relationships while playing team sports.
Adult Sports Training	Aim of this program is to provide fun, team-oriented, recreational fitness opportunities to keep service members in shape and to promote camaraderie.

HBI and the Defense Commissary Agency

DeCA was an enthusiastic supporter of HBI; its director and senior leadership embraced HBI. As the 13th largest grocery chain in America and as an organization with strong relationships to the food industry, DeCA was a natural partner for HBI: it touches many segments of the military community (service members, family members, retirees, and those eligible to shop via VA disability standards and civilians overseas) and is uniquely positioned to deliver health messages to the military community. DeCA consistently received the highest scores on the m-NEAT assessment tool based on its substantial offerings of healthier food. In addition to the initiatives summarized in the table below, DeCA indicated interest in delivering educational messages about nutrition to youngsters during child development center field trips to commissaries. The table summarizes DeCA's experience with the implementation of specific HBI initiatives.

DeCA HBI Initiatives	
Better For You (food labeling)	Preliminary assessment, suggested that 40 percent of DeCA food stock could be labeled BFY (based primarily on calories per serving) but later found that over 50 percent of DeCA's food items qualify for this designation. The training covered several topics: • How to Use BFY logo on display signs for qualifying items • How to promote BFY by providing links to the BFY webpage and sales flyer on commissaries.com • How to create and use infographics, posters, shelf talkers, and ceiling danglers In addition, DeCA is in the process of selecting a contractor to help develop a food labeling system for its stores. Initially, DeCA proposed a modified approach to food labeling that focuses on three main attributes: sodium, fiber, and sugar. However, DeCA reconsidered and now plans to not limit its Nutrition Guide labeling program to three attributes. Instead, the final number of attributes will be determined after the contract to develop a labeling system has been awarded. Roll-out was initially planned for October 2015 but has been delayed.

Smarter Food Movement (including directional signs)	Senior staff was trained at all four Smarter Food Movement commissary locations in 2014 (Fort Meade on September 8; Quantico on October 7: Fort Bragg on October 22; March ARB on October 27). Signage and floor/directional arrows were installed at all locations (Intervention 1). Half Cart Healthy Signs that nudge customers to "Load up the front half of your cart with fruits, vegetables, and lean meats!" (Intervention 2) were fielded in May 2015. This initiative will continue after HBI.
Share our Strength Cooking Matters at the Store	Positive response to this initiative, especially to its educational components and to the distribution of $10 gift cards for produce and healthy items to participants as part of a "healthy purchasing challenge" at the end of the tour. DeCA is interested in sustaining and expanding the program to more commissaries. In total, 5,097 individuals participated in 448 tours at HBI commissaries. Although DeCA cannot fund the $10 gift cards, there is interest in finding a way to continue the tours. In addition, DeCA hopes to encourage health professionals to use the commissary for health and wellness promotion and brand DeCA as a place that can help meet the health and wellness needs of the military community, while also strengthening partnerships with MWR.
DeCA Fruit and Vegetable Initiative	DeCA rolled out this initiative as part of its FY2014 Balanced Scorecard. Corporate leaders and staff at Fort Lee drove this initiative. It is being implemented at all commissary locations, not just at HBI pilot sites.

Aside from HBI initiatives, DeCA has been supportive of a healthy military and has conducted a number of other efforts to promote healthy eating. For example, DeCA recently re-formatted the grab-and-go sections in its commissaries to include healthier choices such as salads and more nutritious drinks. And DeCA has been supportive of the 5210 Healthy Military Child program, offering produce tours to child development centers and introducing children to various fruits and vegetables. DeCA also hosts farmers markets at most commissaries during the peak season. For the last few years DeCA has sponsored Fun and Family Fitness Festivals featuring farmers markets, fitness events, and other activities. DeCA also added 25 natural/organic food sections at Fort Meade, Fort Bragg South and Quantico. Section markers will be visible to alert customers to these sections (channel strips, blades). Commissary Connection (an electronic newsletter that reaches more than 60,000 military households) highlighted the BFY initiative and featured an infographic during the Month of the Military Child to reinforce the 5210 message.

Like many American cities and towns, the infrastructure and landscape at most military installations has evolved over time to favor automobiles as the dominant mode of travel, with poor connectivity between districts adversely affecting opportunities for walking and biking as active transportation modes.

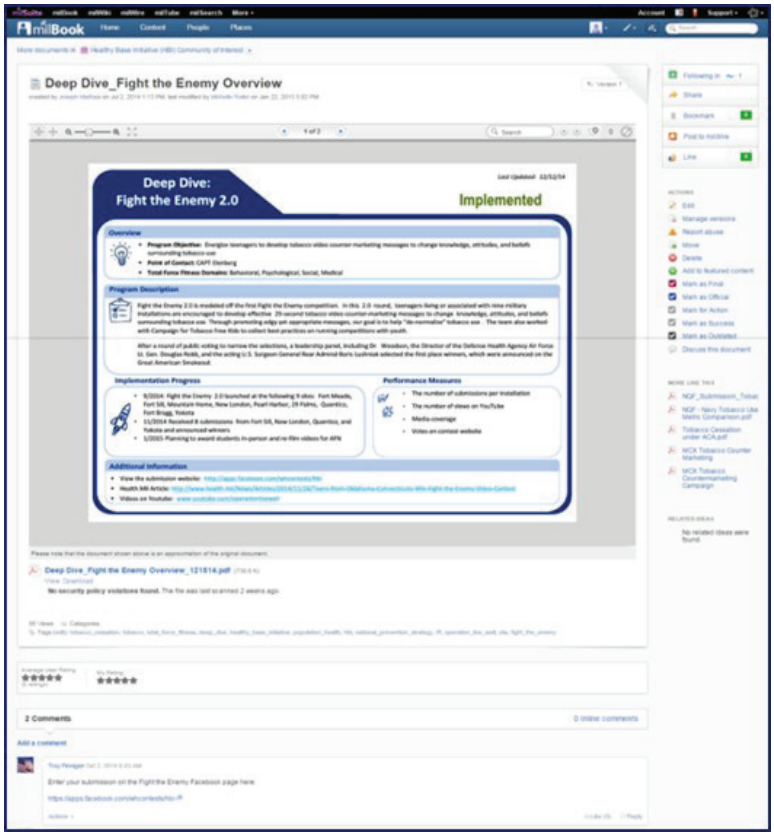
Chapter 7. Additional Actions Taken in Response to Needs Identified During HBI

Throughout HBI implementation, the HBI team sought feedback from participating installations as to how OSD could support their HBI activities. Not wanting to wait until the demonstration phase of the initiative was completed, the team took a number of actions to assist installations and share HBI tools and lessons with the wider DoD audience after HBI had already launched. This chapter describes these additional actions taken during the course of HBI implementation.

Additional Actions to Improve Communication and Knowledge Sharing

Given the nature of HBI and the many stakeholders involved, the HBI support team sought a way to effectively communicate updates on status and overall progress. To that end, the team created a "COI" on milSuite, a web-based platform accessible to all CAC users. Launched in October 2014, the HBI COI serves as an online data repository and collaboration community that offers secure, centralized access to up-to-date information about HBI programs. The COI provides an interactive, user-friendly, and sustainable communications channel, allowing various stakeholders, such as MHS and Service leadership, installation POCs, and pilot site participants, to actively engage with each other and the larger HBI community. The site layout and platform encourages bookmarking, knowledge exchange, and discussions on content—thereby creating a true collaboration space for DoD. For example, a user from Twentynine Palms could update the installation's status slide by commenting directly on the COI post. Through regularly published status updates and numerous comments received from users, this real-time communication platform enabled the HBI team to continuously maintain accurate information on HBI's progress. Figure 7.1 depicts the COI landing page and displays an overview slide for a sample HBI initiative.

Figure 7.1. HBI s COI Web Page (depicts landing page, sample initiative overview, and outcome metrics)



The HBI team built and moderated its COI by first recommending the use of milSuite. Understanding the business imperative to unite various HBI stakeholder groups on a single knowledge-sharing platform, the team built the site to be a one-stop shop for all HBI program-related information. The COI included an HBI overview, a description of each initiative and promising practice, performance measures, and POC information. It also provided regularly updated reports on implementation status for each HBI pilot site. Additionally, the site's homepage was updated on a quarterly basis with population health outcome metrics and data visualizations that compared measures across HBI installations and to the DoD average.

With the conclusion of HBI, the COI will continue to exist on milSuite as a platform for sharing knowledge and for documenting initiatives and the demonstration project as a whole. The COI helped inform DoD leadership about HBI progress and ultimately drove recommendations that were outlined in a report to Congress about long-term strategies for improving the overall health and wellness of the DoD community.[xxx]

Additionally, issue-specific COIs were developed to increase knowledge sharing. For example, as senior leaders considered changes to DoD-wide tobacco policy, the HBI team built a Tobacco-Free Living COI on milSuite to provide a forum for collaboration and for accessing information about current tobacco-related policies, relevant tools and resources for tobacco cessation efforts, and research regarding tobacco use.

Looking ahead, the innovative approach to knowledge sharing piloted through HBI will continue to provide value to population health efforts. The COI increased transparency about initiatives and outcomes and offered a platform through which stakeholders could interact virtually. Similar knowledge sharing in the future is critical to ensure that information and creative solutions continue to drive improvements in the health of the military community.

Additional Actions to Support Healthy Eating

The HBI support team identified a number of interventions to improve and sustain healthy eating, but there was a desire for additional resources to help implement these initiatives. Efforts to provide these additional resources are summarized below.

- ***USDA Farmers Market Guide:*** Installations were very interested in starting farmers markets but also wanted tools to develop these markets on their own. The HBI team realized that creating a farmers market guide could help all interested installations and not just those in the HBI demonstration project. To create this guide, DoD entered into a memorandum of understanding (MOU) with the U.S. Department of Agriculture (USDA). USDA then commissioned the non-profit organization Wholesome Wave, which has experience in managing farmers markets around the country, to take the lead in creating the guide. The comprehensive guide is an online publication that military installations, farmers market managers, and potential vendors can use to successfully establish, operate, and participate in markets on military installations.[29]
- **Culinary Institute of America Recipe Guide:** Another deliverable developed from an HBI initiative is the Culinary Institute of America recipe guide, which was a byproduct of the Menu Renovation initiative's Culinary Skills Enhancement Course. The course was given at HBI locations and participants asked for more information to share with others. Like the farmers market guide, the recipe guide can be shared with audiences beyond the HBI pilot. Its goal is to provide recipes that are not only more flavorful and attractive to target audiences, but also consistent with the 2010 U.S. Dietary Guidelines for Americans. The guide is designed for commercial food service, and is intended as a resource – in other words, use of the recipes is strictly voluntary. The majority of ingredients used in these recipes are available in the DLA catalog. The guide clearly states that it is geared toward commercial cooks, not home cooks.[30]
- **Strategies for Sustaining Cooking Matters at the Store:** Toward the end of the HBI demonstration, personnel at several installations asked how they could sustain this program without resources from OSD. Five installations developed strategies to that end. At Fort Meade, the local Share our Strength No Kid-Hungry Maryland coalition started leading tours on June 30, 2015. At Mountain Home, the Idaho Food Bank took over the tours in March 2015. At New London, the Community Health Network of Connecticut took over and at Twentynine Palms, Semper Fit, an in-house organization, took over. All of these organizations, it should be noted, are non-profits. At Fort Bragg, the team worked with the USDA's FNS to develop a sustainability effort that tapped into existing federal resources. Details of the Fort Bragg effort are summarized in the text box; they can be followed by any other installation interested in sustaining CMATS.

[29] The guide was completed in September 2015 and will be hosted on the USDA website at www.ams.usda.gov/USDA-DOD-FarmersMarketGuide and on the HBI COI webpage, which can be accessed using a CAC card at https://www.milsuite.mil/book/groups/hbi.

[30] The guide is available on the HBI COI page, which requires CAC access, at https://www.milsuite.mil/book/groups/hbi

Fort Bragg Effort to Continue Cooking Matters

The effort to continue Cooking Matters at Fort Bragg began when Fort Bragg's HBI contact and the Cooking Matters coordinator asked the USDA North Carolina FNS contact if there was a way to use existing resources to sustain the program.[31] FNS identified SNAP-Ed as a potential resource (SNAP-Ed funds can be used for cooking curricula but not to purchase food). The state's FNS contact then tapped a local SNAP-Ed implementing agency, the Alice Aycock Poe Center for Health Education, to work with Fort Bragg. The Alice Poe Center, in turn, determined what SNAP-Ed could pay for under the heading of nutrition education, and then reached out to a local food bank to supply a bag of groceries to be distributed to class participants. To recruit participants, the Fort Bragg WIC program center reached out to the more than 700 families in the community that are on WIC. At present, Cooking Matters classes are full and Fort Bragg is planning to continue the program.

- **Improvements to m-PAC and m-NEAT:** These assessment tools were used as part of HBI, and as time progressed, the HBI support team realized how helpful it would be for all installations to be able to use them. Therefore, the team worked with the U.S. Army Public Health Command (USAPHC) to explore how m-PAC and m-NEAT could be improved and promoted beyond HBI. The use of both m-PAC and m-NEAT in this way is one example of how HBI leveraged existing, evidence-based tools to support a broad population. HBI did not seek to "reinvent the wheel;" rather, here and in other instances, the HBI support team recognized the importance of utilizing and expanding the reach of the most effective existing health-related resources developed both within the DoD and by other federal agencies, including partners on the NPC.[32]

Additional Actions to Promote Tobacco Cessation

The HBI team encountered a number of challenges in rolling out several of HBI's tobacco-related initiatives at the installation level. The DACT was established to (1) address these challenges, including specifically barriers to parity pricing and increasing tobacco free areas, and (2) respond to congressional calls for action on tobacco prevention/cessation in the U.S. military.

The DACT's plan is currently being reviewed by the Secretary of Defense, who is expected to issue a decision about whether and how to proceed with the plan following an effort to collect input from the broader DoD community. When HBI started — that is, prior to the FY2015 National Defense Authorization Act (NDAA) — the policy of selling tobacco at the most competitive price in the local community was already being implemented by Navy and Marine installations across DoD. The 2015 NDAA prohibits the sale of a tobacco product at a price below the most competitive price in the local community. (Historically, installations could price tobacco 5 percent below the lowest price in the community.)

[31] Contact information for every SNAP-ED director around the country is available at https://snap.nal.usda.gov/state-contacts. Other installations interested in following the Ft. Bragg example should contact the SNAP-Ed director in their state to explore the possibilities for leveraging SNAP-Ed resources in their state.
[32] Both resources are available on the secure, non-public HBI COI at https://www.milsuite.mil/book/groups/hbi.

Additional Actions to Promote Outcome Measurements

In an environment where staff and financial resources are severely constrained, it is particularly important that decision makers know which programs work and which do not. A first step is to ensure that measurement is ingrained in any provisions for program evaluation. To address the fact that installation leads and other key personnel were not always trained in the use of measurement and evaluation tools, the HBI team offered an existing online course that focused on developing outcome metrics. The 12-week course, which also provided information on principles and techniques for identifying evidence-based, public health practices, taught participants learned how to plan, implement, and evaluate comprehensive community health programs. It was available to all HBI sites. (HBI sites participated during the period from September to December of 2014.) Participants reported that the class was helpful, particularly in its coverage of topics related to program metrics and leadership.

Additional Actions to Reach Children, Schools, and Families

The HBI team recognized early on that schools play a critical role in promoting healthy lifestyles among DoD families. Promising practices such as Recess Before Lunch and Club 5210, both of which were studied at Yokota AB, demonstrated positive outcomes and helped instill healthy habits in students. Moreover, data collected during Club 5210 suggested that student attitudes towards healthy eating had a positive influence on the nutritional habits of parents and, thus, the entire family. With these lessons in mind, the HBI team engaged DoDEA to explore options for establishing policies and other mechanisms to implement and standardize evidence-based health and wellness initiatives. For example, given the demonstrated benefits of play for students, the team partnered with DoDEA to promote daily recess in all schools and school day schedules that placed recess before lunch, a CDC-endorsed practice that has been shown to produce positive impacts in both the lunchroom and the classroom. Additionally, research compiled by the HBI team on integrated health curricula helped inform DoDEA's approach to piloting a new curriculum in schools. The HBI team also collaborated with DoDEA when exploring partnership opportunities with other federal and non-federal entities and when developing a platform through which DoDEA could share its best practices and learn about developments outside the military. Moving forward, collaboration with DoDEA will remain critical, as schools have the unique ability to reach a large segment of the DoD population — including youth and their parents — and instill healthy habits in tomorrow's fighting force.

Additional Actions to Improve the Capabilities of MHS Health Information Technology

HBI implementation included the development of two mobile applications (apps) that use games to encourage changes in behavior. These two apps — called Habits for Health and Virtual Lifestyle Coach — were designed to help individuals track health-related habits over time and thereby increase their understanding of health issues. The two apps could not be made available during the period of HBI implementation because existing information management policies within MHS are not written to accommodate the collection, storage, and retrieval of personal health information via mobile applications, websites, and other sources. To address this barrier, the HBI team is working with the MHS Chief Information Officer and Privacy Office to derive clinical value from patient-generated data and establish a mobile app policy. Once this process is completed, MHS will be in a better position to use technology that engages people at the level of their day-to-day lives and activities. Innovative uses of health information technology will allow for an improved understanding of individuals' overall health and wellness, and will help inform the development of personal health records in the near future.

Commander's Toolkit

HBI generated demand for a toolkit that would help any commander at any location replicate HBI programs. Responding to this interest, the HBI team developed a "Commander's Toolkit" that provides initial guidance and information resources for implementing HBI anywhere. All elements of the "Commander's Toolkit" are available on the secure, non-public HBI COI at https://www.milsuite.mil/book/groups/hbi. These elements include:

- Roadmap/Wayfinding for Site Users
- HBI Overview (or Fact Sheet as deployed on MOS site)
- HBI Initiative Summaries
- m-PAC Assessment Template
- m-NEAT Assessment Template
- Initiative Program Fidelity Tool (PFT) Templates (measurement tool)
- Tobacco Cessation Marketing Materials
- Farmers Market Guide for Military Commanders
- Culinary Institute of America Recipe Book
- BFY Menu Labeling Whitepaper and Marketing Materials
- Office of Personnel and Management (OPM) Wellness Assessment (WellCheck)
- Partnerships and Incentives Toolkit
- Links[33]
  - *JCCoE Go for Green*
  - *Human Performance Resource Center (USUHS site with GfG literature)*
  - *Alliance for a Healthier Generation's HSP*
  - *Share Our Strength's Cooking Matters*
  - *Cornell University Food and Brand Lab's Smarter Food Movement*
  - *Balanced Scorecard Institute*
  - *The President's Council on Fitness, Sports and Nutrition*
  - *CDC Health and Sustainability Guidelines for Federal Concessions and Vending Operations*
  - *Fit-Pick*
  - *HHS Dietary Guidelines for Americans 2010*
  - *FDA Menu and Vending Machine Labeling Requirements*

[33] More details on these resources can be found at the following links (respectively): http://www.quartermaster.army.mil/jccoe/operations_directorate/quad/nutrition/nutrition_main.html, http://hprc-online.org/nutrition/go-for-green, https://www.healthiergeneration.org/, http://cookingmatters.org/at-the-store, http://foodpsychology.cornell.edu/, http://balancedscorecard.org/, http://www.fitness.gov/, http://www.cdc.gov/obesity/strategies/food-serv-guide.html http://www.fitpick.org/, http://www.health.gov/dietaryguidelines/, http://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm217762.htm

The inclusion of resources such as the Office of Personnel and Management (OPM)'s WellCheck assessment and guidelines from CDC, HHS, and the Food and Drug Administration (FDA) in the "Commander's Toolkit" underscores the value of partnering with other federal agencies to promote health and healthy behaviors. Previously, for example, the DoD, OPM, HHS, and CDC coordinated efforts to promote tobacco cessation resources in both military and civilian communities. The NPC plays a critical role in fostering such partnerships by increasing knowledge sharing among federal agencies, helping agencies leverage existing tools and communication materials, providing a sounding board for new ideas, and thinking through approaches to addressing issues that multiple agencies face.

Additional resources may be added to the "Commander's Toolkit" as needed in the future.

As the HBI COI is a secure site behind the DoD firewall, it is not open to the public. There are, however, efforts underway to increase transparency and facilitate knowledge sharing among the broader population through the development of a public-facing website. Additionally, DoD's participation in the NPC affords an opportunity to further the reach of HBI lessons learned in partnership with other federal agencies on the Council.

Additional Actions to Identify Key Decision Makers and Review Existing Policy

During HBI implementation, the HBI team and participating installations identified a number of policies that required clarification and/or adjustment to support progress toward a healthier environment. DoD's Strategy and Innovation Office and HA are in the process of identifying existing policies that merit further discussion; in addition, both offices are identifying key decision makers within DoD with whom they can share the lessons of HBI and work to resolve remaining challenges to improving nutrition, increasing physical activity, and reducing tobacco use in the military community.

"I strongly support the Healthy Base Initiative (HBI) and the effort toimprove the health and quality of life for Soldiers, families, andcommunities. The Army is expanding upon the HBI framework across IMCOM and we are in the process of creating healthy initiatives and continuing our focus and emphasis on health and wellness programming across all installations."

-LTG David Halverson, IMCOM CG

Chapter 8. Evaluation and Outcomes[34]

Measurement and Evaluation Overview

Measurement and evaluation were important components of HBI from the outset. To assess what HBI accomplished and to identify lessons learned that could inform future efforts, it was critical to track and, wherever possible, measure progress toward program goals, both in terms of the successful implementation of planned initiatives and programs, and in terms of actual health outcomes for DoD service members and their families. Specifically, our goal was to answer the following research questions:

1. What is the current status of programs, policies, and the environmental support system for Health and Wellness? Has HBI impacted the physical and social environment to support healthy lifestyles?
2. Have the installations implemented initiatives as planned?
3. What is the level of awareness, participation, and satisfaction with initiatives?
4. Did the initiatives affect behavior?
5. Did the initiatives affect the prevalence of obesity and tobacco use?
6. What are the implications for future initiatives similar to HBI – how can DoD spend its scarce resources more effectively on programs that achieve improvements in health and wellbeing?

The HBI measurement and evaluation framework contained three components:

1. A **structural evaluation** to assess the status of programs, policies, and support systems for health and wellness, specifically related to reducing obesity and tobacco use. The purpose of the structural evaluation was to identify needs and gaps and to monitor health-promoting changes and improvements to the environment of military installations throughout HBI implementation.
2. A **process evaluation** to assess (1) the degree to which HBI was implemented as planned (fidelity) and the extent to which all aspects of the interventions were put in place with appropriate intensity, frequency, and duration (dose delivered); (2) the degree of

[34] The full analysis on the HBI demonstration done by Johns Hopkins can be found at: http://www.jhsph.edu/research/centers-and-institutes/institute-for-health-and-productivity-studies/projects/archived-projects/

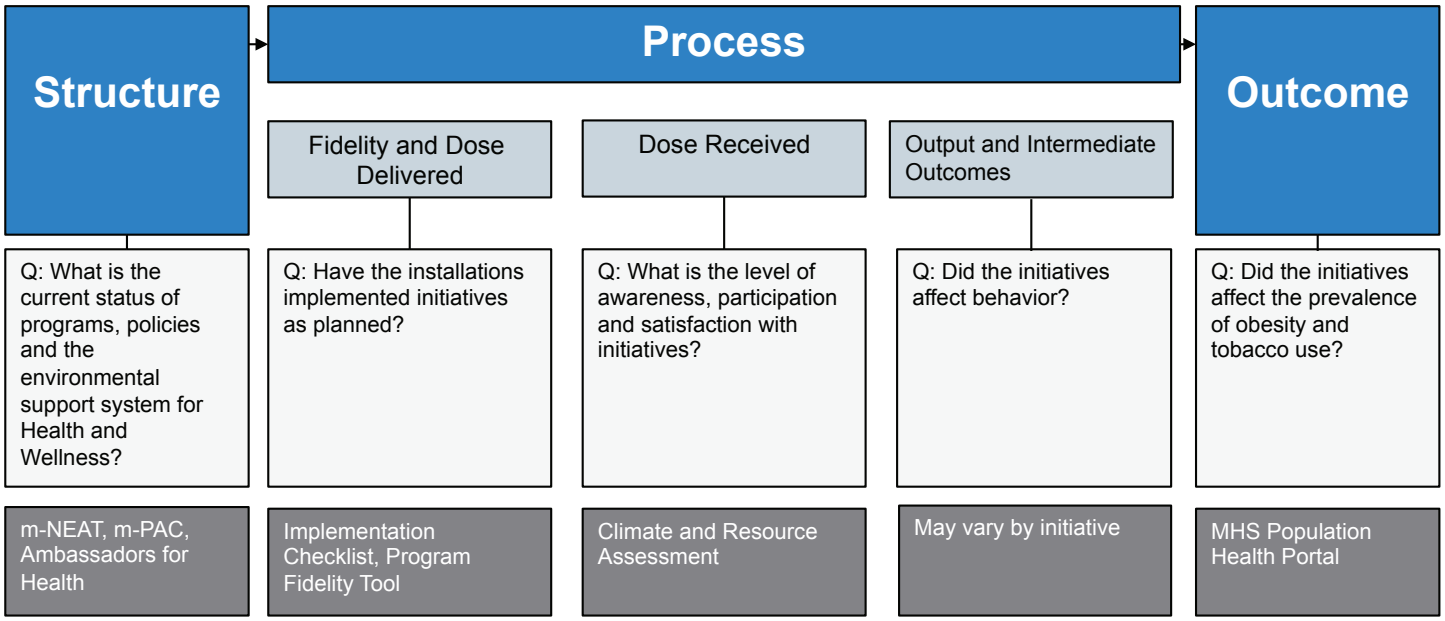
awareness, participation, and satisfaction with various HBI program components and HBI overall (dose received and reach); and (3) intermediate outcomes or outputs (i.e., changes in health behaviors) that are leading indicators providing early insight into HBI's potential to impact the ultimate outcomes of interest (e.g., healthy diet, physical activity, tobacco sales).

3. An **outcome evaluation** to assess the overall impact of HBI on tobacco use and obesity.

The structure-process-outcomes framework used in this report was developed by University of Michigan professor Avedis Donabedian, MD, in his seminal work on the measurement of health care quality and was deemed an appropriate organizing framework for the measurement and evaluation of HBI.[xxxi]

Figure 8.1 provides a schematic overview of the HBI measurement and evaluation framework. The overall objective of the framework was to (1) generate reportable results that would help installation staff and the HBI team monitor and adjust program implementation as needed to ensure program quality and completeness; (2) shed light on both the effectiveness of HBI at promoting behavior change and the challenges impeding efforts to improve health outcomes related to obesity and tobacco use; and (3) ultimately guide DoD's future investments in health promotion and disease prevention.

Figure 8.1. Summary of HBI Evaluation Components



It is important to note that while this evaluation leveraged all available data and used various strategies (detailed throughout the report) to minimize threats to validity, the realities of the demonstration – where military installations are akin to cities and municipalities of varying sizes and are purpose-built complexes with differing real-world operational commitments and missions – meant that there were many sources of bias. For example:

- Pilot installations were very different at the start of HBI (for example, in terms of their populations, environments, culture, and existing programs);
- Installations self-selected the initiatives they wished to implement, so different treatments were applied at each installation;

- Different timing/intensity of implementation meant that subjects were exposed to a variety of health promotion experiences;
- There was no control group for most of the measures examined;
- Baseline measurements were often not available;
- Many measures included unreliable or incomplete data; and
- Pilot installations were subject to internal and external forces outside of the demonstration's control (e.g., budget reductions, force drawdowns, and relocations of a significant proportion of personnel to other duty stations). This means that when measuring outcomes from one time period to another, the underlying population may be very different.

Timeline: For the sake of consistency throughout this chapter, the following timeline is used:

- **Baseline:** July 1, 2009 – June 30, 2013 (only available for outcomes data)
- **Year 1 HBI Intervention Period:** July 1, 2013 – June 30, 2014
- **Year 2 HBI Intervention Period:** July 1, 2014 – June 30, 2015

It should be noted that different initiatives began at different times throughout the above time horizon and that measures were collected at different intervals and during different seasons of the year. Our analysis aimed to align measurement periods so that they correspond to the above timeline, in general, but as shown in the following sections, the time periods for program "exposure" and measurement intervals varied significantly across installations and across initiatives. The data reported here, though voluminous, are still lacking because many of the data systems and processes were not designed for program evaluation purposes. Data limitations are noted throughout the report. As a general rule of thumb, program measures were assigned one of three categories: green = positive impacts showing a minimum 1.0 percentage point effect size; yellow = program impacts that were neither indicative of positive or negative effects (i.e., between -1.0% and +1.0%); red = negative impacts (a decline of more than 1.0 percentage point). When the 14 installations were compared to one another, they were often put into one of three strata – the top, middle, and lower third performers.

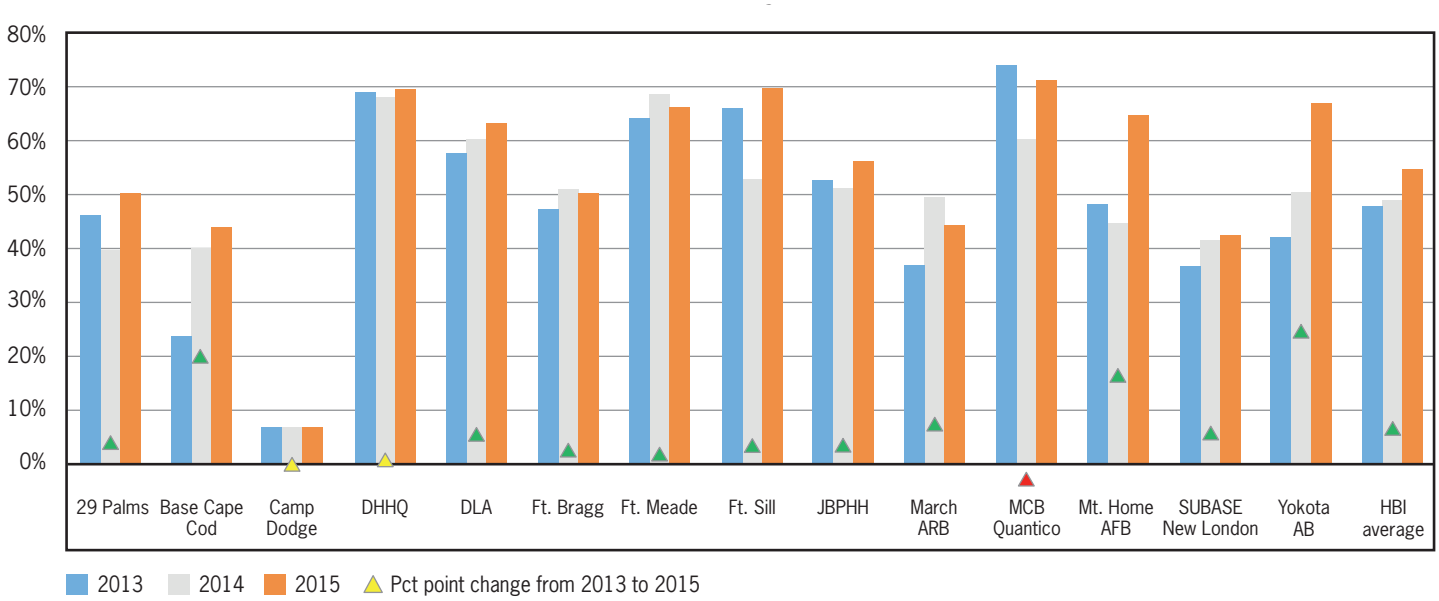
Structural Evaluation

To conduct the structural evaluation and establish baselines for different HBI pilot sites, the HBI evaluation team leveraged three existing tools: m-NEAT, m-PAC, and WorkHealthy America (specifically, the "Ambassadors for Health Assessment"). These tools were selected because they were already in development as part of broader initiatives directed at improving the eating environment at installations, adapting infrastructure to increase physical activity, and establishing programs and policies to promote a culture of health within MTFs. Because only some installations chose to include these specific initiatives, and thereby administer these standardized tools, the data are not complete across all installations. Therefore, we only report data for sites that chose to administer these assessments.

The Military Nutrition Environment Assessment Tool (m-NEAT)

The m-NEAT tool is designed to assess whether the physical and policy environment at a military installation promotes healthy eating. It specifically accounts for food availability, promotion, and pricing and looks at each of the food establishments or outlets at an installation, including DFACs, clubs and snack bars, exchange fast food restaurants, commissaries, convenience stores, and vending machines. The 2013, 2014, and 2015 m-NEAT scores for each of the 14 HBI pilot sites are shown in Figure 8.2.

Figure 8.2. m-NEAT Scores by Installation



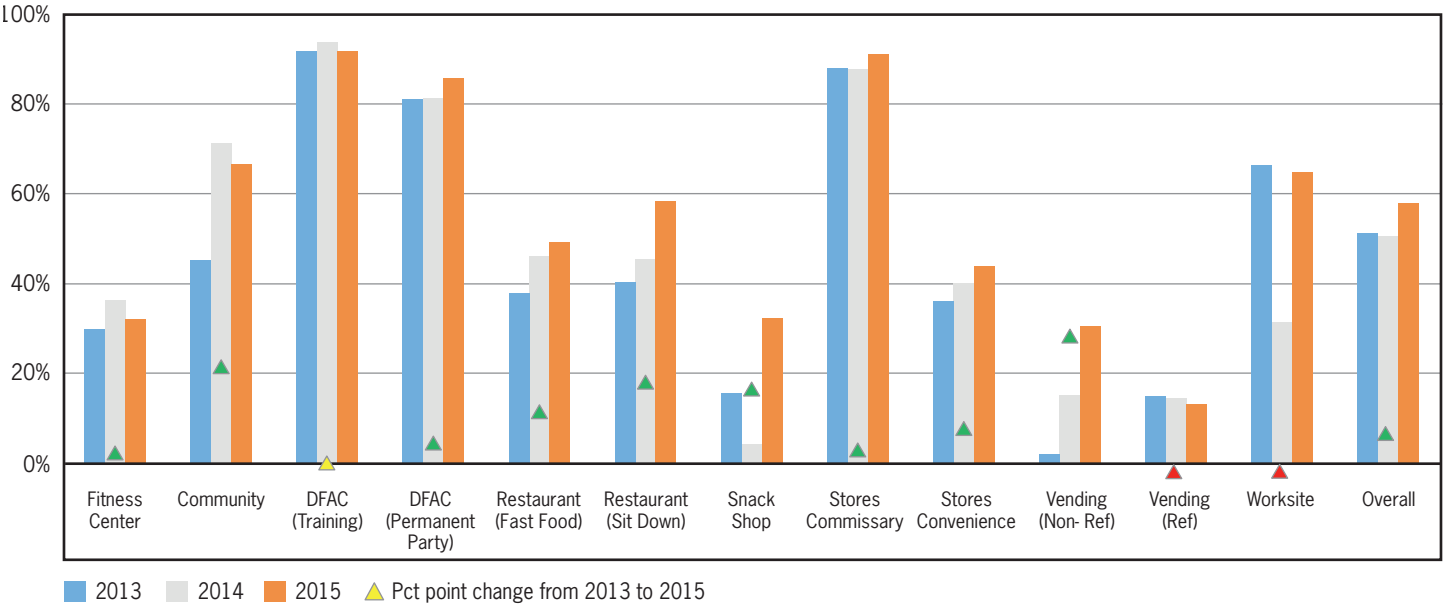
The m-NEAT analysis offers generally promising results. Of the 14 installations studied, 12 improved their scores by at least 1 percentage point. On average, m-NEAT scores improved 7 percentage points from 2013 (baseline) to 2015 (final measurement year). The greatest improvements in m-NEAT scores occurred at Yokota, Cape Cod, and Mountain Home, with average improvements of 25, 20, and 17 percent, respectively. Minimal or no improvements were found at Camp Dodge, DHHQ, and MCB Quantico.

Figure 8.3 (on the next page) displays the average scores across these years by food outlet category. Generalizing across all sites, the m-NEAT assessments showed that commissaries consistently scored highest in healthy food offerings at the pilot sites. DFACs and galleys also tended to provide healthy offerings. On the other hand, there was significant room for improvement at most installations with respect to the food offerings available from vending machines and fast food outlets.

The largest improvements in m-NEAT scores were in the categories of non-refrigerated vending, community, sit-down restaurants, and snack shops (improving 28, 21, 19, and 17 percent, respectively). Areas showing little or no progress were DFAC (training), vending (refrigerated), and worksite.

A key limitation of the m-NEAT data is that scores shown reflect a snapshot of one day's meal services. Therefore, variations in menu, operational execution, or product shortages may bias scores. A more frequent sampling of food choices at installations would strengthen the validity and reliability of the m-NEAT in future applications. A detailed assessment of the tool's strengths and weaknesses can be found in

Figure 8.3. m-NEAT Scores, by Category, for All HBI Pilot Sites



Chapters 10 and 11 (lessons learned). Lessons learned were routinely shared with the DoD Food and Nutrition Subcommittee and informed the efforts of that committee to improve the m-NEAT assessment tool. The m-NEAT is being updated and a new version is anticipated to be released in Spring 2016.

Military Promoting Active Communities (m-PAC)

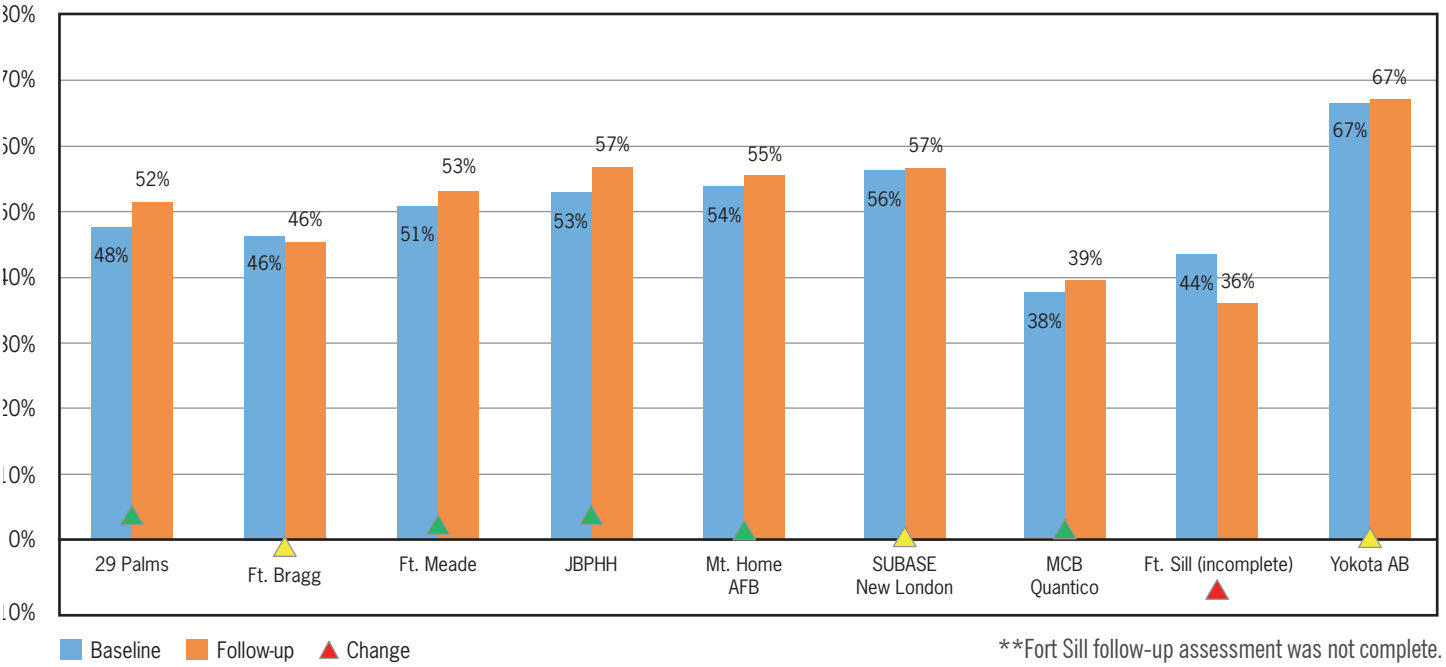
The m-PAC structural assessment focused on whether the built environment of pilot HBI installations promoted or enabled physical activity. The m-PAC was used to understand strengths and challenges for military communities, and to identify strategies that can be implemented as part of future projects to promote healthy, active lifestyles.

At baseline (between July 2013 and December 2014), the full m-PAC instrument was administered at nine of the 14 installations. Because of the complexity of the assessment tool, and the need for follow-up data within a short time horizon, only a subset of the tool was administered at follow-up (between April 2015 and June 2015). Comparisons of scores across time were therefore focused on the following categories that most directly relate to the aims of HBI and have potential for meaningful change within the short demonstration period: physical activity promotion, farmers markets, support for bicycling, access to fitness facilities, stair use promotion, and health events. Figure 8.4 (next page) shows the overall m-PAC scores, by installation. Figure 8.5 (page 90) shows the m-PAC scores by category.

In general, most HBI pilot installations have an abundance of open space and sports fields, provide a safe and secure environment for pedestrians and bicyclists, and offer policies and programs aimed at promoting physical activity. On the negative side, like many American cities and towns, the infrastructure and landscape at most military installations has evolved over time to favor automobiles as the dominant mode of travel, with poor connectivity between districts adversely affecting opportunities for walking and biking as active transportation modes.

Of the 14 HBI installations, nine completed the baseline m-PAC (64 percent) and, of these, five (56 percent) improved their scores by at least one percentage point. Twentynine Palms and Joint Base Pearl Harbor-Hickam improved the most (by four percentage points) from baseline

Figure 8.4. Overall m-PAC Scores, by Installation



**Fort Sill follow-up assessment was not complete.

to follow-up. Four installations (Ft. Bragg, New London, Ft. Sill, and Yokota) showed little or no change in m-PAC scores. (Note: Ft. Sill did not complete its follow-up assessment. The score shown is for the subset of follow-up questions completed.)

Only one of the four m-PAC categories (increasing walkable/bikeable destinations) showed meaningful improvement over time; other categories showed a decline in score or were essentially unchanged.

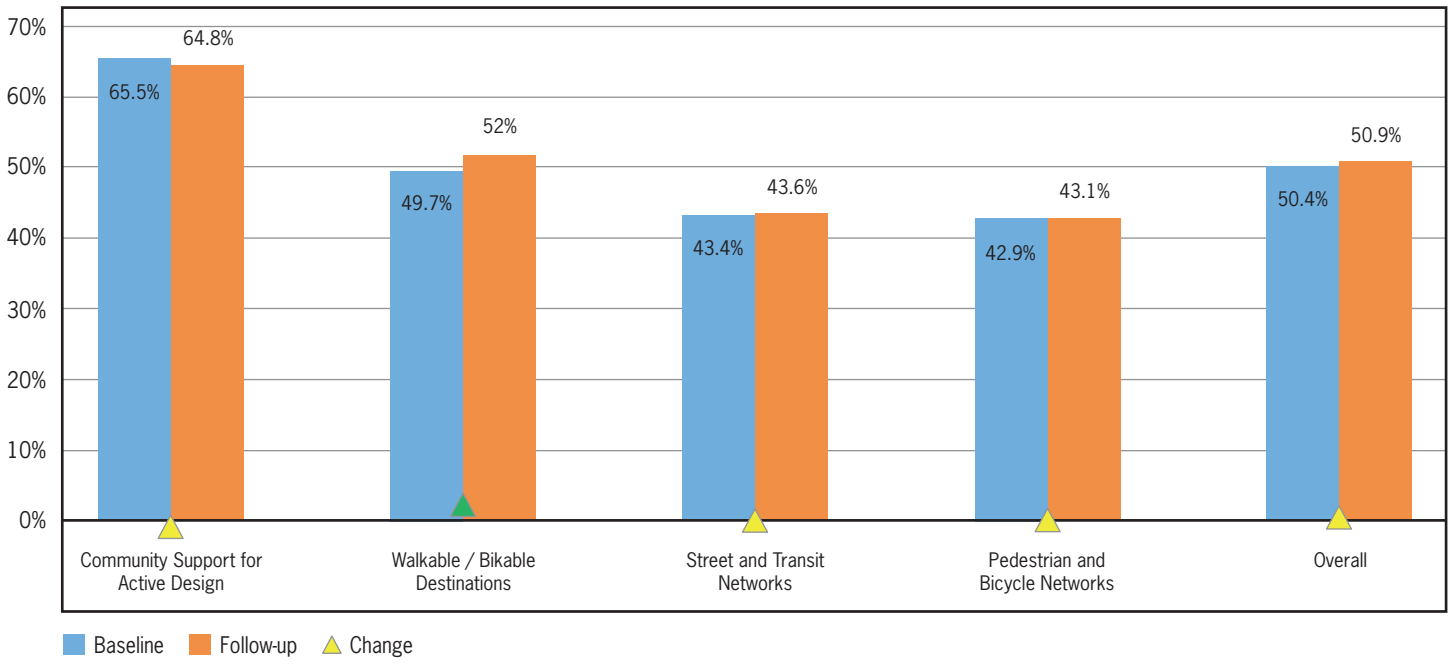
It is important to understand that, due to the lengthy process involved in planning and constructing military infrastructure projects, any changes to the physical environment (as opposed to programs and activities) observed in pre and post m-PAC Scores are almost entirely due to projects that were already in the planning stage at the beginning of HBI. Changes to the physical environment, inspired by HBI, may therefore not be completed for several years.

The Ambassadors for Health Assessment

While the Ambassadors for Health initiative was intended to be implemented at five HBI sites, only three MTFs (Yokota AB, SUBASE New London, and Ft. Meade) were able to complete baseline assessments within the HBI timeline and one installation (Yokota AB) completed a follow-up assessment (in February 2015).

Numerical scores on the tool are described as "grades" for ease of benchmarking. At baseline (2014), the three participating installations received a composite grade of "C," with somewhat better scores in the areas of tobacco-free environments and culture of wellness. In contrast, results of the baseline assessments show that the nutrition category was the most challenging to address. In this category, baseline scores ranged from 14 percent to 42 percent, or from "F" to "C." The only installation that provided follow-up data (Yokota), improved its overall score by 28 percent from 43 percent to 71 percent.

Figure 8.5. m-PAC Scores, by Category



Process Evaluation

Fidelity and Dose Delivered

The process assessment evaluates fidelity or program quality and dose delivered (i.e., program intensity, frequency, and duration). Information gathered through the process evaluation is used to monitor and adjust program implementation as needed to ensure program quality, and to describe and quantify the quality of implementation for different initiatives and provide context for understanding outcomes. To evaluate whether a particular HBI initiative was implemented as planned, DoD used a measurement tool, the PFT, that was specifically developed and tailored by the evaluation team and its partners to measure fidelity and dose delivered for each initiative. A PFT was completed for each program implemented at a given pilot site (including, in some cases, specific facilities within the pilot site), with scores aggregated at the installation and initiative levels. PFTs were administered on a semi-annual basis following the start of the initiative at each installation.

Table 8.1 (presented as a stand-alone page) shows a summary of PFT results by installation and initiative. The PFT score in each cell is the most recent score for the entire implementation period. The PFT scores are color-coded by performance level. (Specifically, a score between 0 and 1.0 is red, a score greater than 1.0 but less than 2.5 is yellow, and a score of 2.5 to 3.0 is green).

At the end of each row, a value is presented that shows the total and average PFT scores by initiative. Average PFT scores are color-coded using the thresholds described above. The total PFT scores, which capture not just the quality but also the quantity of initiatives implemented, are also color coded as top, medium, and low performers (green = top 33 percent, yellow = 34 percent to 66 percent, and red = bottom 33 percent).

Table 8.1. Overall Program Implementation Fidelity and Dose Delivered, by Installation and Initiative (Most Recent Scores)

	Mt. Home AFB	Yokota AB	Ft. Sill	Ft. Bragg	Ft. Meade	Camp Dodge	Base Cape Cod	March ARB	DLA	DHHQ	SUBASE New London	29 Palms	MCB Quantico	JBPHH	TOTAL	AVERAGE
HEALTHY FOOD INITIATIVES																
Go for Green	2.6	2.6	1.8	3.0	2.6		2.9				2.8			1.9	20.2	2.5
Better for You MWR	2.6	2.6	2.8	2.2			2.9		2.8		2.9	1.8	2.4	2.1	25.1	2.5
Menu Renovation	2.6	2.6	2.8	1.8	1.8		3.0	3.0			0.4	1.8	1.8	1.8	23.4	2.1
Farmers Market				2.6	2.7				2.9	2.7			2.8		13.7	2.7
Smarter Food Movement		1.6	2.9		1.4		2.4	2.8	2.0		2.7				15.8	2.3
Commissary Initiative (SFM)				0.2	0.9			1.2					0.7		3.0	0.8
Commissary Initiative (Produce)	2.4	3.0	1.2	1.6	2.1			2.6			2.8	2.8	2.5	2.6	23.6	2.4
Share our Strength Shopping Tours	2.6		2.8	2.6	2.7		2.6				2.5	2.9	2.6		21.3	2.7
ACTIVE LIVING INITIATIVES																
24hr Fitness	2.4	2.4								3.0		2.0			9.8	2.5
Fitness on Request	2.6	2.6	3.0					2.7				3.0			13.9	2.8
Stairwell		2.1							3.0	3.0					8.1	2.7
Bikeshare									3.0						3.0	3.0
Warrior Well						3.0									3.0	3.0
SCHOOL INITIATIVES																
Alliance for a Healthier Generation	2.4		3.0	2.8	3.0							1.1	2.8		15.1	2.5
HEALTH AFFAIRS INITIATIVES																
UltimateMe	2.1	2.0	1.5	1.9	2.0	0.0	2.4	1.1		0.4	1.0	1.4	1.3	0.1	17.2	1.3
Community Health Promotion Council (or Team)					2.5	0.7					2.3	2.3	1.1		8.9	1.8
Community Resource Guide			2.5	1.5	0.5			1.0			0.5	1.2	1.0	1.5	9.7	1.2
5210 Healthy Military Children							2.2								2.2	2.2
Let's Go 5210	2.3														2.3	2.3
Group Lifestyle Balance	3.0														3.0	3.0
Parity Pricing							2.8								2.8	2.8
Tobacco Counter-marketing at POS							1.2					3.0	3.0		7.2	2.4
Tobacco Free MTF Policy			0.6												0.6	0.6
Tobacco Free Areas			1.0	1.6	1.0			1.2			1.3	0.9	1.1	0.8	8.9	1.1
INNOVATIVE INITIATIVES																
Ambassadors for Health		2.3	0.5	0.5	2.4						2.3				8.0	1.6
Fight the Enemy	2.3	3.0	3.0	1.9	1.5						3.0	1.9	2.9		19.5	2.4
Holly-Graham	2.8		2.6		2.8						2.8		2.7		13.7	2.7
Kicking Butts for Points			3.0		1.1						2.9	2.8	2.9	2.4	15.1	2.5
Operation Kid Fit															0.0	0.0
Total PFT Score	32.7	26.8	35.0	24.2	31.0	3.7	22.4	15.6	13.7	9.1	30.2	28.9	31.6	13.2		
Average PFT Score	2.5	2.4	2.2	1.9	1.9	1.2	2.5	2.0	2.7	2.3	2.2	2.1	2.1	1.7		
Count Green	7	6	10	4	6	1	5	4	4	3	8	5	8	1		
Count Yellow	6	5	3	7	7	0	4	3	1	0	3	8	5	5		
Count Red	0	0	3	2	3	2	0	1	0	1	3	1	2	2		
Number of initiatives implemented	13	11	16	13	16	3	9	8	5	4	14	14	15	8		
Exposure score	0.9	0.7	0.6	0.7	0.6	0.5	0.6	0.5	1.3	1.0	0.5	0.7	0.7	0.6		
DOSE INDEX [(Total PFT score * Avg exposure score)/ 174 optimal score]	17%	11%	12%	10%	11%	1%	8%	4%	10%	5%	9%	12%	13%	5%		

	Mt. Home AFB	Yokota AB	Ft. Sill	Ft. Bragg	Ft. Meade	Camp Dodge	Base Cape Cod	March ARB	DLA	DHHQ	SUBASE New London	29 Palms	MCB Quantico	JBPHH	

0 - 1.00 RED	1.1 - 2.49 AMBER	2.5 - 3.00 GREEN	Initiative present but no PFT	WHITE	Initiative present but does not require a PFT	LIGHT GRAY	Initiative not present	DARK GRAY

Some initiatives were implemented very early in the demonstration and were in place for approximately the full two years; others were implemented near the end of the demonstration. It is reasonable to expect that initiatives that are not fully established may not have as great an impact as those that are longer-standing. We therefore gathered data on exposure lengths for initiatives at each installation. Initiatives in place for 0-6 months (half a year) received an exposure score of 0.5; those in place for 7-12 months (about 1 year) received a score of 1; those in place for 13-18 months (about 1.5 years) received a score of 1.5, and exposures 19+ months (approximately 2 years) received a score of 2. Table 8.1 shows the average exposure scores for each installation.

A dose index was then constructed to capture the quantity, quality, and duration of initiative implementation in a single number. This number was normalized on a 0-100 scale, with 100 being the maximum score achievable if an installation implemented all 29 HBI initiatives, with excellent fidelity (3.0 PFT score), and for the full 2 years of the demonstration. The dose index score can therefore be interpreted as the amount of HBI dose delivered at a given installation during the demonstration period (e.g., the actual vs. potential score for Mt. Home is 16.9 percent).

The four installations with the highest total PFT scores were: Ft. Sill, Mt. Home AFB, MCB Quantico, and Ft. Meade. The four installations with the lowest total PFT scores were Camp Dodge, DHHQ, JBPHH, and DLA. The remaining six installations (SUBASE New London, Twentynine Palms, Yokota AB, Ft. Bragg, Base Cape Cod, and March ARB) achieved mid-range PFT scores.

Caveat: Throughout the various phases of the demonstration, it became apparent that variations in implementation and impact may be due to factors inherent to the installations (e.g., availability of existing programs, resource capacity, and commitment levels) or factors inherent to the initiatives (e.g., ease of implementation, support for implementation, potential for health impact, resource needs). Qualitative findings, made available from survey responses to the Climate Resource Assessment and on-site interviews, are provided in other sections of the report.

Initiatives receiving the highest scores were those focused on providing healthy food choices (e.g., BFY MWR, Go for Green®, Menu Renovation, Commissary Produce, and Share our Strength CMATS) with five of 29 receiving a PFT score above 20.

The five installations with the highest dose index scores were Mt. Home AFB, MCB Quantico, Ft. Sill, Twentynine Palms, and Yokota AB. The four installations with the lowest dose index scores were: DHHQ, JBPHH, March ARB, and Camp Dodge. The remaining five installations (Ft. Meade, DLA, Ft. Bragg, Subase New London, and Base Cape Cod) had mid-range dose index scores.

Unfortunately, it was not possible to evaluate the "reach" of initiatives, i.e., the number of individuals "exposed" to a given intervention, and to incorporate that value into an overall dose score. Future studies should consider alternative methods for tracking exposure to interventions in terms of the number of individuals who are aware of initiatives, participate in them, and are positively influenced by them.

Finally, it is worth reiterating the point that no installation was expected to implement all 29 initiatives; furthermore, a variety of external factors (discussed in detail elsewhere in this report) may have limited the timeliness and fidelity of implementation.

Dose Received

The Climate and Resource Assessment

The second step in the process evaluation looked at the degree of program awareness, participation, and satisfaction associated with

different HBI initiatives – in other words, dose received. This information was gathered using a self-reported feedback tool called a "Climate and Resource Assessment," or CRA, which was administered by Cornell University and DMDC and was IRB approved. An invitation to complete the CRA was sent by the installation to all service members, civilian employees, and spouses of active duty personnel who provided their email address and indicated that email was their preferred mode of contact. The CRA was distributed to all participating locations approximately 12 months after the HBI program launch. A convenience sample of those who voluntarily completed the survey instrument was used to determine level of awareness, use, and satisfaction with individual HBI initiatives; the extent to which respondents made changes in their eating, exercise, and tobacco use behaviors; and the way those behavior changes related to awareness, use, and satisfaction with HBI.

Results from the CRA are presented in the following chapter.

Process Output

The final step in the process evaluation involved examining intermediate outcomes or outputs, i.e., changes in health behaviors. For example, the HBI team examined detailed food service transactions and physical activity-related behaviors. Information on output measures was captured from a variety of sources including point-of-sale records at food outlets, fitness center utilization records, and stairway sensors. These data were collected for one month per fiscal quarter, monthly during an operating season, or as appropriate by program, from October 2013 through June 2015. In the section below, we report on the output measures that were gathered for a sample of HBI initiatives.

Output Measures for Sample Healthy Food Initiatives

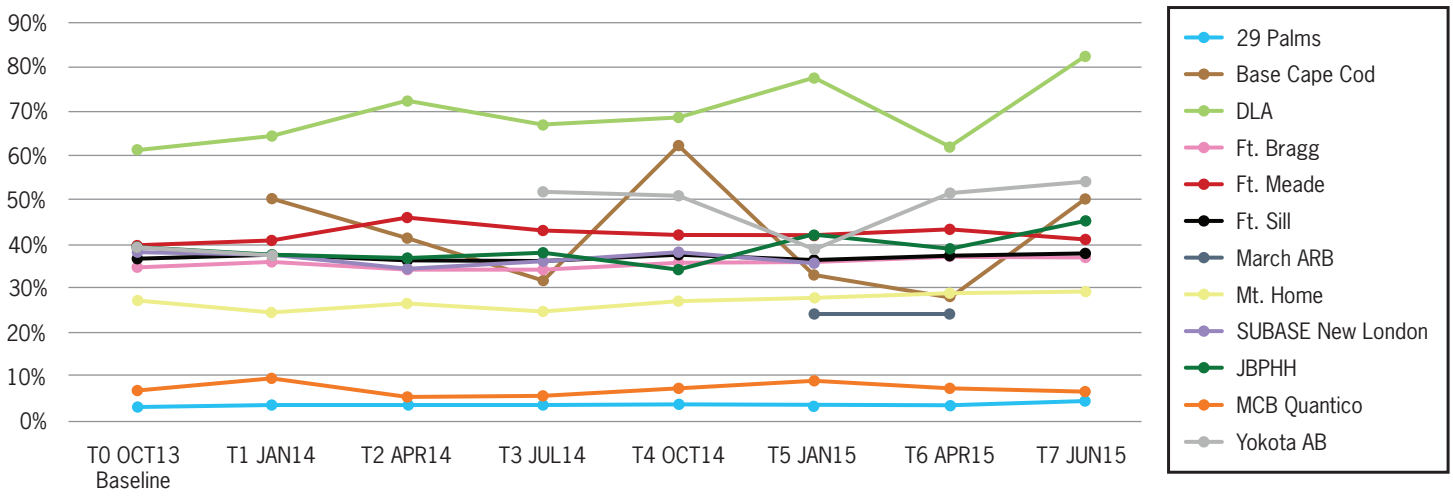
Go for Green® and Better For You

HBI included the piloting of two food labeling systems: the **BFY** and the **Go for Green®** programs. The process output for these programs was assessed using a common set of metrics related to changes in the food environment (e.g., BFY food choices available as a percentage of total food available), and data on consumer behavior (e.g., BFY food sold as a percentage of total food sold). Figure 8.6 (next page) shows changes in the proportion of BFY food available in sampled food outlets at 12 of the HBI pilot sites between October 2013 and June 2015. There was substantial variability in the BFY available ratio; however, on average, HBI pilot sites experienced a small positive change (3 percent) in BFY food available as a percentage of total food available when comparing the most recent period (June 2015) to baseline (October 2013).

Installations showing the greatest increase in BFY food available included: DLA (+21 percent from baseline) Yokota (+15 percent), and JBPHH (+6 percent). Just one installation (SUBASE New London) experienced a drop in BFY food available (-3 percent).

Figure 8.7 (page 95) shows change in BFY food sold as a percentage of total food sales at the sampled food outlets. Available data indicate a small improvement in the ratio of BFY food sold (an increase of two percentage points) from baseline to the most recent period. The proportion of BFY food sold varied greatly across installations with DLA showing the most improvement (+22 percent from baseline).

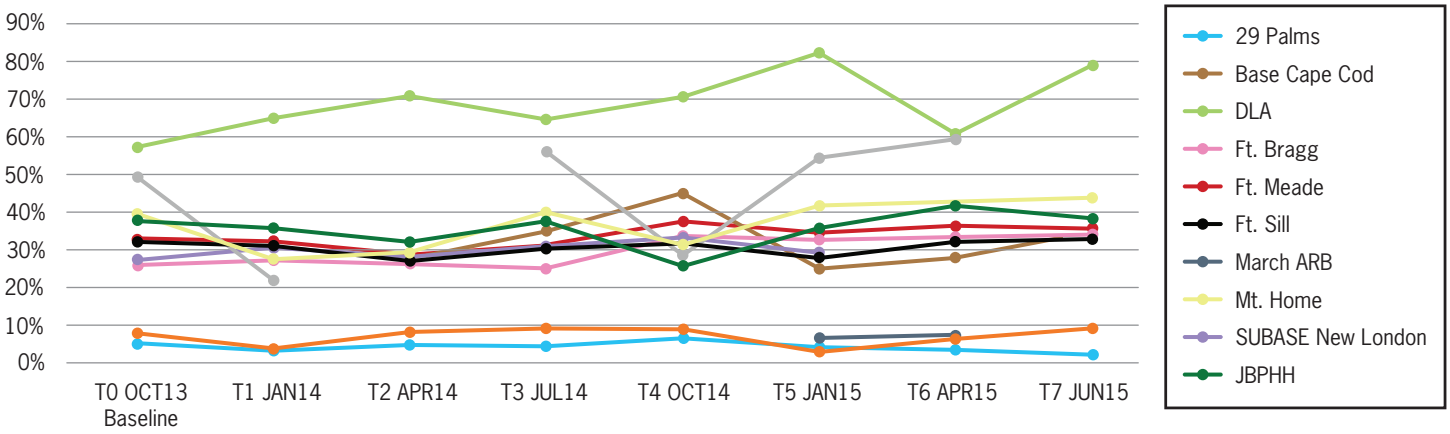
Figure 8.6. Changes in the Proportion of BFY Food Available, October 2013 – June 2015



Better for You food available as a percentage of total food available									
	T0 OCT13 Baseline	**T1 JAN14**	**T2 APR14**	**T3 JUL14**	**T4 OCT14**	**T5 JAN15**	**T6 APR15**	**T7 JUN15**	**Pct point change from baseline to most recent***
29 Palms	3%	4%	3%	3%	3%	3%	3%	4%	**1%**
Base Cape Cod		50%	41%	31%	62%	33%	28%	50%	**0%**
DLA	61%	64%	72%	67%	69%	77%	62%	82%	**21%**
Ft. Bragg	35%	36%	34%	34%	36%	35%	37%	37%	**2%**
Ft. Meade	39%	41%	46%	43%	42%	42%	43%	41%	**2%**
Ft. Sill	37%	37%	36%	36%	38%	36%	37%	38%	**1%**
March ARB						24%	24%		**0%**
Mt. Home	27%	24%	26%	25%	27%	28%	29%	29%	**2%**
SUBASE New London	38%	37%	34%	36%	38%	36%			**-3%**
JBPHH	39%	37%	37%	38%	34%	42%	39%	45%	**6%**
MCB Quantico	7%	9%	5%	5%	7%	9%	7%	6%	**0%**
Yokota AB	39%	37%		52%	51%	39%	51%	54%	**15%**
ALL INSTALLATIONS	35%	35%	34%	34%	38%	35%	33%	38%	**3%**

**Where baseline data were missing, we substituted the earliest available data for the baseline measure.*

Figure 8.7. Change in BFY Food Sold as a Percentage of Total Food Sold, October 2013 – June 2015



Better for you food sold as a percentage of total food sold									
	T0 OCT13 Baseline	**T1 JAN14**	**T2 APR14**	**T3 JUL14**	**T4 OCT14**	**T5 JAN15**	**T6 APR15**	**T7 JUN15**	**Pct point change from baseline to most recent***
29 Palms	5%	3%	5%	4%	6%	4%	3%	2%	**-3%**
Base Cape Cod			27%	35%	45%	25%	28%	34%	**7%**
DLA	57%	65%	71%	65%	71%	82%	61%	79%	**22%**
Ft. Bragg	26%	27%	26%	25%	34%	33%	33%	34%	**8%**
Ft. Meade	33%	32%	29%	31%	37%	34%	36%	36%	**3%**
Ft. Sill	32%	31%	27%	30%	31%	28%	32%	33%	**1%**
March ARB						6%	7%		**1%**
Mt. Home	40%	27%	29%	40%	31%	42%		44%	**4%**
SUBASE New London	27%	31%	28%	31%	33%	29%			**2%**
JBPHH	38%	36%	32%	37%	25%	36%	42%	38%	**1%**
MCB Quantico	8%	4%	8%	9%	9%	3%	6%	9%	**2%**
Yokota AB	49%	22%		56%	28%	54%	59%		**10%**
ALL INSTALLATIONS	32%	30%	27%	31%	32%	29%	33%	34%	**2%**

**Where baseline data were missing, we substituted the earliest available data for the baseline measure.*

Data collection for these process output measures was challenging. Food outlets often use different PoS systems and in some outlets "pencil and paper" record keeping is still in practice. This documentation resulted in challenges with missing data or minor changes in the underlying sample, such as changes in the venues from which data were collected. It is possible that some of these challenges in data collection may have biased the findings.

Part of the evaluation of Go for Green® and other food initiatives was intended to examine the financial impacts and viability of these programs. Data were collected on total revenue, total patronage, and total food cost per customer. However, these data were found to be unreliable and were therefore not included in our evaluation.

Initiatives were widely implemented (Go for Green® at seven bases, and BFY at 11 bases), and they had strong fidelity of implementation. (The most recent PFT scores for both programs averaged 2.5.) Although double-digit positive changes were not realized by most installations, there were small consistent improvements in output measures. Given the large proportion of the DoD community touched by the initiatives, a moderate effect size may translate to meaningful population health impacts over time.

Commissary Initiatives

Commissary initiatives were rolled out at 10 stores. To measure the output of this initiative, we tracked the sales of fresh produce as a percentage of total commissary sales. (See Figure 8.8 on the next page.) Over a three-year period, purchasing patterns held steady; meaning there was no appreciable increase in sales of fresh produce as a percentage of total commissary sales in the two years following baseline (i.e., a 0.7 percent increase in sales from baseline to year 2).

Installations with the greatest increase in fresh produce sales were: New London and Pearl Harbor (each with a 1.3 percent increase over baseline), Pearl Harbor-Hickam (1.2 percent increase), and Twentynine Palms (1.1 percent increase). One installation (Yokota) realized a -1.2 percent reduction from baseline.

Additional studies of specific item sales trends (i.e., for frozen fruit, canned fruit, frozen vegetables and canned vegetables) as well as overall fresh produce sales trends were conducted by the Cornell Food and Brand Lab.

Farmers Market Initiative

The **farmers market** initiative was tested at five installations. However, only three sites (DLA, Ft. Meade, and Quantico MCB) tracked vendor and financial data. The process-output data show that there was a moderate increase in the number of farmers market vendors and the percentage of farmers market vendors who reported "breaking even" since the start of HBI, with substantial seasonal variation (i.e., spikes in the number of vendors and sales in July and August of each year). Farmers markets are well established at DLA, and appear to be financially viable at that installation.

Share our Strength Cooking Matters at the Store

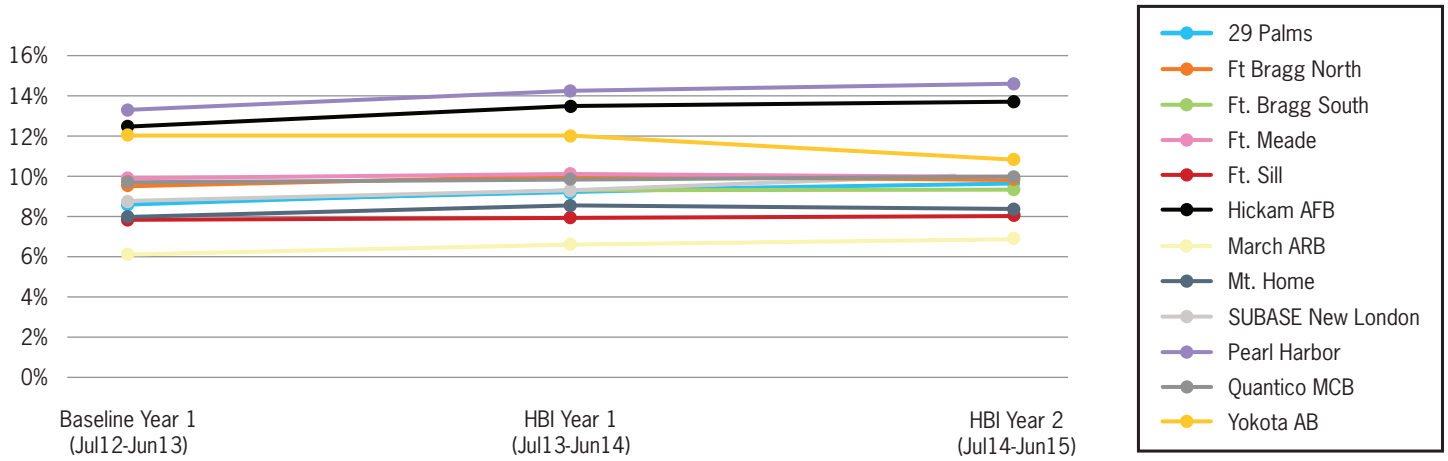
The **Share our Strength CMATS** initiative was tested at eight of the fourteen (57 percent) HBI sites. Over the course of the demonstration, a total of 5,133 participants completed the classes and tours. Post-tour feedback indicates that participants improved their understanding of, and attitude toward, balanced nutrition, food shopping, and cooking.

Output Measures for Sample Active Living Initiatives

The pilot **Warrior Well** initiative touched very few individuals across HBI (about 60 people), required a high level of time and resource commitment, and achieved modest results. On average, participants in the Warrior Well program saw little impact on body composition. There were notable improvements in physical fitness test scores, as well as self-reported nutrition, physical fitness, and mindfulness.

However, these trend data were gathered from only a small subset of participants and were likely affected by attrition and self-selection bias. The 19 Warrior Well participants measured at both baseline and final team session lost an average of 0.8 pounds over the course of the training. The average BMI decreased from 28.1 to 28.0 but there were increases in body fat mass (+0.6 lbs.) and lean tissue mass (+0.6 lbs). (Reported changes are small and likely the result of measurement or reporting errors.) In terms of physical fitness, there was a noticeable improvement in APFT scores. Participants improved their scores in three categories: two-mile run (+4.5 percent), push-ups (+6.7 percent), and sit-ups (+13.2 percent).

Figure 8.8. Sales of Fresh Produce as a Percentage of Total Commissary Sales



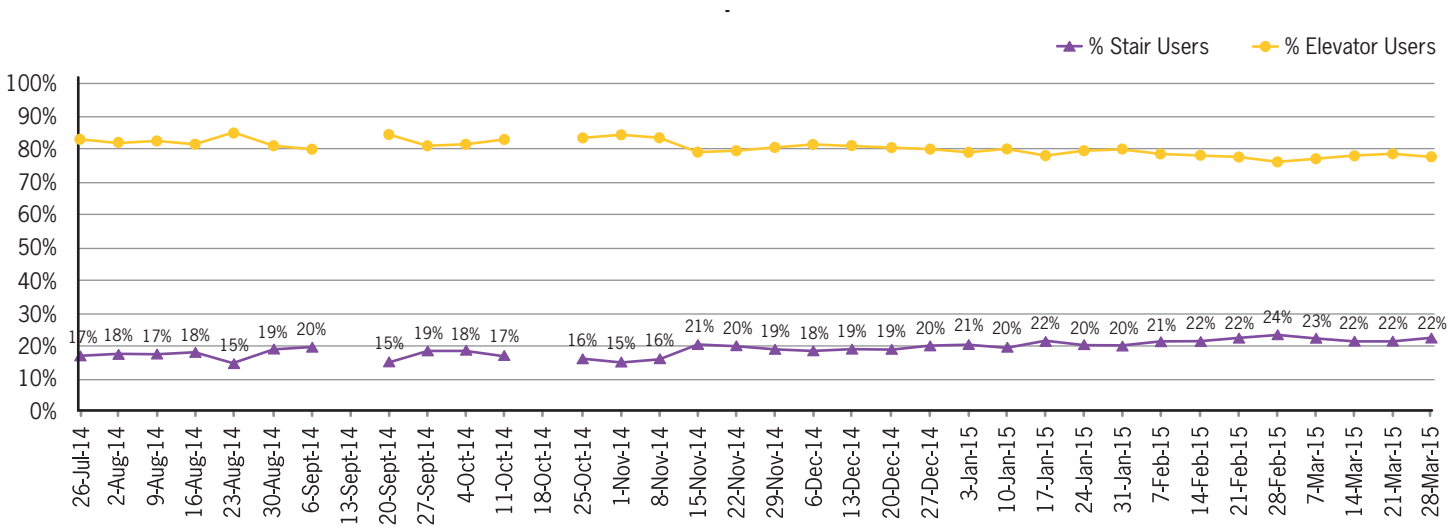
Fresh Produce Sales as a Percentage of Total Commissary Sales						
	Baseline Year 1 (Jul12-Jun13)	HBI Year 1 (Jul13-Jun14)	HBI Year 2 (Jul14-Jun15)	Pct point change from Baseline to T1	Pct point change from T1 to T2	Pct point change from Baseline to T2
29 Palms	8.6%	9.2%	9.6%	0.6%	0.4%	1.1%
Ft Bragg North	9.6%	9.9%	9.8%	0.4%	-0.1%	0.3%
Ft Bragg South	8.7%	9.3%	9.3%	0.6%	0.0%	0.6%
Ft. Meade	9.9%	10.1%	10.0%	0.2%	-0.1%	0.1%
Ft. Sill	7.8%	7.9%	8.2%	0.1%	0.3%	0.4%
Hickam AFB	12.5%	13.5%	13.7%	1.0%	0.2%	1.2%
March ARB	6.1%	6.6%	6.9%	0.5%	0.3%	0.8%
Mt. Home	8.0%	8.5%	8.4%	0.6%	-0.2%	0.4%
SUBASE New London	8.8%	9.3%	10.1%	0.5%	0.8%	1.3%
Pearl Harbor	13.3%	14.2%	14.6%	0.9%	0.4%	1.3%
Quantico MCB	9.8%	9.8%	10.0%	0.0%	0.2%	0.2%
Yokota AB	12.1%	12.1%	10.8%	0.1%	-1.3%	-1.2%
AVERAGE	10.1%	10.6%	10.7%	0.5%	0.1%	0.7%

The **StairWELL to Health** initiative was rolled out at three installations; however, only Yokota AB was able to monitor program impact using automatic data collection sensors. Daily counts of stair and elevator users were gathered for approximately 50 weeks following launch of the initiative. Output data from only one site (Yokota) suggest a solid upward trend in stair use; that is, an increase of five percentage points from baseline to the most recent measure. These findings are encouraging and consistent with previous research showing increases in stair use coinciding with the introduction of signage.

Figure 8.9 (below) shows summary data for the StairWELL initiative at Yokota AB. On average, the weekly data logged activity for about 5,000 people, of which, on average, 20 percent used the stairs. Extreme outlier data points — that is, those more than three standard deviations from the mean — were removed from the data set and considered missing. For example, in one of the outlier weeks, the data showed that 100 percent of people used the elevator (i.e., zero stair users). (This data point is improbable and most likely due to a data collection error [e.g., a malfunction in the stairwell sensors] or some other exogenous variable [e.g., the stairwells were closed and unavailable for use]).

The **Fitness on Request** initiative was implemented at ten of fourteen pilot sites. However, the prolonged contracting period coupled with IT security concerns and interruptions produced inconsistent data. Complete output data were only gathered at Yokota, and intermittent data were provided by four other installations. On the whole, the initiative experienced relatively low utilization, averaging fewer than four hours of viewing per day. The installations faced various operational challenges, significant delays in implementing Fitness on Request, and establishing data collection procedures. It is too early to assess the output of the initiative at most sites, however, data from Yokota show a downward trend in utilization.

Figure 8.9. Longitudinal View of Stair Use at Sampled Yokota Venues



24-Hour Fitness was a program originally piloted at select Air Force installations and later tested at five of fourteen (36 percent) HBI installations. Because of various operational challenges, just two of the seven pilot sites reported utilization data. Data from Yokota show a positive trend in utilization (from under two to about five CAC swipes per day) despite substantial fluctuation, and one period of data from Twentynine Palms shows moderate utilization. Given these limited data, it is not possible to assess the success of this initiative.

The **Bikeshare** initiative was tested only at DLA. However, available output data indicate low utilization – on average 23 reservations per month for a fleet of 15 bicycles.

Output Measures for School Initiatives

Alliance for a Healthier Generation's Healthy Schools Program worked with 22 schools that served six military installations. During the 2014-2015 school year, HSP saw positive changes in 91 percent (20/22) of participating schools. One school at Fort Sill earned a Silver Award and two schools at Fort Meade earned Bronze Awards.

In general, schools reported the most improvements in Health Promotion for Staff, PE and Other Physical Activity Programs, and School Health and Safety Policies and Environment. Specifically, schools reported most progress in supporting staff to model healthy behaviors and offering staff members accessible healthy eating/weight management programs. Within PE and Other Physical Activity Programs, schools showed improvement in promoting the practice of walking and bicycling to school, providing opportunities for students to participate in physical activity breaks in the classroom on all or most days of a typical school week, and offering students opportunities to participate in physical activities before or after the school day (or both).

Schools also reported notable progress in implementing policies that prohibit teachers from withholding recess as punishment, as well as those that prohibit the use of food as reward. Positive trends reported here are especially significant because of the inherent sustainability of policy change. Very minimal improvements were recorded in the areas of Health Education and Nutrition Services, likely because improvements there require broader, systemic changes. Finally, Family and Community Involvement was the area showing the most room for improvement.

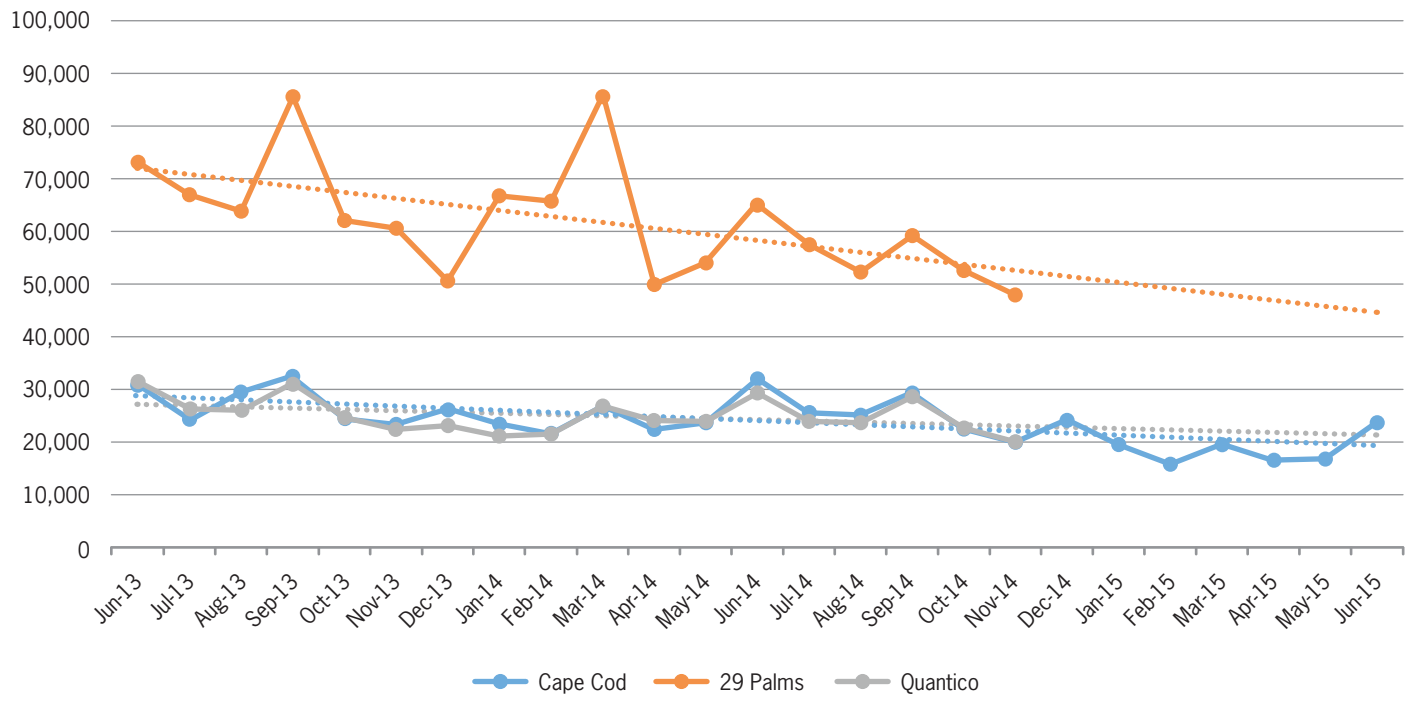
Output Measures for Sample Tobacco Initiatives

The HBI pilot included several tobacco-cessation related initiatives (e.g., counter-marketing at the point-of-sale, increasing tobacco free areas, the Kicking Butts for Points competition, and parity pricing at the exchange – which on average resulted in an effective price increase of about 5 percent). This section examines key output measures shared by these initiatives (e.g., tobacco sales units), as well as some other initiative-specific measures.

Figure 8.10 presents sales data from Base Cape Cod, Twentynine Palms, and MCB Quantico – the three installations most active in tobacco counter-marketing efforts. It is evident that tobacco sales are declining at all three of these installations. These declines ranged from -23.3 percent to -36.5 percent from baseline to the most recent period.

It is important to note that the large downward trend in sales observed at Base Cape Cod, MCB Quantico, and Twentynine Palms predated the launch of HBI-initiatives. At Base Cape Cod, for example, the tobacco pricing initiative was only put in place in February 2015. (Although

Figure 8.10. Tobacco Sales at Base Cape Cod, MCB Quantico and Twentynine Palms (in units)



this initiative had installation-level support, implementation was delayed because it required policy changes at the exchange level to implement.) Therefore, observed changes in tobacco sales cannot be attributed to HBI. It is not clear whether HBI influenced tobacco use at these sites or whether post-HBI declines were due to other forces at these installations that pre-dated HBI.

UltimateMe (OLW Health and Wellness Assessment)

UltimateMe was piloted at thirteen of the fourteen HBI pilot sites. The HBI team gathered output measures related to average physical activity, sleep, nutrition, and healthy days score across all installations, as well as differences between chronological age and "Real Age"—a metric that considers an individual's actual health and wellbeing. Participation during the demonstration period was low (N=569 as of August 2015) due to technical challenges and the values gathered were a one-time snapshot and not amenable to interpretation in terms of evaluating the effects of HBI. This initiative appears promising, especially as a tool to collect individual level information, but more work is needed to promote the tool and achieve credible baseline and follow-up data. (A separate report reflecting more current data on UltimateMe is expected to be issued in November 2015.)

Outcome Evaluation

Overview

The purpose of the outcome evaluation was to assess HBI's overall effectiveness in terms of impacts on the prevalence of tobacco use and obesity rates. Prevalence data for specific indicators of tobacco use and obesity were derived in aggregate from the MHS's Population Health Portal (PHP). The outcome data reported are collected from direct care encounters at MTFs. It is important to note that outcome data available from MTFs are for TRICARE® beneficiaries who sought care at MTFs; this includes active duty personnel, dependents, and retirees. Data reflect a one year look-back and are compiled on a monthly basis for individuals who received care at an MTF and who were continuously enrolled in TRICARE® within 12 months of the reporting period. The look-back provides a year's worth of data (e.g., first fiscal quarter of 2014 reflects data from January 2013 through December 2013). While the information is collected on a monthly basis, it takes approximately three months after receipt of data to process the information before it is accessible to DoD.

Outcomes data were only available for nine of the fourteen HBI pilot installations. The data were drawn from electronic medical records (EMRs) for patients who received medical services at the nine pilot sites contributing data to the PHP (i.e., individuals who had appointments at the MTFs during a specified period, were assessed on the measure, and had it recorded in their health record). It is likely that individuals using the MTF are older and sicker than the general population at the site. Additionally, it is possible that healthier individuals (i.e., those at normal weight and non-tobacco users) were less likely to be assessed on the key outcome measures and have the data recorded. In short, the analysis presented below may not be representative of population health in general at any given installation. We were unable to secure demographic data (e.g., age, gender, race, and income level) for patients with medical records to gauge how similar or dissimilar the samples were from the general population they were intended to represent.

The aggregate data were not available on a monthly or quarterly basis and, therefore, rolling annual averages needed to be calculated, with time horizons differing for the two key outcome measures. For example, for tobacco use, each data point represents the average measure for the full one-year period ending in the first month of that quarter, (e.g., 2010Q2 data reflect average tobacco use from May 2009 through April 2010). To address this limitation, we examined annual trends, using the most recent data available (e.g., 2015Q2) and equivalent data points for each prior year (2014Q2, 2013Q2, etc). Also, because of operational difficulties, data were not available through the end of June 2015, as was expected. To create equivalent time periods, we chose uniform time horizons for each study year, which began on May 1 of a given year and ended April 30 of the following year. Consequently, HBI Intervention Year 1 includes a three-month period (May 1, 2013 – June 30, 2013) prior to the formal start of HBI on July 1, 2013.

Another complication to the analysis is that HBI was rolled out at different times at the various installations. This analysis uses July 1, 2013 as the official start of HBI; however, each base launched HBI on a different start date and individual initiatives within HBI began at different times. Some installations delayed the start of certain programs, which meant that some initiatives (for example, those related to tobacco) were implemented only recently in February 2015. In spite of these limitations, we analyzed outcomes data for four baseline and two intervention years. However, with so few data points, we lacked power to conduct inferential statistical analysis.

In Table 8.2, we highlight the timeline for data analysis for both tobacco and obesity prevalence calculations.

Table 8.2. Study Timeline for Tobacco and Obesity Prevalence Calculations

Tobacco Data Period Definitions	Obesity Data Period Definitions
Baseline Year1 May 2009 – April 2010	Baseline Year1 April 2009 – March 2010
Baseline Year2 May 2010 – April 2011	Baseline Year2 April 2010 – March 2011
Baseline Year3 May 2011 – April 2012	Baseline Year3 April 2011 – March 2012
Baseline Year4 May 2012 – April 2013	Baseline Year4 April 2012 – March 2013
HBI Year1 May 2013 – April 2014	HBI Year1 April 2013 – March 2014
HBI Year2 May 2014 – April 2015	HBI Year2 April 2014 – March 2015

Methods

The evaluation team used MS Excel pivot tables to analyze the data following a careful review of inputs to address inconsistencies and implausible values. Extreme outlier data points (operationally defined as more than three standard deviations from a prior value) were excluded from the analysis and treated as "missing."

For each risk factor, we conducted a review of the data that included:

- An overall look at trends for the population as a whole within a given HBI installation, compared to all non-HBI DoD sites;
- A look at trends for active duty personnel compared to non-HBI DoD counterparts;
- A look at trends for dependents compared to non-HBI DoD counterparts;
- A look at trends by military branch or service, compared to non-HBI DoD sites; and
- A stratified analysis looking at trends for "high," "medium," and "low" dose installations as determined by their PFT scores.

In this chapter, because of space limitations, we only present results for the overall population. Analyses of subpopulations, along with a more detailed report of HBI Measurement and Evaluation Results are available at *the Johns Hopkins website*.[35]

For each of the data reviews, we examined the average annual change during the four baseline years, and compared that to the average annual change during the two HBI intervention years. We then compared the pre-post difference for HBI sites (treatment group) to the pre-post difference for non-HBI DoD sites (comparison group) to assess whether changes observed can reasonably be attributed to HBI.

Results: Tobacco Use

Tobacco use prevalence values ranged from 10.6 percent (at JBPHH in HBI Year2) to 26.7 percent (at Ft. Sill in Baseline Year2), with no radical swings in the number of records from any of the installations studied. Figures 8.11 and Table 8.3 show the average annual change

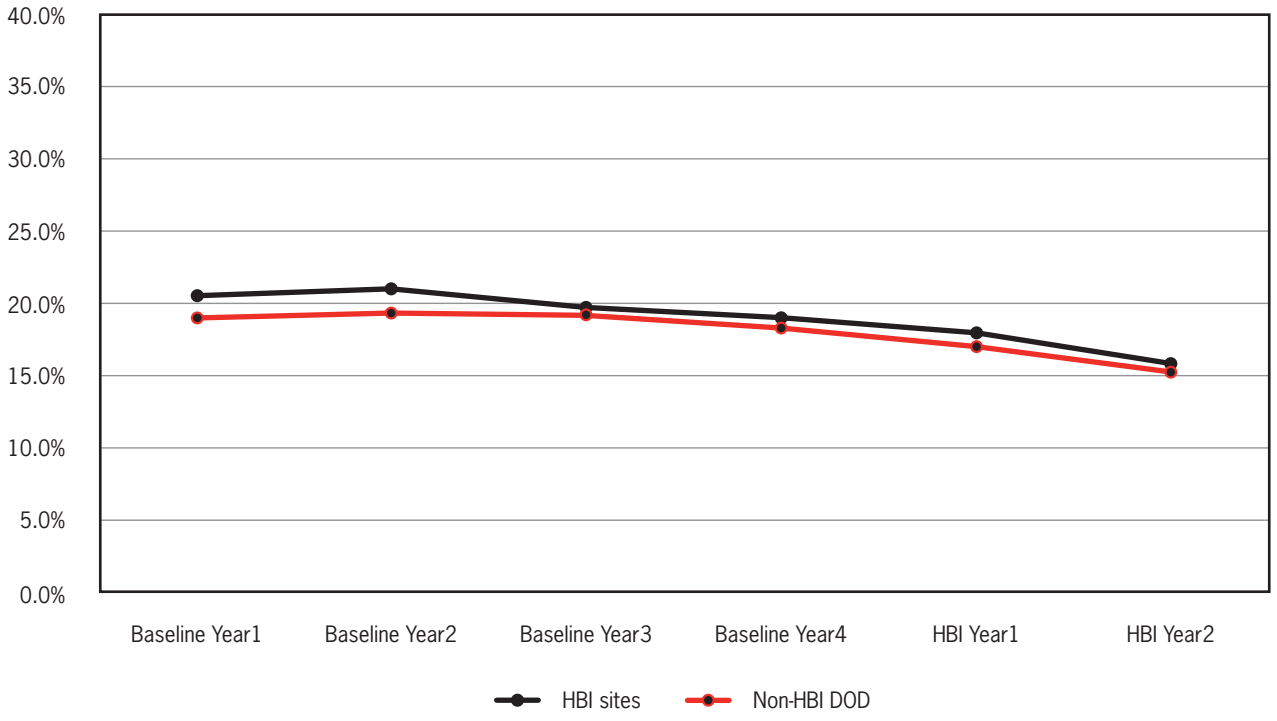
[35] More details can be found at: http://www.jhsph.edu/research/centers-and-institutes/institute-for-health-and-productivity-studies/projects/archived-projects/.

in tobacco use prevalence for the HBI intervention period compared to baseline. In almost all cases, the decline in tobacco use prevalence during the HBI period was substantially greater than during the baseline period (-2.1 percent annual change in the intervention period vs. -0.5 percent during the baseline period, for the nine HBI sites). Declines in tobacco use rates were also observed for all non-HBI DoD sites (-1.7 percent post vs. -0.2 percent pre). When conducting a "difference-in-differences" analysis, the HBI sites experienced a net -0.2 percent reduction in tobacco use compared to DoD overall. Figure 8.11 shows the tobacco use prevalence rates for all nine HBI sites combined compared to DoD overall.

Tobacco use rates declined steadily across all DoD sites for the six-year period of 2010-2015, falling 1.6 percent annually at HBI sites and 1.4 percent at non-HBI sites. All HBI sites saw reductions in tobacco use rates during the two year intervention period (averaging 2.1 percent), with seven of the nine sites (78 percent) experiencing annual reductions exceeding 1.0 percent. The reductions in tobacco use rates for HBI sites appear to follow a trend for DoD in general wherein tobacco use rates have dropped at a faster rate in the past two years compared to the prior four-year baseline period. Tobacco use rates are dropping quickly for DoD overall, and at HBI sites the rates are dropping slightly faster than at non-HBI sites.

However, due to the late implementation of some of the tobacco initiatives, and the data limitations described above, it is too early to attribute the drop in tobacco use prevalence rates to HBI.

Figure 8.11. Trends in Tobacco Use Prevalence for Nine HBI Sites Combined and DoD Overall (Excluding HBI Sites), 2010 – 2015, Overall Population



We conducted a dose stratification analysis in which we stratified the nine installations providing outcomes data by their dose indices. Our analysis revealed that tobacco use prevalence outcomes were not associated with high-, medium-, and low-dose PFT scores. Specifically, we observed that high-dose installations had the smallest improvement in tobacco use trends from the baseline period to the HBI-period. On the other hand, and contrary to expectations, low-dose installations had the greatest improvement in tobacco use rates when comparing the baseline average annual change to the post-HBI average annual change. (See Table 8.4)

Table 8.3. Trends in Tobacco Use Prevalence for Nine HBI Sites and DoD Overall (Excluding HBI Sites), 2010 – 2015, Overall Population

Prevalence of Tobacco Use - Overall									
	Baseline Year1	Baseline Year2	Baseline Year3	Baseline Year4	HBI Year1	HBI Year2	Baseline Average Annual Change	Annual Change Post-HBI	Difference
Ft Bragg	22.8%	23.5%	21.1%	21.9%	20.7%	17.6%	-0.3%	-3.1%	-2.8%
Ft. Meade	14.2%	13.9%	13.8%	13.3%	12.9%	11.1%	-0.3%	-1.8%	-1.5%
Ft. Sill	26.6%	26.7%	26.4%	24.4%	21.6%	19.4%	-0.7%	-2.2%	-1.5%
JBPHH	13.2%	12.8%	12.6%	12.2%	11.3%	10.6%	-0.3%	-0.6%	-0.3%
Mt. Home AFB	19.5%	19.9%	18.9%	17.8%	17.7%	15.6%	-0.6%	-2.2%	-1.6%
SUBASE New London	22.2%	22.6%	22.6%	20.6%	17.2%	14.2%	-0.5%	-3.0%	-2.5%
MCB Quantico	18.1%	16.5%	17.1%	17.0%	16.6%	15.7%	-0.4%	-0.9%	-0.6%
29 Palms	24.6%	26.1%	24.8%	21.6%	21.0%	19.6%	-1.0%	-1.3%	-0.3%
Yokota AB	16.6%	15.6%	19.2%	18.2%	17.7%	12.9%	0.5%	-4.8%	-5.3%
HBI sites	20.6%	21.0%	19.7%	19.0%	18.0%	15.8%	-0.5%	-2.1%	-1.6%
Non-HBI DOD	19.1%	19.4%	19.2%	18.4%	17.0%	15.3%	-0.2%	-1.7%	-1.4%
Difference (HBI-DoD)	1.5%	1.6%	0.5%	0.7%	1.0%	0.5%	-0.3%	-0.5%	-0.2%

It should be noted that as with all other tobacco use analyses, the differences across conditions were small (<2%), and while the data set lacks the power for meaningful inferential statistical analyses, it is likely that the magnitude of these differences is not statistically significant.

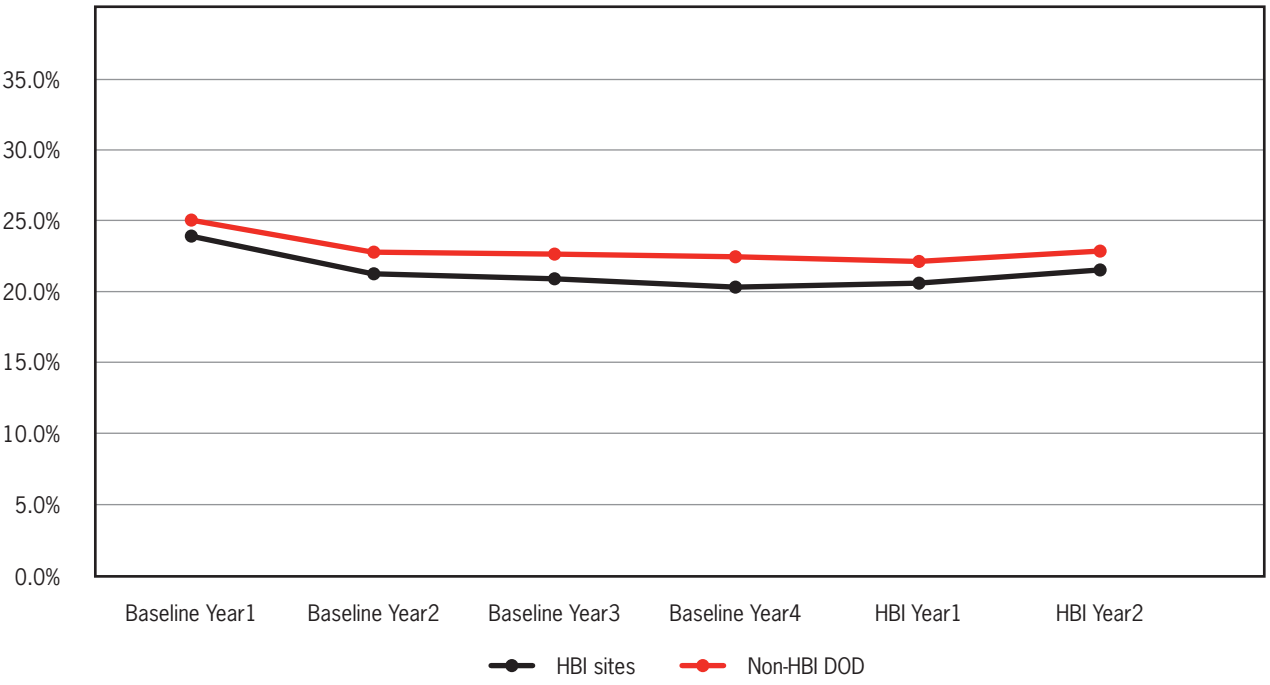
Table 8.4. Trends in Tobacco Use Prevalence by HBI Dose Category and DoD Overall, 2010–2015, Overall Population

Prevalence of Tobacco Use - By HBI Dose									
	Baseline Year1	Baseline Year2	Baseline Year3	Baseline Year4	HBI Year1	HBI Year2	Baseline Average Annual Change	Annual Change Post-HBI	Difference
High dose	22.6%	22.2%	21.8%	20.5%	19.3%	17.5%	-0.7%	-1.9%	-1.2%
Medium dose	17.8%	18.1%	18.0%	16.5%	15.9%	13.8%	-0.4%	-2.1%	-1.6%
Low dose	20.6%	21.4%	19.5%	19.4%	18.1%	15.8%	-0.4%	-2.3%	-1.9%
Non-HBI DOD	19.1%	19.4%	19.2%	18.4%	17.0%	15.3%	-0.2%	-1.7%	-1.4%

Results: Obesity

Obesity prevalence values ranged from 12.1 percent (at Yokota AB in HBI Year1) to 30.2 percent (at Ft. Sill in Baseline Year2), with no radical swings in the number of records from any of the installations studied. Figure 8.12 and Table 8.5 show the average annual change in obesity prevalence for the HBI intervention period compared to the baseline period. Obesity increased more during the HBI period than it did, on average, during the baseline period (+0.9 percent annual change in the intervention period vs. an average -1.2 percent during the baseline period, for the nine HBI sites). The obesity trend also worsened for non-HBI DoD sites (an increase of +0.7 percent in the intervention period vs. an average of -0.9 percent during the baseline period).

Figure 8.12. Trends in Obesity Prevalence for Nine HBI Sites Combined and DoD Overall (Excluding HBI Sites), 2010 - 2015, Overall Population



When conducting a "difference-in-differences" analysis, the HBI sites experienced a net 0.6 percent increase in obesity compared to DoD overall. Table 8.6 shows the obesity prevalence rates for all nine HBI sites combined compared to DoD overall.

Obesity prevalence increased steadily across all of DoD for the six year study period of 2010-2015. Of the nine installations examined, eight saw an increase in obesity during the two-year intervention period (an average change of +0.9 percent), whereas eight of the nine sites experienced a decline in obesity prevalence during the baseline period (an average annual change of -1.2 percent). The changes in obesity prevalence at HBI sites appear to follow a trend for DoD in general wherein obesity has increased somewhat in the past two years, following on the heels of a four-year decline. Obesity rates are increasing for DoD overall, and they are increasing slightly faster at HBI sites compared to non-HBI DoD sites. However, the difference is small enough that it is not practically meaningful and likely lacks statistical significance.

Table 8.5. Trends in Obesity Prevalence for Nine HBI Sites and DoD Overall (Excluding HBI Sites), 2010 – 2015, Overall Population

Prevalence of Obesity - Overall									
	Baseline Year1	Baseline Year2	Baseline Year3	Baseline Year4	HBI Year1	HBI Year2	Baseline Average Annual Change	Annual Change Post-HBI	Difference
Ft Bragg	24.6%	21.5%	21.2%	20.0%	20.0%	21.3%	**-1.6%**	**1.3%**	**2.8%**
Ft. Meade	24.8%	24.3%	24.6%	25.7%	25.2%	25.8%	**0.3%**	**0.6%**	**0.3%**
Ft. Sill	30.2%	27.6%	27.6%	27.6%	28.3%	29.3%	**-0.9%**	**1.0%**	**1.9%**
JBPHH	19.2%	16.9%	16.2%	15.6%	15.8%	16.0%	**-1.2%**	**0.2%**	**1.4%**
Mt. Home AFB	22.6%	19.3%	18.6%	18.3%	19.1%	21.2%	**-1.4%**	**2.1%**	**3.6%**
SUBASE New London	27.5%	25.2%	24.7%	24.6%	25.7%	27.1%	**-0.9%**	**1.4%**	**2.3%**
MCB Quantico	18.2%	15.8%	15.2%	15.3%	16.2%	16.0%	**-0.9%**	**-0.2%**	**0.8%**
29 Palms	22.0%	18.1%	17.0%	16.0%	15.5%	15.6%	**-2.0%**	**0.1%**	**2.1%**
Yokota AB	16.4%	14.3%	15.5%	14.6%	12.1%	12.7%	**-0.6%**	**0.6%**	**1.2%**
HBI sites	23.9%	21.3%	20.9%	20.4%	20.6%	21.5%	**-1.2%**	**0.9%**	**2.1%**
Non-HBI DOD	25.0%	22.8%	22.7%	22.5%	22.1%	22.9%	**-0.9%**	**0.7%**	**1.6%**
Difference (HBI-DoD)	-1.1%	-1.5%	-1.8%	-2.1%	-1.6%	-1.3%	**-0.3%**	**0.2%**	**0.6%**

We also conducted a dose stratification analysis in which we stratified the nine installations, providing outcomes data by their dose indices. Based on this analysis, the obesity prevalence by site, measured in terms of a "difference in differences," does not appear to be associated with high-, medium-, and low-dose scores. Specifically, we observed that that low-dose installations had the highest increase in obesity prevalence, and medium-dose installations had the smallest increase when comparing the baseline average annual change to the post-HBI average annual change. (See Table 8.6.)

Table 8.6. Trends in Obesity Prevalence by HBI Dose Category and DoD Overall, 2010–2015, Overall Population

Prevalence of Obesity - By HBI Dose									
	Baseline Year1	Baseline Year2	Baseline Year3	Baseline Year4	HBI Year1	HBI Year2	Baseline Average Annual Change	Annual Change Post-HBI	Difference
High dose	25.3%	22.6%	21.9%	21.9%	23.4%	24.0%	-1.2%	**0.6%**	**1.8%**
Medium dose	22.7%	21.1%	21.2%	21.8%	20.6%	21.5%	-0.3%	**0.9%**	**1.2%**
Low dose	23.7%	20.8%	20.4%	19.4%	19.6%	20.6%	-1.4%	**1.1%**	**2.5%**
Non-HBI DOD	25.0%	22.8%	22.7%	22.5%	22.1%	22.9%	-0.9%	**0.7%**	**1.6%**

Discussion & Conclusions

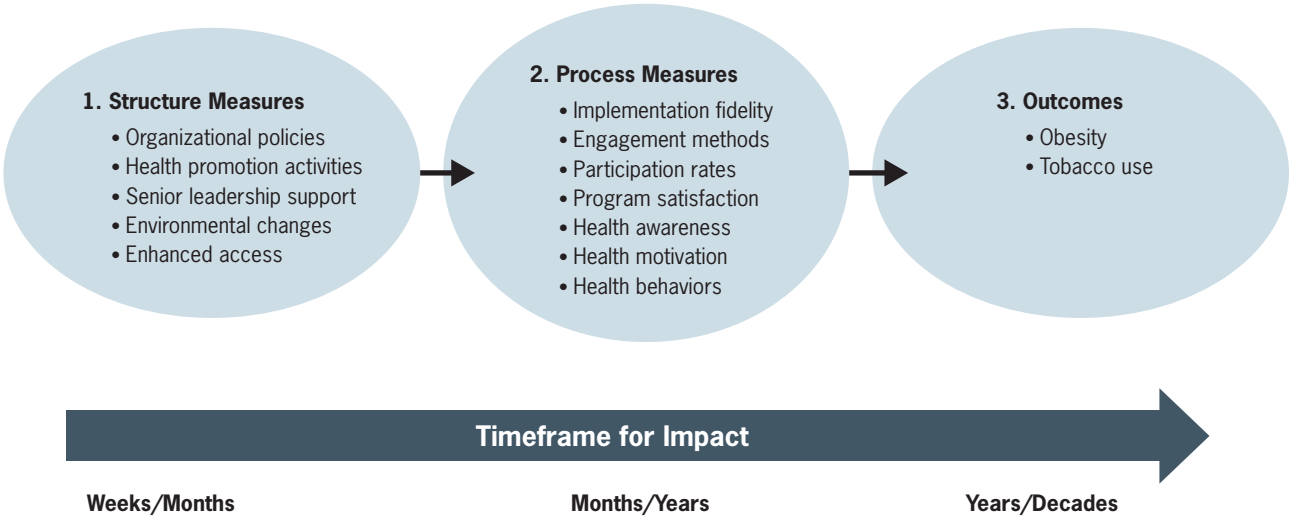
The evaluation of HBI has focused on structure, process, and outcome measures for twenty-nine initiatives made available at fourteen installations. Below, we return to the original research questions identified at the beginning of this chapter and offer summary impressions and conclusions. But, before we do so, we wish to make a few points.

First, it is important to remember that impacting population health is a long-term effort requiring years and even decades to achieve meaningful improvements. The poor health habits that have led to the need for HBI have accumulated over a long time horizon, and changing those habits requires commitment (i.e., "grit") and a meaningful long-term strategy focused on health promotion and disease prevention, with support by senior leadership at DoD. The short-term HBI pilot was important and provided meaningful feedback, but it is not long enough to achieve sustainable population health improvement. (See Figure 8.13.)

Second, while this report is voluminous and contains many data points, it is still impressionistic in its findings. We describe here a naturalistic study, ecological in nature, with no data that can connect an intervention to an individual, or health improvements for that individual. In addition, with the exception of outcomes data, we lack a baseline period against which to compare HBI results. Fortunately, in our outcomes analysis, we have a "pseudo" comparison group (i.e., the rest of DoD not receiving HBI), but that comparison group is varied, and comprised of different Services, installations, and populations that may be similar to or different from the HBI pilot sites. A rigorous evaluation study, even one conducted in a naturalistic setting, should have an appropriate baseline period and matched comparison groups against which to measure progress.

Finally, person level data are needed to assess program impact. Ideally, an evaluation would examine the extent to which individuals are "touched" by the program and the amount of behavior change and risk reduction achieved by those "touches," compared to similar individuals not engaged in the program. Individual-level data are needed to perform a credible evaluation – and these data would focus on biometric risks (weight/BMI, glucose, cholesterol, and blood pressure), behaviors (tobacco use, diet, and exercise), and psychosocial variables (stress and depression). In addition, future studies should examine other outcomes important to DoD including force readiness, utilization of healthcare services, service member "performance" (operationally defined as resilience or fitness for duty), and cost (including cost-effectiveness and cost-benefit, otherwise referred to as return-on-investment, or ROI).

Figure 8.13. Timeframe for Impact



With the above caveats in mind, we return to the research questions noted in the early part of this chapter.

Question 1

What is the current status of programs, policies, and the environmental support system for Health and Wellness? Has HBI impacted the physical and social environment to support healthy lifestyles?

Overall answer

The evaluation identified many gaps and opportunities to improve the programs, policies, and the environmental support system for health and wellness at the installations. There is evidence that the food environment is improving, but slow progress is being made in making installations more conducive to increased physical activity.

Specific answers

- The m-NEAT assessment showed that commissaries, DFACs, and galleys provide healthy food options; but there is significant room for improvement with respect to the food offerings available from vending machines and fast food outlets. The assessment revealed a promising trend related to an improvement in the food environment for 86 percent of HBI installations, with an average improvement score of seven percentage points.
- The m-PAC assessment revealed some notable strengths and weaknesses. In general, it found that most HBI pilot installations already have in place some policies, programs, and a supportive environment for physical activity (e.g. sports fields, fitness centers, exercise classes, etc.). But, there is room for improvement, for instance, improving the general walkability and bikeability of the installations, and broadening access to exercise facilities.
- There was only a modest improvement (0.5 percent) in creating a supportive environment for physical activity at five of the fourteen HBI installations (36 percent), of which only eight provided complete pre and post m-PAC data.

Question 2

Have the installations implemented initiatives as planned?

Overall answer

There was substantial variation in the fidelity of implementation across initiatives and installations. Overall, the initiatives were implemented with good fidelity (the average fidelity score was 2.1, on a 0–3 scale), but the intensity, duration, and reach of the initiatives was lacking and therefore needs to be improved to achieve optimal impact.

Specific answers

- While the average PFT score across all sites and all initiatives at the end of the demonstration was 2.1, indicating good fidelity of implementation, many of the initiatives were in place for just a short duration and/or had limited reach. There were many qualitative lessons learned from these implementation challenges that can be applied to direct future efforts.
- Overall dose index scores for HBI ranged from a low of 2 percent (actual vs. potential) at Camp Dodge to a high of 17 percent at Mountain Home. There is ample opportunity to increase the amount of health promotion programming made available at installations by increasing the number and quality of initiatives and their exposure period. Not revealed in this study were the number and proportion of individuals at a site exposed to any given intervention and to HBI as a whole.

Question 3

What is the level of awareness, participation, and satisfaction with initiatives?

Overall answer

Our quantitative data revealed substantial variation in output measures. In some of the targeted individual-level initiatives, participation was relatively strong (e.g., the Share our Strength CMATS Initiative engaged more than 5,000 individuals during its six-week classes and tours). However, other initiatives were intensive and intentionally focused on a small group of individuals (e.g., Warrior Well and Group Lifestyle Balance), or implementation was delayed so that that they were not able to build sufficient awareness and engagement before the end of the demonstration period (e.g., Fitness on Request). Unfortunately, we were unable to gather valid and objective participation data on the broad environmental initiatives that would have had the largest reach (e.g., Go for Green®, BFY MWR, and Commissary Initiatives).

Additional answers to this question can be found in the CRA analysis reviewed in the following chapter.

Question 4

Did the initiatives affect behavior?

Overall answer

There is limited evidence to suggest that some initiatives affected behavior.

Specific answers

- As part of the HBI evaluation, data were gathered on a small number of health behaviors (for example, food purchasing patterns, stair use, and tobacco sales). There was substantial variation in the strength of evidence regarding each of these process output measures.
- Output data from Go for Green® and BFY initiatives indicated a small improvement in BFY food sold as a percentage of total food sold (+2 percent) from baseline to the end of the demonstration period.
- Output data from the Commissary Initiatives indicated a small change in sales of fresh produce as a percentage of total commissary sales (+0.7 percent) from baseline to the end of HBI.
- Data from three installations show substantial declines in tobacco sales from June 2013 through June 2015. However, these declines predated the launch of HBI initiatives so it is not clear as to whether HBI influenced tobacco use at these sites or whether post-HBI declines were due to other pre-existing factors on these installations.
- Output data from the StairWELL to Health initiative at one sample installation (Yokota) showed a solid upward trend in stair use – an increase of five percentage points from baseline to the end of the HBI demonstration.

Question 5

Did the initiatives affect the prevalence of obesity and tobacco use?

Overall answer

Consistent with our expectations, there is no evidence that this short-term HBI pilot exerted a positive impact on tobacco use and obesity rates.

Specific answers

Tobacco Use:

- Tobacco use rates are dropping quickly for DoD overall, and at HBI sites the rates are dropping slightly faster than at non-HBI sites. However, due to late implementation of some of the tobacco initiatives, and data limitations noted in the report, it is too early to attribute the drop in tobacco use prevalence rates to HBI.
- The prevalence of tobacco use among active duty members is declining overall, but is declining at a faster rate at non-HBI sites than at HBI sites. (Data provided in the detailed report.)
- The prevalence of tobacco use among dependents is declining at most sites, but at a faster rate at non-HBI sites compared to HBI sites. (Data provided in the detailed report.)
- The prevalence of tobacco use among Air Force HBI sites shows the greatest decline. (Data provided in the detailed report.)

Obesity Rates:

- Obesity rates are increasing for DoD overall, and they are increasing at faster rates at HBI sites compared to non-HBI DoD sites.
- Obesity rates for active duty personnel are increasing for DoD overall, and they are increasing slightly faster at HBI sites compared to non-HBI DoD sites. (Data provided in the detailed report.)
- Obesity rates for dependents are increasing for DoD overall, and they are increasing slightly faster at HBI sites compared to non-HBI DoD sites. (Data provided in the detailed report.)
- Army HBI bases have experienced slower increases in obesity than their non-HBI DoD counterparts. (Data provided in the detailed report.)

Question 6

What are the implications for future initiatives similar to HBI – how can DoD spend its scarce resources more effectively on programs that achieve improvements in health and well-being?

Overall Answer

This demonstration has laid the foundation for future health promotion and disease prevention programs, and measurement and evaluation of those efforts. The lessons learned from HBI are that the quality of execution is critical to program success. Other important factors to consider are the initiative's reach (especially to high-risk populations that would benefit most its effectiveness), and its financial impact. These are described below:

The effectiveness of initiatives: Interventions need to be based on solid science that shows that various programs, strategies, and policies are evidence-based (or promising practices) and likely to produce better health outcomes at the individual and population levels. Effectiveness studies document changes in knowledge about one's health, health behaviors, biomarkers, and health care utilization outcomes. In addition to proving program effectiveness, leaders need to take into account program cost, cost-effectiveness, and cost-benefit. These are explained below.

The costs of a program are simply the total monetary value of resources spent on implementation, often reported on a per capita basis.

Cost effectiveness looks at the health outcomes of interest combined with the investment required to achieve one unit of improvement for that health outcome. For example, for HBI, what does it cost to achieve a 1 percentage point reduction in the prevalence of tobacco use or obesity?

Cost benefit analysis (CBA or return on investment [ROI] analysis) considers the total economic investment in an intervention and its subsequent monetary benefit (operationally defined as decreased healthcare costs, higher retention rates, lower recruitment expenditures, and higher resiliency levels). A variant on ROI that has been developed to take into account non-tangible benefits, such as quality of life and workforce productivity, is "value of investment" or VOI.

Bottom Line Conclusion

HBI shows promise but it is too soon to tell whether the initiatives piloted will produce long-term behavior change and risk reduction for DoD. A much more intensive effort is needed for HBI to be successful, with a longer implementation timeline (i.e., 3-5 years), high-level leadership support and engagement, and excellent execution. Measurement and evaluation are necessary components of any future health promotion program – for without rigorous program evaluation, DoD is unable to determine whether its programs are effective and provide a good value for the money spent to keep our armed forces healthy and in a state of heightened readiness.

The m-NEAT assessments showed that commissaries consistently scored highest in healthy food offerings at the pilot sites. DFACs and galleys also tended to provide healthy offerings. On the other hand, there was significant room for improvement at most installations with respect to the food offerings available from vending machines and fast food outlets.

Chapter 9: Climate and Resource Assessment[36]

HBI was piloted at fourteen military installations with each offering their own mix of initiatives designed to make eating a healthy diet, exercising regularly, and reducing or quitting tobacco use easier. Process and outcome measures were developed to make sure programs were implemented in their entirety as they were intended, to get some sense of their usage, and to determine if the intended outcomes, changes in metabolic measures, such as BMI and blood pressure, actually occurred. In addition, a CRA instrument was developed in the form of an online survey to get feedback from members of the military community at each location on their experiences with HBI at the end of the first year of the pilot demonstration.

Ideally, metabolic measures would be the best way to determine if members of the military community are healthier. However, individual metabolic data pre and post could not be paired with awareness, use, and satisfaction with HBI initiatives to determine what impact HBI had on those measures in this demonstration project. Additionally, for many individuals, an interim step can occur before metabolic change: they change their eating, exercising, and tobacco use behaviors. Before behavior change can happen, there needs to be some recognition that change is needed, a plan to make the change, and hopefully an environment that is supportive of change. If HBI was successful, it would be evidenced by the fact that more people recognized the connection between eating well, exercising more, and reducing or quitting tobacco and their overall health. They would also view themselves as having greater agency to affect changes, because they had the information they needed and because their food and physical environment was more supportive. The goal of the CRA was to determine the extent to which members of the military community at the locations where HBI operated changed their eating, exercising, and tobacco use behaviors, and how those changes in behavior were related to their engagement with the various HBI initiatives offered at their location.

The survey link was distributed at thirteen of the fourteen locations via a mass emailing to an all hands lists. A total of 2,057 responses were received. The response rate could only be calculated for four of the locations, because exact numbers for those invited to take the survey were only available at those four sites. The average response rate at those sites was 8.5 percent, and we have no reason to believe that the overall average response rate was any different for all thirteen locations.

[36] The full CRA results can be found at: http://www.bctr.cornell.edu/healthy-base-initiative-report/

The sample from the thirteen sites was skewed heavily toward Civilian Employees. While Civilian Employees made up 26.6 percent of the potential respondent universe, they comprised 54.1 percent of the respondents or more than twice their proportion of the population. Active Duty and Spouses of Active Duty were under represented. While 51.2 percent of the potential respondent universe was Active Duty, they comprised only 34.9 percent of the sample; and although 22.2 percent of the potential respondent universe was Spouses of Active Duty, they only comprised 11.0 percent of the sample.

In order to answer the evaluation questions about whether eating, exercising, and tobacco use behaviors changed, and the extent to which the behavior changes were related to engagement with the initiatives that made up HBI, we needed a sample that was diverse both in terms of the amount of change they needed to make at the start of HBI and their level of engagement with HBI. According to the self-report data that was received, there was a lot of diversity among respondents in terms of their level of engagement with HBI; however, most respondents started the year eating a healthy diet, exercising regularly, and living tobacco-free. In other words, according to their self-report, many, if not most, were at the high end of the stages of change continuum at the beginning of the HBI year and did not have room for further improvement. This was especially true for exercising behavior where 60 percent of the sample began the year exercising regularly and 45 percent were in the maintenance stage (had been exercising regularly for more than six months). For eating, half of the sample started the year eating a healthy diet and a third were in the maintenance stage. For tobacco use, nearly 85 percent of the sample started the year tobacco free. This greatly reduced the number of responses from individuals needing to make changes.

Despite the high portion of respondents who were already doing what they needed to do, the CRA revealed many changes were made during the year by those previously not taking any action. In general, those respondents needing to take action reported the greatest amount of change in their eating behavior, followed by change in tobacco use, and the least amount of change in their exercising behavior. For eating behavior, roughly 7 percent reported that they did worse during the course of the year, 46 percent said they stayed the same, and 47 percent reported improvement in their eating behaviors. Gainers outnumbered losers by more than 6 to 1. For exercising behavior, roughly 11 percent of the sample did worse during the course of the year, 56 percent stayed the same, and 33 percent improved. For exercising behavior, gainers outnumbered losers by more than 3 to 1. For tobacco use behavior, roughly 13 percent did worse during the course of the year, while 47 percent stayed the same, and 40 percent improved their tobacco use behavior by reducing their use of tobacco or quitting. Gainers outnumbered losers by a little more than 3 to 1.

Generally, there was good awareness of, participation in, and satisfaction with the HBI initiatives by both those needing to make changes and those who were starting the year where they should. The greatest awareness was reported for Bikeshare with 72 percent of those at the installation where it was offered saying they were aware of the program. Second was 24-Hour Fitness with 63 percent awareness at the installations where it was offered. Farmers markets with 62 percent awareness, DTAs at 47 percent, and StairWELL at 43 percent rounded out the top five. Questions about usage were only asked for seven of the initiatives, and the number one initiative was UltimateMe with 82 percent of those who were aware of it using it or at least considering using it. Second was farmers markets with 62 percent of those who were aware using, followed by 5210 at 60 percent, Group Lifestyle Balance™ at 36 percent, and Kicking Butts for Points at 22 percent. A satisfaction question was asked for any initiative respondents said they were aware of. The highest level of satisfaction registered was for Share our Strength: Cooking Matters at the Store with satisfied respondents out numbering dissatisfied respondents 16 to 1. The second greatest level of satisfaction was expressed for Bikeshare with satisfied respondents outnumbering dissatisfied respondents 15 to 1, followed by 5210 at 14 to 1, Fitness on Request at 8 to 1, and the Alliance for a Healthier Generation Healthy Schools Program at 8 to 1. Overall, those who were somewhat or very satisfied with an HBI initiative outnumbered those who were somewhat or very dissatisfied 2.5 to 1.

There were many factors that contributed to the success that respondents reported in changing their eating, exercising, and tobacco use behaviors, such as their demographic and situational characteristics. However, in each behavior area, at least one HBI initiative was a strong factor. For example, statistically, engagement with UltimateMe was the second most strongly associated factor with improvements in diet, and engagement with Alliance for a Healthier Generation was the fifth most strongly associated factor. In addition, responses to the CRA contained many open-ended comments on the importance of the availability of better options for healthy items on menus and in the DFACs, helpful food labeling, either with specific nutritional content or more generally, as a better choice, observations about placement of food in the DFACs, increased availability of fresh produce from farmers markets or through the commissary, and having workplace facilities (refrigerators/microwaves/kitchens) and comfortable break rooms available for those who bring their own food.

The role of HBI was also apparent in the changes reported on the CRA in exercise behavior. Again, when looking at the people who were not exercising regularly at the beginning of the year, engagement with the CRG, where it was implemented, was the fifth most strongly associated factor with moving toward regular exercise. There were many open-ended comments about the increased accessibility (flexible hours and 24/7 access) of multiple places to exercise indoors (gyms and fitness facilities with 24 hour access) and many walking, biking, and running paths outdoors coupled with administrative policies and leadership support for allowing exercise during the workday. It was obvious from the feedback respondents gave that HBI was very helpful for those trying to maintain an active life style and those trying to establish an active life style.

Finally, for reducing or quitting tobacco use there was both quantitative and qualitative data from the CRA to indicate that HBI played an important role. The two factors that were the most strongly associated with reducing or quitting tobacco use were engagement with Counter Marketing and Holly Graham. Although only a small number of respondents (302 [15 percent]) from the thirteen installations indicated that they used tobacco products, both users and non-users had opinions about what would constitute a supportive environment for reducing or stopping use of tobacco products. The single biggest factor that was identified as supportive for becoming tobacco free was to enforce and expand the smoke-free workplace policy. Tobacco cessation classes and programs offered by the military were also frequently mentioned as good resources for those who wanted to quit using tobacco products.

For a significant portion of those who completed the CRA, changing their eating, exercising, and tobacco use behaviors was an important first step to a healthier lifestyle. While many things contributed to the progress they reported, it is obvious from responses on the CRA that HBI played an important role. It was also clear from the open-ended responses that an overwhelming majority of those who took the time to complete the CRA would like to see many of the HBI initiatives made permanent and expanded if possible. While the CRA does not establish causality between HBI and important changes in eating, exercising, and tobacco use behaviors, it clearly shows the strong, supportive role HBI played in helping members of the military community make positive behavior changes – behavior changes that are needed in order to see the desired changes in metabolic measures. Continuing these initiatives and, where possible, expanding upon them supports those at every stage of the change process, but is especially meaningful to those who are just getting started on the road to a healthier life style.

Chapter 10. General Lessons

Like any organization, DoD has many priorities, programs, and objectives and operates at multiple levels – at the level of the enterprise, at the level of each of the Services, and at the level of individual installations. Implementing a demonstration project like HBI on top of existing priorities is difficult, given the demanding workload of leaders and staff at every level and installation. Although the HBI team initially focused on particular initiatives, the experience of implementing these initiatives allowed the team to observe and gain insight into a number of issues that sometimes went beyond HBI in particular. This section describes some of the challenges encountered during HBI implementation, as well as lessons learned over the course of the project.

Much of HBI's success hinges on observing and synthesizing these lessons so that they can inform future DoD efforts to improve health, wellness, and readiness through OLW. Specific recommendations that respond to many of the issues discussed in this chapter are provided in Chapter 11.

To organize this discussion, we group lessons and challenges into six broad categories:

- Process/Organizational Capacity
- Culture
- Partnerships
- Marketing and Outreach
- Incentives and Funding
- Policy

It is worth emphasizing that this grouping is by no means intended to impose an exact or rigid classification scheme – some of the lessons and challenges could plausibly fit into multiple categories, and many of them overlap in key respects.

Process/Organizational Capacity

As a project, HBI added to the existing duties of installation leaders and staff. Although many leaders supported HBI's goals in principle, a number of challenges related to organizational capacity and implementation emerged during the course of the project.

Success requires strong leadership and management within and across installations. In the civilian sector, leadership at every level has been identified as a key factor in the success of efforts to improve employee health and wellness at any organization. Two other key factors include cultivating a culture of wellness at the organization, and creating feedback mechanisms to support employee wellness programs. DoD is no different. At the start of HBI, installation commanders asked to be part of the Initiative. Not surprisingly, however, this initial, top-down commitment was not enough. HBI relied on active champions at every level, from the officers in charge of DFACs and fitness centers to the HPOs and others. Moreover, these champions needed to have the time to dedicate to HBI on top of their regular assignments, and they needed to stay long enough to see their HBI commitments through. When personnel changes occurred, it was often much more difficult to sustain progress, especially in cases where the individuals who left had institutional experience with, and background knowledge of, HBI and OLW. Over time, it became clear that this variation in individual commitment and leadership on the part of key decision makers correlated strongly with success during the implementation phase.

Rank and background of key points of contact affected implementation. Closely tied to the issue of leadership is the observation that individuals with relevant interest and expertise were crucial to HBI's success. If improving health was part of someone's job description, it was more likely to get done. Personnel with previous experience and a passion for particular goal(s) — e.g., health, nutrition, physical activity, tobacco cessation, etc. — were naturally stronger and more effective advocates for HBI, and took a more active role in HBI implementation than those who viewed it as one more thing on their "to do" list.

Up-front assessment is essential. Identifying baseline conditions or measurements for installations was key to identifying opportunities for improvement. Assessment tools like m-NEAT for healthy eating and m-PAC for active living helped installations understand how "healthy" their environment was at the outset of HBI.

Measurement is critical. Measuring the impact of HBI initiatives was critical in assessing their value. The HBI team, with the assistance of the Johns Hopkins research team, developed a PFT for each initiative to systematically measure impact.

Measurement is challenging. Metrics to track progress and measure impact are extremely important, but very difficult to develop and apply on many levels. In the case of HBI, installation leads often lacked the knowledge, skills, and capacity to apply metrics and collect the data needed to measure program results. In addition, it could be difficult for installation leads to determine and/or access data and metrics being collected by other programs or offices at the installation. Lack of standardization was a further problem – many programs applied completely different metrics. There is too little emphasis on measurement in the current culture within military installations, which in turn makes it difficult to evaluate the impact and effectiveness of health, nutrition, and physical fitness-related programs. As a result, success is often determined on the basis of anecdotal evidence rather than empirical data.

Lack of a coordinating authority impeded efforts and made it difficult to align the efforts of different departments within DoD. DoD's Offices for Health Affairs (HA) and Military Community and Family Policy (MC&FP) shared responsibility for HBI implementation (at the Assistant Secretary and Deputy Assistant Secretary levels, respectively), but their HBI authority was lateral in the sense that both HA and MC&FP can formulate policy changes and enforce them within their own purview, but lack authority to make and enforce changes

in policy across DoD. HBI falls in the category of policy or guidance from OSD – it was not implemented as a DoD directive. Moreover, different DoD offices and agencies, including MC&FP and HA, were restricted in how they could allocate funding and, as such, often managed and implemented programs on their own. But HBI and OLW were not stand-alone programs. And while the current governance structure readily supports programs run by different offices, there is no clear, effective way to create enterprise-wide culture change and work across offices and agencies within DoD.

Dose delivered matters. During HBI, initiatives were tested at various locations on installations but they were typically not implemented everywhere at a given pilot site. For example, on installations with multiple food locations, HBI interventions were only tested at a few outlets. The StairWELL to Health initiative was measured at just one location (Yokota AB). This approach reflected the view that initiatives needed to be tested before installations were asked to implement them at every location. The team learned (1) that it was far more effective to package different initiatives together — as a healthy eating package or as an active living package, for example — and (2) that implementing multiple initiatives at more locations is critical to driving behavior change and ensuring that the healthy choice is the easy choice no matter where an individual goes on base.

A one-to-two-year implementation timeframe was too short to produce measurable changes in health outcomes. The consequences of obesity and tobacco use for service members and their families have been widely reported and are clearly recognized by OLW leaders. HBI attempted to address both issues, but as a short-term demonstration project, it was unrealistic to expect that HBI by itself would produce substantial, observable changes in these risk factors over a one-to-two-year timeframe. In fact, the CDC and other experts warned that it would not be possible to "move the needle" in such a short period of time.

A related issue was the concern that unrealistic expectations could lead to the judgment that HBI had been unsuccessful. Instead, a more appropriate set of expectations for measuring project success would focus on whether HBI has (1) resulted in discrete environmental changes (such as changes in food offerings at military DFACs and MWR-operated foodservice venues), (2) succeeded in developing standardized metrics for measuring progress toward health and wellness goals, and (3) laid the foundation for a deeper culture change at DoD that will be implemented through OLW over the next 20 years.

Policy changes affect more people than individual behavior changes, but both are needed. Effective strategies to combat problems like obesity and tobacco use require sustained changes in the environment and in individual behavior — there is no "silver bullet" solution. Recognizing the need to address both environmental and behavioral drivers, HBI offered a combination of programs, with some efforts targeting environmental or system changes across multiple installations, while other programs were designed to work with a smaller population at the level of individual installations. Policy or system changes can influence more people — an example would be changing the menu options at a food outlet. At the same time, other programs, like the Warrior Well program tested at Camp Dodge, address the fact that some individuals need more support to reach their goals. In another example, the most effective tobacco cessation programs are comprehensive and multifaceted in the sense that they combine policy changes — such as creating tobacco-free areas and/or increasing the cost of tobacco products — with programs to help individuals stop using tobacco. Similarly, programs to educate individuals and families about the importance of a healthy diet may be of limited value absent efforts to change the food environment so that people have ready access to affordable, nutritious food options. HBI aimed to address the need for both policy and individual changes, but was hampered by its short time frame.

HBI was viewed as a collateral duty; like any voluntary program, it faced challenges due to competing staff and resource priorities. Despite best intentions, HBI implementation was delayed at many installations, even where strong buy-in existed at the leadership level. This delay reflected the reality that, with so many competing and often mandatory commitments, a voluntary initiative naturally falls lower on the "to do" list. A related issue or challenge was the frequent perception that HBI was redundant with existing policies or programs, given that each of the Services currently has its own initiatives for nutrition and physical activity. In addition, the number of programs and initiatives already in place at many installations could be overwhelming – Fort Bragg, for example, has nearly 600 programs (though not all of them specifically target health and wellness). Where there was a perception that installations were already doing a lot to promote health and wellness, the challenge was to explain that HBI should not be considered a duplicative effort, but rather that it represented an attempt — and an opportunity — to identify and facilitate the enterprise-wide, system-level changes that need to be in place to support and enable Service-level efforts.

Initiatives didn't start at the same time and in some cases insufficient time was available to plan for implementation. The HBI timetable did not leave adequate room for planning ahead of implementation. One participant likened the challenge to trying to fly an airplane while still in the process of building it. Others mentioned that it would have been helpful to have the HA and MC&FP programs start at the same time, with the same amount of lead time — at least four to six weeks — to implement. Instead, notices for some programs were provided only two weeks in advance.

Many of DoD's health-related efforts are siloed even though they have similar objectives. Examples include the Joint Chiefs' Total Force Fitness initiative and several Service-led initiatives, such as the Army's Performance Triad, the Navy's Sailor and Marine Initiative, and the Air Force's Comprehensive Airmen Fitness initiative. This lack of coordination and the perception of overlap with HBI and OLW sometimes led to confusion. At some installations, all the health, nutrition, fitness, wellness, and tobacco cessation programs were grouped under one umbrella and there was sometimes a concern that support for HBI meant less support for the Service-led effort. The plethora of programs and initiatives led to the frequent suggestion that DoD's health-related efforts must have complete organizational synergy and support up, down, and across the entire agency.

Multiple points of contact at each installation made coordination challenging. No one office or individual had 100 percent responsibility for HBI coordination and implementation, given that many of the initiatives were run by different offices on an installation (e.g., MWR, health and wellness centers, military treatment centers, schools, etc.). Given this decentralization, it was sometimes difficult to coordinate all of the various HBI efforts. In locations that formed a CHPC that brought together all entities involved with HBI, it was easier to coordinate and track HBI initiatives. At other locations, the main contact was often overwhelmed with information and was not able to track all the different offices.

Implementation of some HBI initiatives was affected by concerns about overreach and infringement on individual rights. A source of ambivalence about HBI — and therefore a challenge in terms of sustaining buy-in and leadership — was the concern that policies or programs aimed at promoting healthier foods or discouraging tobacco use could restrict choice and infringe on individual rights. There is a perception that any effort to change the environment constitutes social engineering and/or fosters a "nanny state." Emphasizing the direct, real-world impacts of obesity and tobacco use in terms of service members' performance and mission-readiness, along with careful program design to ensure that continued access to choices was balanced with efforts to promote health and wellness, proved to be the most effective way to address this issue.

Some HBI initiatives also raised concerns related to security and privacy. Security and privacy issues arose in connection with some of the challenges discussed previously (notably in connection with concerns about infringing on individuals' rights and information sharing), but they also arose in the very specific context of using technology to implement certain programs and track participation or impacts. For example, some people raised "Big Brother" concerns and expressed the view that DoD already had sufficient information on individual personnel. (DoD does undertake significant data-collection efforts, but personnel information goes to different offices, agencies, or branches and it can be extremely difficult, and often very time-consuming, to access these data.) Notably, issues related to data collection and privacy/security arose not only at the level of individual service members, but also at the level of the individual Services. The HBI team heard repeated concerns about the potential for overburdening the participant population with surveys and evaluations. In this context, attempts to gather further information on individual preferences or health status sometimes met resistance, and required extra efforts to demonstrate that security and privacy standards had been met. If signing up for a program required providing a social security number, for example, many people simply would opt not to participate. In some cases, as with UltimateMe, these kinds of issues delayed implementation.

Inconsistent and sub-optimal use of technology was a challenge for implementing some initiatives. The use of technology was very uneven across individual installations and across the Services. At some locations, physical fitness test results were still collected on index cards and stored at fitness centers. In the food arena, recipes were often hard to locate and disseminate because they only existed on a piece of paper at one location. Point-of-sale (PoS) systems were inconsistently programmed and operated, which made it extremely difficult to report on food-related initiatives. Some food service venues had no PoS system at all, and relied on hand-written receipts to account for daily activity. More generally, the power of technology is often not being leveraged to communicate to service members and their families in an efficient way.

Uneven information-sharing was a consistent challenge. Besides the organizational impediments to information-sharing noted above, it became clear over the course of HBI implementation that officials — both at the level of individual installations and at the level of the Service branches — sometimes hesitate to share data and information because they are worried that their data are subpar, that they will be called out as not doing as well as other installations or Services, or that — in the absence of clear policy guidance in this area — they could be criticized for sharing information that is proprietary, or otherwise sensitive from a national security standpoint. Where these concerns existed, it was sometimes easier to avoid collecting data, or avoid sharing the data that had been collected. Barriers to information-sharing are obviously problematic given the need to track progress, validate program impact, and guide future program improvements.

DoD/Service Culture

Given the diversity of installations and facilities involved, the need to bridge multiple divisions within DoD, including divisions between each of the distinct Services, and the multiplicity of programs and policies that were part of HBI, issues of organizational culture arose during every phase of implementation. The most important challenges in this area are summarized below.

The Services often took a critical view of top-down prescriptions. Closely related to the issue of competing priorities and programmatic redundancy was the concern that a program like HBI was not adequately responsive to particular needs and circumstances further down the chain of command. This concern reflected the fact that HBI was initiated at the level of OSD, together with the fact that the different Services and even individual installations already had a large number of health- and wellness-related activities underway. A close corollary was the common perception that local and home-grown initiatives are generally preferable, and likely to be more effective, than initiatives that are imposed "from above." For this reason, the HBI team put a high priority on gathering input and feedback from individual installations throughout the implementation and evaluation process. Indeed, it will be crucial to the success of future initiatives that they are not viewed

as simply being pushed from the top down. Similarly important is overcoming the perception that initiatives developed in the civilian sector are not likely to be transferable to the military – for multiple reasons but particularly because there is a common perception that the civilian sector's challenges are fundamentally different from those the military faces. Thus, any civilian program, technology, or initiative needs to be tailored to the military population and to the particular environments in which the military operates.

A singular Service culture can lead to duplicative efforts. Each HBI-participating Service branch (Army, Navy, Air Force, Marine Corps, and Coast Guard) has a unique brand and identity. These distinctions help support cohesion and teamwork within units. The disadvantage of these singular Service cultures, however, is that each branch sometimes develops and/or funds very similar programs/technologies or services. This, in turn, tends to foster turf battles that can impede collaboration and communication, while also giving rise to inevitable redundancies and potential cost inefficiencies. There was also strong opposition to using any program that was developed, or that appeared to have been developed for, a different Service. For instance, UltimateMe was developed for HBI and all the Services. However, it resided on an Army server and that was reflected in the web address. Many individuals voiced concern about whether UltimateMe was intended for them.

Partnerships

Installations want more partners "outside the gate." Installation leaders understand that community and military resources need to be leveraged and that military installations should not compete with local organizations, but rather work with the community. Some suggested that OSD and the Services consider brokering more partnerships with national organizations that they could access at their location, while others expressed the view that every installation should conduct a community scan to better understand the resources available outside the gate before making decisions to offer anything on post.

Some installations are more nimble than others in terms of working with outside groups. Two installations were already working with outside coalitions before HBI, and both found these coalitions to be effective ways to further HBI and other installation efforts. At Fort Sill, the Fit Kids Coalition, made up of the local school district superintendent, a pediatrician, the MWR director, and other organizations, was formed to address childhood obesity. The Coalition was able to promote Safe Routes to School, build a playground entirely through donations from the community, and increase opportunities for outdoor recreation. Another example of a successful community partnership is the Fort Meade Alliance, a non-profit group that was created to work with 117 government agencies and organizations located on or around Fort Meade. The Alliance, which was originally formed to work on Base Re-Alignment and Closure (BRAC), proactively fosters communication and partnerships between Fort Meade and outside organizations. It was helpful in promoting HBI initiatives and was instrumental in getting the Fort Meade Farmers market up and running.

Partnerships offer opportunities for growth in DoD. At the installation level, commanders often believe that government rules strictly curtail their ability to work with outside entities, whether private or non-profit. At the same time, given their short tenure, not every installation leader has cultivated a strong relationship with local elected officials, including the local mayor's office or county executive. Since 70 percent of military families typically live off installation in the United States, city, town, and county offices have a natural inclination to work with local military installations. Moreover, many elected officials share the military's interest in tackling health and wellness issues that affect their communities. This creates opportunities for partnership that may be going untapped. Other potentially productive opportunities for collaboration/partnerships are going untapped because DoD is generally not in the habit of working closely with other federal agencies, many of which are actively engaged with the same issues that inspired HBI. Likewise, at the installation level, commanders do not always have strong relationships with the regional representatives of federal agencies, in some cases because they don't know that they can enter into partnerships with these agencies and in some cases because they are unaware of the resources that exist outside DoD.

Marketing and Outreach

Lack of strategic marketing affected HBI implementation. At the start of HBI, there were many discussions about whether HBI programs should just begin at the fourteen sites without marketing to see if there was natural uptake. On further reflection, the HBI team realized that better marketing would have led to greater uptake. In addition, HBI needed stronger messages and credible messengers to effectively communicate how participation in its programs could improve health, performance, and quality of life for service members and their families (in other words, to persuasively answer the question, "What's in it for me?").

To better market health and wellness programs, health and wellness goals need to be more closely tied to DoD's overall mission. Throughout HBI implementation, installation leaders stressed that the HBI team needed to develop messaging that showed clearly how the health of the military community affected the installation's ability to fulfill its mission, and the mission of the Services and of DoD as a whole. Some individuals voiced frustration about the difficulty of changing mindsets to recognize that human systems are just as important as weapons systems. Others suggested that HBI/OLW messaging should be more clearly connected to readiness, including readiness to deploy, not just health. There was also a suggestion that HBI messaging should make a stronger connection to cost impact. For example, in 2012 the Army dismissed 3,000 soldiers and the Navy and Air Force each dismissed 1,300 service members for being overweight or out of shape, and the cost to recruit, screen, and train their replacements amounted to nearly half a billion dollars.[xxxii]

"Make health and wellness part of the National Military Strategy." One installation leader suggested that health and wellness should be viewed as one of the pillars of the National Military Strategy. This would have helped HBI tap into the values and priorities of commanders and other leaders and would have focused more attention on the connection between issues of obesity and tobacco use and DoD's overall mission. As one installation leader observed: "HBI allows installations to be exposed to a wealth of expertise and helps them tap into the experience and knowledge of people working in this space that we would have never known about outside of HBI."

Multiple levels of marketing and communications are needed and health officers are not always the best messengers. Divisions exist between installation leadership and the health entities on an installation. Health officers are not always effective at delivering messages to young service members who already consider themselves healthy. HBI/OLW needs multiple levels of messengers to reach service members, dependents, civilians, and retirees.

Marketing materials were needed for each initiative. HBI leaders at several installations emphasized that ready-to-use marketing materials — from pre-drafted or template press releases, Facebook and Twitter posts, and printed media (such as posters) — would have been extremely helpful in terms of raising awareness of HBI programs, particularly as installation staff often lack the time and resources to create new materials and content from scratch.

Lack of effective communication mechanisms was a common challenge. At the start of any project, organizers typically request contact lists for the constituents they are trying to reach. At many military installations, however, these lists do not exist for communications purposes. Instead, many programs on military installations rely on social media like Facebook to broadcast information, while others rely on Family Readiness groups or spouse groups. But these mechanisms do not reach everyone and since, as mentioned previously, approximately 70 percent of U.S.-based service members live off installation, it is often difficult to disseminate information about on-base programs, like CMATS. Communicating through typical community channels, such as through posters, newspaper articles, websites, and social media, can be inefficient and is not always effective, as HBI's target audience is inundated with other marketing messages from a host of companies and

organizations. In addition, many of these mechanisms are not well suited to developing a durable social network to serve a population that moves on a regular basis and that has specific social support needs.

Providing an integrated, customer-centered approach will lead to greater success. Another side effect of the fragmentation that characterizes many large organizations such as DoD is that these organizations often have difficulty providing integrated, customer-centered products and services. And when different parts of the organization are not working together, the "customer" often lacks knowledge or access to all the resources that might be available. A typical service member and his or her family member(s) wants "one-stop shopping" to address needs for childcare, schooling, shopping, recreation, etc. If people have to contact different departments or offices to access some of the services HBI or similar initiatives provide, they are much less likely to participate. The use of technology could be a solution to this challenge. CRGs are one example of a mechanism that already exists to address this need, but many service members and their families continue to lack information about the programs that are available to them (for example, in one recent e-mail query, a service member who wished to quit smoking expressed frustration about the difficulty of locating support programs for tobacco cessation).

Challenges Related to Incentives and Funding

Effective incentives and adequate funding are crucial to the success of any effort like HBI, especially if that effort is to be sustained over a long period of time. In the case of HBI, these issues affected the success of the program at two levels: first, in terms of whether the pilot installations themselves had sufficient staffing and funding/incentives to implement programs successfully, and, second, in terms of the effectiveness of individual HBI programs in motivating behavior change among the populations they were intended to serve.

Recognition programs are important to commend installations that worked hard to implement HBI. Many of the installations worked hard to implement the various HBI initiatives. At present, there is no recognition program to credit the installations for their work. The value of recognition is demonstrated by the Alliance for a Healthier Generation's Healthier Schools Program, which issued awards to schools that achieved success in creating a healthy school environment.[37]

Lack of dedicated HBI funding hampered implementation at some installations. As part of HBI, some installations received additional funds for technical assistance, to procure equipment, and to print program materials. However, no funding was provided for additional labor, staffing, or other implementation needs related to HBI. Not surprisingly, this lack of funding hindered program implementation, particularly in a context of competing priorities and significant budget pressures. In addition, the federal government's appropriations cycle made it difficult to procure contract personnel and certain items, like fitness equipment, in a timely fashion. Sometimes, funding rules also confounded personnel who were unclear whether DoD-funded initiatives, websites, or materials, are allowed to benefit both DoD personnel and the general community. Some specific funding-related examples follow:

- Fight the Enemy (an anti-tobacco marketing campaign) has a broader reach in public schools, but there was hesitation from DoD leadership to as whether non-military students could participate and be recognized.
- DoD dieticians can reach more people by seeing children where they are (e.g., at child development centers and youth centers). These settings, however, often serve a mix of federal employees' children and TRICARE® beneficiaries' children. If DoD leadership views the dietitian's role as solely to benefit TRICARE® beneficiaries, dieticians lose an opportunity to reach a broader audience.

[37] Three schools, one at Fort Sill and two at Fort Meade achieved silver and bronze status respectively and were honored by a ceremony in Washington with former President Clinton in October 2015.

- DoD-developed technologies, including some mobile apps and websites like *UCanQuit2*,[38] cannot be advertised broadly and can only provide certain types of information. For example, UCanQuit2 can only link to information for non-military personnel. Conversely, direct information concerning the benefits of smoking cessation for federal employees and the general public are not allowed on a DoD-funded site. In another example, UltimateMe was bound by contract to be promoted only at HBI sites, despite the fact that broader dissemination would have generated more robust baseline data.

HBI was handicapped by the inability to use incentives/prizes to increase participation. In the civilian sector, employers and health insurers increasingly offer financial incentives, and sometimes prizes, for behavior changes like joining a tobacco cessation, diabetes prevention, or weight loss program. The use of incentives within TRICARE®, however, is strictly circumscribed under current federal law. Similarly, government rules about awarding prize money or accepting in-kind donations made it difficult to create an incentive structure for participation in HBI programs. With few exceptions, this meant that there could be no competition among the HBI sites and no incentives for individual participation in programs at the sites.

However, there were some bright spots that showed how partnerships or in-kind donations could benefit future efforts and generate local economic benefits, as well as an environment that fosters healthy change. For example, the Fort Meade Alliance was able to raise $2.2 million for their new resiliency center. In another example, HA was able to hold a competition for UltimateMe (the UltimateMe PALA+ Challenge) because a non-profit sponsored the prizes.

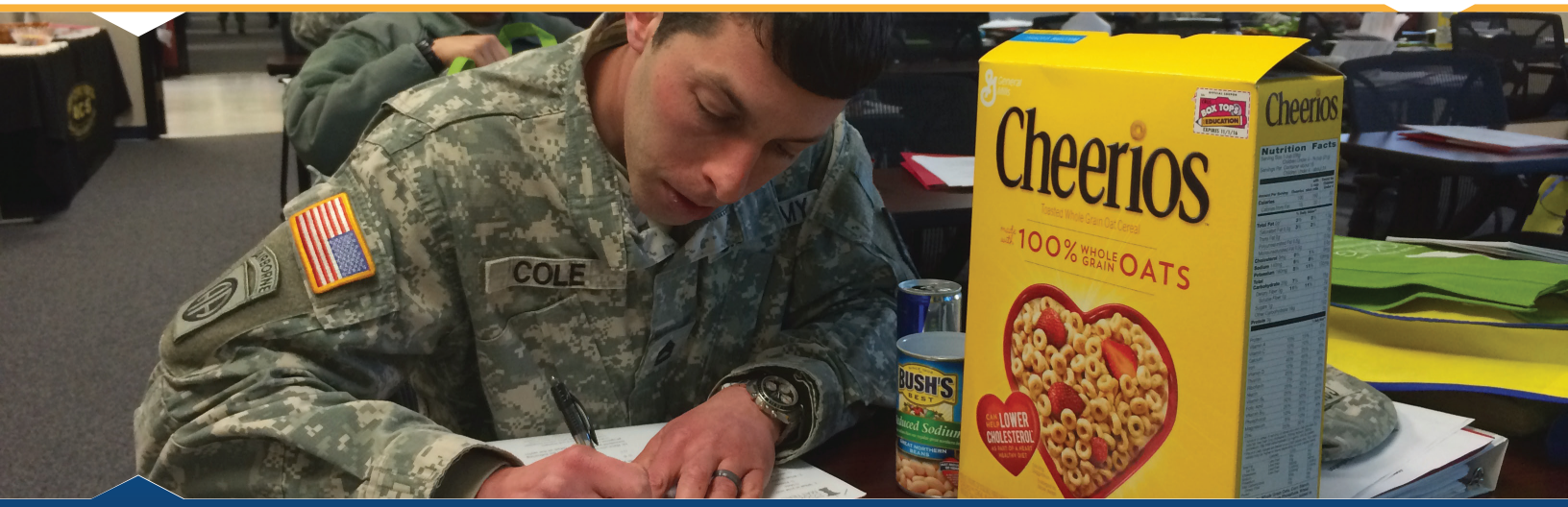
Policy

Department of Defense Issuances are required to implement federal policy. For DoD to create new programs and resource them appropriately, federal policies and guidelines usually need to be translated into Issuances. These instructions help provide clarity about program requirements and authorize the resources that the Services need to execute programs. Many federal agencies have issued guidance applicable to obesity and tobacco cessation; however, not all have been adopted or resourced by DoD, and there is not necessarily an Issuance for each one. DoD has an opportunity to ensure that federal policy and guidelines related to food, active living, and tobacco control are evaluated by key stakeholders and converted to Issuances that will support needed programs within the Department.[xxxiii]

Policy is not always implemented or translated accurately. When there is an Issuance, it is not always communicated accurately. Examples included the parameters on working with outside groups, vending guidelines, farmers markets, new provisions from the Affordable Care Act like menu labeling, and more. There is an opportunity to clarify policy and communicate it more effectively to various stakeholders.

The Office of the Secretary of Defense (OSD) is open to policy changes to improve the accessibility and availability of healthy eating and fitness programs. OSD has made every effort consistent with the spirit and intent of the HBI demonstration to change or clarify policy to improve accessibility and availability of healthy eating and fitness programs. For example, the Air Force was granted a waiver to leverage technology that allows access to fitness centers 24 hours per day. On the healthy eating side, policy guidance was issued that paved the way for Farmers markets to operate on military installations. It is clear from the HBI findings that additional policy changes are likely necessary to assist the Services in establishing healthier communities. OSD MC&FP stands ready to address and implement any changes necessary when requested.

[38] More details can be found at: https://www.ucanquit2.org/



Chapter 11. Lessons Learned by Wedge

Healthy Eating Initiatives Observations and Lessons

This section summarizes lessons learned from HBI's healthy eating initiatives.

A. Overview

HBI tested a number of different initiatives to promote healthy eating. These initiatives are described in Chapter 3. Before discussing lessons learned from implementing these initiatives, it is important to stress that there is not one universal solution or intervention that is optimal for each food operation. Different food venues in DoD operate with different decision-makers, regulations, menus, training, delivery, tracking, measurement, and accountability. Any effort to improve all the food delivery systems in the military environment will have to be sensitive to these differences. HBI tested interventions in some food environments, but not all of them.[39]

B. General Lessons Learned from HBI Healthy Eating Initiatives

As the HBI team tested different interventions to promote healthy eating, lessons emerged that were outside the scope of any particular initiative. These general lessons and observations are summarized below.

1. **The DoD food system is complex – thus, any change affects the whole system, not just one element.** As each initiative was tested, other issues emerged. For example, if the aim was to make a recipe healthier, it was also necessary to procure ingredients. Issues like procurement, cost, training, production, presentation, and tracking all proved important during HBI implementation.
2. **Procurement is a perceived as a challenge.** Every installation noted that working with prime vendors sometimes presented issues in terms of improving food offerings. One complaint was that even if a location wanted to order healthier ingredients, prime vendors were often unwilling to deliver smaller quantities (especially if this meant breaking cases). Minimum order requirements could make it difficult to test new foods.

[39] Table 4.1 provides further clarification concerning which initiatives were offered at different food venues.

3. **Buying power is reduced because of NAF procurement at the installation level.** Most NAF food operations procure food individually. When the golf course, the bowling center, and the club all purchase their food independently and in small quantities, the potential for leveraging their buying power diminishes considerably, resulting in less efficient operations.

4. **Regulations that limit procurement to U.S products pose a challenge.** Under DLA Troop Support, the Subsistence Directorate serves as the operational manager for all food operations. Procurement is subject to the provisions of the Berry Amendment and the Buy American Act (BAA). The Berry Amendment requires DoD to give preference to domestically produced, manufactured, or home-grown products, notably food, clothing, and fabrics. Some alternative food items like quinoa — a great source of protein — are not grown in the U.S., and obtaining procurement exceptions for these products can be difficult.

5. **Commissaries are a source of food for child development centers and MWRs.** On occasion, child development centers and NAF locations buy food from the commissaries when the prime vendor is not able to supply desired items. The commissaries are interested in supplying food on a regular basis for smaller quantities or items not offered in the catalogue. APF DFACs face restrictions in terms of how much they can purchase on a Government Purchase Card (GPC). Currently, purchases on a GPC cannot exceed $2,500 for a single line item.

6. **Implementation of DoD nutrition policy is not always consistent with DLA contracting rules and with the product catalogue from which installations purchase food.** Implementing policy is often a challenge. For example, DoD policy says that food products purchased or prepared by DoD cannot contain the additive monosodium glutamate (MSG). Nevertheless, there are products in the DLA catalogue that contain MSG. Enforcing policies is often left to individual installations, even though they are often understaffed and may not be educated on all DoD policies. Some staff members requested that policy be enforced at a higher level in the food supply chain so that local installations can focus on preparing food, not on ensuring that vendors are following DoD policy. However, at Army locations, the local dining facility manager determines which products to order and which items to add to the product catalogue. Centralizing product specifications and catalogue additions at the headquarters level has been suggested. Developing product specifications, and conveying those specifications to the prime vendor, should be a headquarters-level responsibility. Amending prime vendor contracts to identify product substitutes that do not meet product specifications should be pursued.

7. **There is interest in updating the DLA catalogue.** DLA adds items that customers request to its catalogue; as a result, there are now more than 90,000 items in the catalogue. At the same time, there was interest in updating the DLA catalogue to include more healthy food options.

8. **There is interest in including more healthy options in the 14-day and 21-day menu rotation in APF environments.** The current menu rotation offers some healthy items, but there is interest in adding more healthy items that are well prepared and tasty (e.g. Cajun fish vs. steamed fish).

9. **Current production methods make it harder to serve fresh, nutritious food.** The current production process in military dining halls requires that nearly all preparation, cooking, and serving occurs in the same day. With a large number of menu items and limited cooking skills among kitchen staff, dining halls often rely on pre-made items because there is no time to cook from scratch, even though staff would like to use the freshest ingredients. There is interest in reviewing the production schedule so that staff can serve more nutritious food.

10. **Food service personnel have different levels of experience, and incentives to perform are different in government food facilities.** Decisions by contractors/concessioners regarding staff, operations, and profitability are primarily driven by business considerations; in this respect, contractors/concessioners are less encumbered than their government counterparts.

11. **APF DFACs offer some of the healthiest menu options but are limited by operating hours and authorized users.** According to the m-NEAT assessment, DFACs are second to the commissaries in the availability of healthy food; however, dining facilities, mess halls, and galleys have limited hours of operation and are only open to authorized patrons. Budget cutbacks continue to reduce the number of hours that DFACs are open, hampering the availability and accessibility of the healthy choices they offer. Other organizations, like the Military Compensation and Retirement Modernization Commission, have also identified this issue through their research and found that DoD is not consistently meeting the dining needs of service members (particularly the junior enlisted). While the Commission believes it should not dictate to the Services which model of delivery they use, the Commission feels strongly that DoD needs better data on what is currently available in order to better represent the status quo and then identify the potential for improved dining choices.

12. **There is a need to market, test, and sell healthy items.** As in the current school environment, DoD needs to test different food items on a regular basis. DoD leadership with responsibility for food services should test different, healthier items at an enterprise level and promote these items to food outlets at the installation level.

13. **It may be hard to convince operators of some food venues to offer healthy items.** Some operators continue to argue that customers don't want healthier foods. They may not be aware that people frequently travel off base during the duty day to find healthier options. In the private sector, venues that offer healthier options are among those that are growing most rapidly; in fact, such venues have been significantly increasing their market share.

14. **All food service outlets need to be part of any effort to create a healthier food environment on base.** Foodservice contracts, including vending contracts and any food programs operated by third parties, do not universally mandate minimum nutrition standards consistent with current best practice. Further, even when nutrition standards are included, such as FitPick standards for vending machines, the m-NEAT assessment revealed that enforcement of the standards was inconsistent. The HBI team observed several instances where non-FitPick items were identified as FitPick items in particular vending machines.

15. **Federal agencies have created guidelines and tools that can be helpful to the military.** A number of federal agencies have developed useful guidance related to nutrition and healthy eating. Examples include the HHS/General Services Administration (GSA) Sustainability Guidelines for Federal Concessions and Vending Operations, or the Obama administration's recent *executive order* directing the GSA to purchase antibiotic-free meat for federal cafeterias.[40] The HHS/GSA Guidelines were reviewed by DoD's Nutrition Aspects Health Promotion Working Group (NAHPWG), which reports to the DoD Food & Nutrition Subcommittee, during an effort to update the DoD menu guidelines about six years ago. The NAHPWG also included some language from the HHS/GSA guidelines in the DoD menu guidelines and should work to implement them fully by January 1, 2017.

16. **Families want to learn more about healthy eating.** The popularity of programs like Cooking Matters demonstrated that there is demand for more hands-on nutrition education in locations where people shop, such as commissaries. This type of education could also be offered at other frequented locations like food outlets, family support centers, child development centers, and schools.

17. **HBI healthy eating initiatives affected behavior.** According to the CRA discussed in Chapter 9, installations that implemented a mix of HBI initiatives, such as menu labeling, food placement, and nutrition education, had a higher number of respondents reporting significant changes in their eating behaviors. Smaller changes were reported in tobacco use and exercise behavior (according to the CRA, exercise behavior showed the least change).

18. **Many children and youth centers on military installations could do more to promote healthy eating.** Eating habits form at a young age and are influenced by family habits at home and by the food environment at locations where children learn and play.

[40] More details can be found at: https://www.whitehouse.gov/the-press-office/2015/06/02/presidential-memorandum-creating-preference-meat-and-poultry-produced-ac

Vending machines at youth centers on military installations typically carry a large number of products with high calorie, sugar, fat, and sodium content. The USDA and national non-profits have worked over a number of years to remove sodas and other unhealthy items from vending machines in schools but these efforts have generally not been replicated at DoD youth centers.

C. Observations and Lessons Learned from Experience with Specific HBI Healthy Eating Initiatives

Insights and lessons learned from the implementation of specific HBI healthy eating initiatives are summarized in this section. The discussion reflects input gathered from interviews with key personnel at the HBI pilot sites as well as results from available measurement tools and the CRA.

C.1 Observations and Lessons Learned from Assessment/m-Neat Tool

The m-NEAT tool proved valuable information to food establishments and installations that were interested in assessing the "healthfulness" of their food environment. This tool is easy to use, but did have some limitations. For example, some food operators suggested that m-NEAT could be improved by adding questions from their perspective, instead of relying solely on questions developed by dietitians. Of course, as with any assessment, completing m-NEAT takes time and is not part of food operators' regular workday – while perhaps unavoidable, this time requirement could be a barrier to implementation in some settings. These lessons are informing the next version of m-NEAT, which is projected to be released in spring 2016.

1. **Vending and fast food needs improvement.** Results from the m-NEAT assessment demonstrated that DFACs, galleys, and commissaries tended to provide healthy offerings. On the other hand, there was significant room for improvement at most installations with respect to the food available from vending machines and fast food outlets.

C.2 Observations and Lessons Learned from Recipes, Training, and Production and Culinary Institute of America Healthy Cooking Skills Workshop

The Culinary Institute's skills workshop generated excitement among participants, many of whom stated that they were able to incorporate the new techniques they learned from the workshop in their daily operations. Because of rapid turnover at many DoD food venues, a number of HBI installations recommended that the workshop be offered regularly to ensure that new staff has the most current information. Several additional challenges arose in the course of menu renovation efforts.

1. **Not all recipes are easily found.** It was hard to find the recipes at many NAF locations; some existed only on paper in a drawer and some were in a computer system. Not having the recipes made it difficult to evaluate nutritional content and offer healthy substitutes to existing recipes. In addition, many snack bars offered only a limited variety of options.
2. **Recipes in DFACs are centrally managed by headquarters.** During the implementation phase, the menu renovation project emphasized culinary skills enhancement, since renovating recipes on a large scale requires more integration with the U.S. Army Natick Soldier Systems Center (NSSC), JCCoE, the food service lead for each of the Services, DLA, and others such as the DoD Nutrition Committee.
3. **Locations needed to be found for the training.** Finding a kitchen that was not being used for daily food preparation was sometimes a challenge. The HBI team was able to use kitchens in DFACs, training DFACs, and clubs.
4. **Staff from all food establishments had to be recruited to participate.** At some locations this was a challenge, both because some personnel had daily responsibilities and could not leave their posts and because other staff members were unsure how the

initiative applied to them, especially in cases where they cooked from set menus that did not allow much creativity. The trainings were mostly attended by NAF/MWR and DFAC/galley food staff, but they would also have been beneficial for cooking staff at child development centers and local schools. When culinary leaders were part of the training, the staff had more flexibility to alter recipes, because their superiors understood the final goals and had the authority to alter operational menus and/or recipes.

5. **Procuring food for the trainings was difficult at some locations.** Because of prime vendor minimum quantity agreements, the products needed to conduct the trainings sometimes had to be purchased at commissaries and commercial supermarkets.

C.3 Observations and Lessons Learned from Menu Labeling - Go for Green®

Go for Green® existed before the implementation of HBI; though it was initially an Army program it has now been customized for every Service, except the U.S. Marine Corps, which introduced a similar stoplight program called "*Fueled to Fight.*"[41] Several challenges to Go for Green® were observed during HBI implementation:

1. **Consistent, accurate labeling was a challenge.** Food service staff had difficulty consistently and accurately labeling food.
2. **Installations needed funds to print labels.** Although the program was being implemented even before HBI, funding to print labels was an issue for several installations.
3. **Full implementation was possible only in dining halls and galleys.** NAF/MWR locations considered Go for Green® too strict; in addition, these venues were unwilling to label foods red or yellow.
4. **Enforcement was a challenge.** At present, there is no enforcement mechanism to ensure that all locations using Go for Green® are implementing the program effectively.

C.4 Observations and Lessons Learned from Menu Labeling - Better for You

As discussed in Chapter 4, the HBI team developed the BFY labeling system to respond to the concerns of NAF/MWR outlets, which found the Go for Green® labeling system to be too restrictive, and were unwilling to label any foods as "bad." Food operators were more accepting of BFY labeling, because menu items that qualified for a positive designation would be highlighted appropriately. Since BFY was a new program, several challenges emerged during implementation:

1. **There was considerable confusion about whether BFY meant "healthy."** The designation was based on calories alone and not nutritional value, so in some instances, a hot dog would be labeled BFY.
2. **Clear recipes were needed.** BFY was not difficult to implement if food operators had the recipes – otherwise it was challenging to determine nutritional information.
3. **Low dose delivered at installations impacted effectiveness.** Typically, only one or two NAF locations at an installation used BFY labeling, so program "dose delivered" was limited. This in turn limited program effectiveness.
4. **Funding was needed to cover printing costs.** As in Go for Green®, staff expressed concern about a lack of funds to pay for printing posters, labels, etc.
5. **Some in the nutrition community were concerned that two different menu labeling systems could confuse consumers.** For this reason, some dietitians and public health advocates recommended simply using Go for Green® at all food establishments on an installation.

[41] More details can be found at: http://www.logcom.marines.mil/Portals/184/Docs/Sites/ie_s/wellness/files/Fuel-To-Fight-Nutrition-Planning.pdf

C.5 Observations and Lessons Learned from Choice Architecture/Smarter Food Movement

Responses to the Smarter Food Movement ranged widely across the fourteen HBI pilot locations. Where there was direct interaction with DFACs, galleys and MWR/NAF food venues, the reaction was generally positive. When the interaction was with personnel who were more removed from direct service, the reaction was less supportive. Unlike other HBI programs, the Smarter Food Movement does not market or try to call attention to program changes. Instead, it focuses on subtle persuasion to influence consumer behavior. Several observations/insights emerged during implementation.

1. **Implementation was challenging.** Food service anywhere is complicated and requires attention to speed and delivery. Most recommended changes to food venues could be implemented in an afternoon, but making them part of the culture took more time. In addition, managers were often skeptical that they could get assistance from public works/civil engineering to implement changes that involved relocating fixtures and equipment.
2. **Front-line staff was often more interested than other personnel.** Staff members who interacted with customers directly were often more interested than managers or staff members who worked "in back of the house."
3. **Champions were needed at each venue to produce results.** As with any program, interventions can be ignored or not implemented if there is no individual on site to champion the effort. Those locations that had eager champions took advantage of the Smarter Food Movement recommendations.
4. **Personnel with a background in food service were quicker to understand and embrace the concepts behind the initiative.** As a result, these individuals were easier to work with to implement program recommendations.
5. **Perceived costs became a barrier.** Many of the recommendations were at least somewhat costly to implement, especially where they involved moving equipment and other physical changes, and there was no budget to implement the program. One HBI location, March Air Reserve Base, invoked HBI when applying for funding to renovate its kitchen and food service delivery area. In this case, March Air Reserve Base incorporated Smarter Food Movement ideas in its remodel.
6. **Lack of staff time was a barrier.** For example, introducing creative names for healthier menu items can help drive sales, but coming up with new names takes staff time and effort.
7. **Food service contracts were a barrier.** Some of the Services have pre-existing contracts with vendors and cannot easily change food preparation and presentation. For example, the Marines have a food service contract with Sodexo and were reluctant to ask the contractor to make any changes that were outside the scope of their current contract. In addition, Sodexo has its own program called *Mindful*[42] and there was concern that the Smarter Food Movement would conflict with their brand.

C.6 Observations and Lessons Learned from Efforts to Increase Sales of Fruits and Vegetables and Establish Farmers markets

Farmers markets were a very popular HBI initiative. At the outset, many commanders were unsure whether they could host such markets on installation, but a memorandum clarifying DoD policy on this issue from the Deputy Assistant Secretary of Defense addressed this concern. Several lessons were learned in the course of implementing farmers markets as part of HBI:

1. **Policy clarification was needed early on.** As noted previously, implementation could not proceed until MC&FP affirmed that MWR, the exchanges, or DeCA could host farmers markets as long as they were true farmers markets and not simply relocated, normal commercial operations.[xxxiv]

[42] More details can be found at: https://mindful.sodexo.com

2. **Technical assistance was required to start farmers markets.** Some installations worked with the non-profit group Wholesome Wave, which specializes in developing farmers markets at locations around the country. Others, like Quantico, hired a market manager. Unrelated to HBI, the Pentagon opened a farmers market in 2015.
3. **Competition with community markets should be avoided.** At some locations, like Fort Sill, the leadership decided it made more sense to encourage service members and their families to visit an existing farmers market rather than establishing a new market on site. In fact, Fort Sill is looking to increase demand further by working with Wholesome Wave and its *Fruit and Vegetable RX*[43] program to prescribe subsidized fruits and vegetables to the military community.
4. **Leadership and community support are critical.** Successful markets required the full support of installation leadership and broad support/cooperation from a host of entities on and off base.
5. **Many installation support agencies were involved in implementing farmers markets.** Examples include security, public works, MWR, Exchanges, DeCA, Military Public Health, and the Public Health Office.
6. **Location matters.** Placing farmers markets in high-traffic areas increases their success.
7. **Food safety and certification was an issue for some vendors.** Any offerings brought on an installation needed to pass food safety inspections. Certain types of products, such as eggs, required USDA certification, which is expensive and hard to obtain for small, independent local farmers. Another challenge was that many farmers had non-federal certification licenses that were not recognized by installation food safety officers.
8. **Vendor-driven markets were more successful.** To sustain themselves, markets must be mutually beneficial for farmers/vendors and customers. Vendor-driven markets tend to be more successful than customer-driven markets.
9. **Customizing the market to the audience matters.** A cookie cutter approach to farmers markets does not work. Markets must be customized to the specific communities they serve in order to maximize success. Key parameters include the type of market, frequency, hours of operation, vendor mix, etc.
10. **Market managers are needed to organize farmers markets.** Markets with competent managers who could work with vendors and serve as intermediaries when coordinating with installation heads tended to be better run. Operating a sustainable farmers market is a complex undertaking.
11. **Markets require three years to be successful.** Markets take time to get established and become profitable. Typically the first year is used to garner support; rally resources; plan, select, and ready the site; recruit farmers and vendors; and open the market. In the second year, the market operates and ideally grows (in terms of customers and vendors) and adjustments are made. Only in the third year would the market expect to stabilize and reach maturity.

C.7 Observations and Lessons Learned from the DeCA Produce Initiative

DeCA developed an initiative to increase sales of fresh fruits and vegetables as part of the HBI FY2014 Balanced Scorecard. Corporate leaders and staff at DeCA's office in Fort Lee implemented this initiative, and the HBI team used the PFT to measure its effectiveness.[44] The initiative centered on three main commissary-based programs: CMATS, Cornell's Smarter Food Movement, and DeCA's own program, called the Fruit and Vegetable Initiative, which used a variety of strategies to promote the purchase of fresh produce. For example, signs were posted on shopping carts advising shoppers to "load up the front half of your cart with fruits, veggies, and lean meats." Other elements of the DeCA initiative included in-store healthy food promotional campaigns and product placement to encourage BFY selections.

[43] More details can be found at: https://www.wholesomewave.org/our-initiatives/fruit-and-vegetable-prescription-program/
[44] PFT is described in chapter 8 on page 100.

1. **Cooking Matters was successful and there is interest in replicating it at more commissaries.** To continue and expand Cooking Matters, DeCA will need funding. DeCA will also need to work with vendors to provide healthy food coupons.
2. **The Smarter Food Movement was a source of many good ideas, but many of these ideas were harder to implement.** According to measurement data, several suggestions from the Smarter Food Movement were implemented.
3. **The Commissary Fruit and Vegetable Initiative generated a small change in sales.** Output data from the commissary initiative indicate a small change in sales of fresh produce. Specifically, sales of fruits and vegetables as a share of total commissary sales increased 0.7 percent over the course of the HBI demonstration project.

C.8 Observations and Lessons Learned from Cooking Matters

1. **There was strong interest in this program,** which was largely well received although the start-up time varied from installation to installation. Altogether, more than 3,400 military families participated in tours at eight installations. The hands-on, immediate nature of the program, along with a common desire to learn more about healthy cooking and eating seem to have contributed to these high participation rates. Participants wanted to know what foods to buy; how to read labels and what to avoid; how to cook tasty, healthy meals on a budget; and how to cook for individuals, families, and children. Many participants indicated that they planned to continue comparing food labels and making healthy shopping choices after completing the program.
2. **A robust marketing effort boosted participation.** CMATS gradually gained installation-wide recognition throughout the first seven to twelve months of implementation when a part-time coordinator was contracted to start the program. Several departments helped with marketing efforts, which included, among other efforts, marketing in installation newspapers and social media by the Public Affairs Office, notices in MWR monthly newsletters and Facebook pages, and signs and fliers at the commissary. A continuous presence and word of mouth among pleased participants helped CMATS attract a steady stream of new participants.
3. **Pop-up model tours were successful.** Designed to bring the grocery store tour to participants outside the store setting, these tours were exceptionally popular and gave the program a wider reach and additional exposure. For example, several people who participated in the CMATS pop-up tour as part of the newcomer briefing at Fort Meade reported that it was "the best part of the day."
4. **Participants saw the program as having a significant impact on their lives.** CMATS tour leaders frequently get feedback from participants indicating that the program impacted their lives in a positive way. For example, the new parent support group coordinator at Fort Meade heard from a young mother that the tour at the commissary "changed her life!" At Twentynine Palms, one individual who participated as part of a married couple told the coordinator, "I am so glad we got to do this together, because now we can support each other and he will be able to understand my struggles, whilst also supporting me, thank you."
5. **There is interest in continuing the program after HBI.** As already noted, CMATS was a well-received and often sought-after program – its coordinators were often recognized and approached when they were on an installation. Share Our Strength is working with individual installations to continue the program through the national-level Share Our Strength program and through local leads and partner organizations.
6. **Support from installation leadership, commissary directors, and store directors was critical to program success.** For example, stores and commissaries made available unrestricted calendar days for events and tours, designated cashiers and registers for checkout, and provided tables, tablecloths, and chairs for events and recruitment efforts. Senior leadership played an important role by communicating with support staff and with other relevant community organizations and institutions (e.g., hospitals, clinics, wellness/fitness centers, registered dietitians, and nurses) and by supporting tour leaders and recruitment efforts during work hours.

7. **Mission, demographics, and location created challenges for program implementation at some installations.** In particular, installations with a highly specialized mission and installations with a higher population of geographically separated service members (geo-bachelors) had issues with participation, especially because they often could not provide access to a kitchen. Anecdotal observations also suggest that installations in remote locations faced additional challenges with participation and volunteer recruitment. Exceptions to this general observation tended to involve installations and locations with a higher retiree population.
8. **Depending on the installation, would-be participants faced a number of additional barriers to participation.** For example, some participants had difficulty arranging for transportation and childcare and gaining access to full kitchens and refrigerators in dorms and barracks. Many young military members, in particular, don't own a vehicle or, if married, only own one vehicle. This made it difficult for them to attend tours. Where housing did not include kitchen facilities, it was hard to see much point in grocery shopping. To help address some of these issues, Share Our Strength implemented the Cooking Matters pop-up tour model. This allowed the program to be brought to just about any location, including playgroups where children could be watched. For service members who reside in dormitories or barracks, Share Our Strength developed a No Stove, No Cook handout and marketing tool, the hand-out offers food tips and recipes that do not require a stove or refrigeration.

Active Living: Physical Activity and Built Environment Observations and Lessons

This section summarizes lessons learned from HBI initiatives related to physical activity and the built environment. The section begins by offering some general observations about the challenges of addressing physical activity and the built environment in the DoD context. Later subsections describe specific lessons learned from implementation experience with particular HBI active living initiatives.

A. Overview and Context

Active living can be defined in many ways, but the simple goal for this HBI "wedge" of initiatives[45] was to ensure that individuals have the ability to be physically active every day in their community, including where they work, where they learn, and where they play. Essential elements of active living include a built environment that supports physical activity, and access to facilities and programs that support and promote physical activity.

B. General Lessons Learned from HBI Experience in the Area of Active Living/Built Environment

Several key lessons emerged as the HBI team worked with installations to implement specific active living initiatives.

1. **Installation layouts are designed for the automobile.** In the 1950s, communities across America began to be designed around the car. Military installations were no different. As a result, there is now a marked difference between the physical layout of installations that were designed before and after the 1950s. Installation design is also affected by the different missions of the individual Services. For example, Navy installations are more industrial than the installations of other Services. Current concepts in urban design favor walkability and bikeability for reasons of fitness, environmental sustainability, and quality of life. The timeframe of the HBI demonstration project made it impractical to target significant changes to the layout and built environment at existing installations.

[45] Initiatives are described in Chapter 5.

Rather, the question for HBI was how to increase awareness among key stakeholders of how the built environment can impact health and wellness and support (or undermine) DoD's objectives with respect to maintaining a fit and ready force.

2. **The factors that play a role in active living are complex and many-layered. Thus, simply promoting physical activity will not, by itself, result in needed changes – the built environment needs to be addressed as well. Put another way, the components of active living need to be approached as a system.** As each initiative was tested, the HBI team uncovered other issues and questions that need to be addressed.

   - **Active Design and Implementation:** How can each installation integrate active design into its master planning processes? What tools do DoD and individual installations need to make the working and living environment for service members and their families more walkable and bikeable? Is it possible to develop central hubs that include places to work, learn, shop, and eat? Are there installation entrances that can be designated for walkers and bikers only?
   - **Assessment:** How can master planners use tools like m-PAC to create environments that encourage physical activity?
   - **Partnerships:** What partners would help OSD, the Service branches, and individual installations realize the goal of promoting physical activity and providing a more walk/bike friendly environment? What are the city and county around the installation doing to promote active living? Are federal and state agencies providing grants for this purpose? Are there partner organizations that could augment existing programs for fitness, outdoor recreation, and youth? How can DoD promote the use of existing apps for fitness and fitness tracking?
   - **Fitness Facilities/Outdoor Recreation (all ages):** What facilities currently exist for fitness? What hours do they operate? Are there spaces where children can play while adults work out? How can outdoor recreation and outdoor resources be integrated better? Is DoD working with government agencies to explore programming on state and federal public lands? What tools exist for helping individuals to follow a program on their phone, tablet, or computer?
   - **Comprehensive Programming:** How can programs be designed to help hard-to-reach individuals who want to be fit but need extra support? What comprehensive programs can be provided that tackle the interconnected issues of physical activity, nutrition, sleep, and stress relief? Are coaches/mentors/peers available to keep individuals on track and motivated?
   - **Tracking/Measuring:** How can the results of active living programs be measured? Through pass/fail results for physical fitness tests? Measurements like BMI and waist circumference? Is it possible to determine whether changes in the environment have had the effect of making people more active? What programs and facilities have the most impact and value and what metrics can be used to assess impact and value?

3. **Service members and their families can find it difficult to find time to go to the gym.** Options for incorporating physical activity in people's daily routines in ways that don't require a separate allotment of time or change of clothes could be beneficial. Even individuals who manage to make it to the gym on a regular basis may realize additional health benefits by incorporating activity into their daily routine.

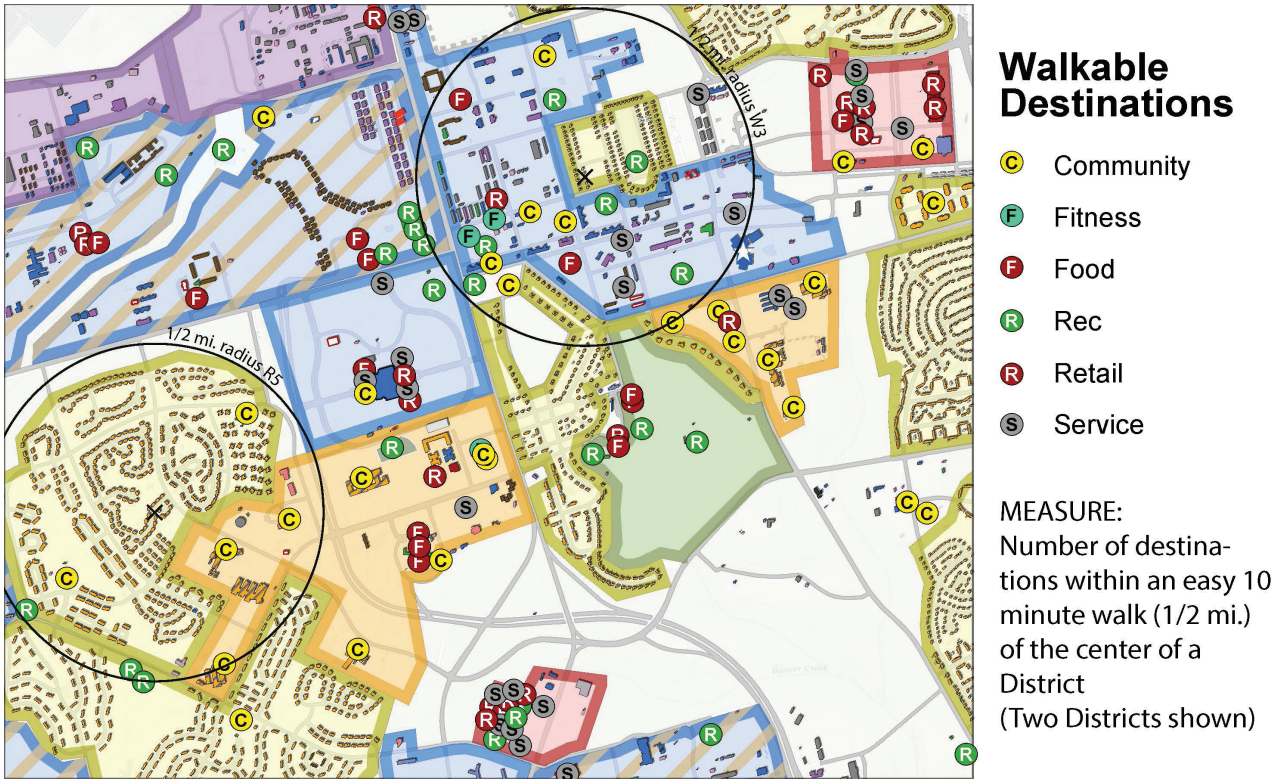
4. **Inadequate access to drop-in childcare is a barrier to exercise for many service members and their families.** While some installations have drop-in childcare, slots are often limited and childcare facilities are generally not located close to fitness facilities. DoD can increase access to childcare facilities by investing in additional resources to increase capacity. Additionally, family-oriented fitness facilities at installations offer a unique way to address this challenge by fostering a safe environment in which childcare and fitness are provided in the same facility. This concept has worked well on a pilot basis at one installation, and it may offer an interesting model to test at additional installations across the Services.

5. **DoD's policy allowing up to three hours of work time per week to be used for exercise has been well received by many civilian employees, but it has been less effective for workers in child development or youth centers.** Within DLA, for example, employees' participation in exercise classes increased because of this policy. Additionally, OPM has developed guidance and the Services support policy that grants time during work for exercise. The policy has been less successful, however, for individuals who work in childcare where a mandated minimum ratio of adults to children makes it difficult to excuse employees so that they can exercise.[46]

6. **Food, fitness, and active recreation outlets need to be strategically located to serve individuals on base where they live and work.** Increasing walkability and bikeability involves more than just adding sidewalks and bike lanes. A first step is to identify population centers and locate places to eat, work out, shop, get medical services, access childcare, etc. so that the greatest number of people possible can be served within easy walking distances from where they live and work. The placement of existing facilities is sometimes out of sync with the populations they serve. In the Air Force, for example, flight lines can be very far away from food outlets. This can mean that during lunch breaks, personnel have to drive to get food or eat from vending machines if they want to eat at all. Food trucks, a newly popular mobile market, may provide one way to address this need while also promoting healthy food decisions if food trucks offer healthy items and are strategically placed near recreational facilities and workplaces.

7. **Commanders need appropriate resources to implement master plans.** There was an opportunity at one installation to develop a more pedestrian- and bike-friendly environment. A planner was hired to develop designs, but the plans have not been implemented due to of a lack of funding. At another installation there is interest in creating a long walk/run/bike path on the perimeter of the installation, but funding restrictions have so far precluded the use of surplus funds to construct the path.

Figure 11.1. Example Map from an m-PAC Assessment



[46] More details regarding fitness policies can be found on the Tobacco-Free Living COI: https://www.milsuite.mil/book/community/spaces/operation-live-well/tobacco-free-living

8. **Young people today want to use active transportation, public transportation, and shared transportation and are less interested in owning a car.** Recent studies find that Generation Z is much more open to alternative forms of transportation and doesn't necessarily want to be burdened with car payments.[xxxv] Military families are often one-car families. At Fort Meade, there is high demand for housing near Town Center because many spouses don't have a car to run errands. Walkable communities reduce household expenses. Young, single service members would have better access to all services in a walkable/bikeable community.
9. **Macro changes are more difficult to implement.** The timeline for making macro changes can be lengthy and the funding process is often complex and hampered by delays. Funding for things that aren't perceived as mission-critical tends to get delayed or de-prioritized. Challenges include:
    - 5-10 year funding cycles.
    - Complicated scoring system with many stakeholders weighing in.
    - Funding process with multiple tiers of review and prioritization (for example, the construction budget is set at the level of the individual base, the Service channels this budget to DoD headquarters, and the DoD construction budget is reviewed by AT&L, and is ultimately subject to congressional approval (MILCON)).
    - Some projects could go forward if base commanders weigh in and use discretionary funding, but commanders are often on base for too short a time to see a larger master planning effort come to fruition.

C. Specific Observations and Lessons Learned from HBI Experience with Active Living Initiatives

C.1 Observations and Lessons Learned from m-PAC

Reactions to m-PAC were mixed, but a few installations seemed genuinely enthusiastic to undertake this assessment effort. The work involved in completing the baseline assessment was somewhat high – for example, it involved the use of Geographic Information System (GIS) data and an excel spreadsheet questionnaire. Future iterations would require less effort.

The m-PAC assessment divides a base into districts — residential, worksites, recreation, and mixed-use — and details three examples from each group. Although time-consuming, these assessments give a good snapshot of how well the installation supports HBI goals.

The m-PAC tool measures installation-wide characteristics, individual districts, and specific issues:

- INSTALLATION-WIDE measurement categories include Commitment, Planning Process, Transit Networks, Fitness and Recreation.
- INDIVIDUAL DISTRICT measurement categories include Town Center / Community Support, Worksite Districts, Residential Districts (on-installation).
- SPECIFIC ISSUE measurements included Community Support for Active Design on the installation, Walkable / Bikeable destinations, Street and Transit Networks, Pedestrian and Bicycle Networks.

HBI's experience with m-PAC yielded a number of specific observations and lessons learned related to the use of this assessment tool.

1. **The total m-PAC score for an installation does not tell the whole story.** Rather, it is more informative to look at results for categories, districts, and specific issues to gain an understanding of where the installation is performing well and where there is room for improvement. Additional tools in the Creating Active Communities and Healthy Environments (CACHE) Toolkit, including m-NEAT and Quantitative Indicators of Tobacco Systems (QITS) can help define joint standards to capture, monitor, and compare longitudinal health and environmental elements (e.g., food availability, neighborhood safety, tobacco policies) to assess installation health over time.
2. **Measurements obtained using m-PAC relate directly to the goals of active design** – that is, design that promotes an active lifestyle through a combination of characteristics:
    - Dense, mixed-use districts that provide a viable walkable environment.
    - Food, retail outlets, schools, and workplaces within easy walking and biking distance.
    - Streets and sidewalks that support safe walking and biking for transportation and recreation.
    - Opportunities for active recreation (e.g., parks, running trails, sports fields).
3. **Efforts to apply m-PAC had several positive results.**
    - GIS data made measurement easy and real; resulting measures reflect quantifiable characteristics rather than opinion or impressions.
    - Many installations are inherently walkable based on their size.
    - Most installations provide a high number of promotional programs for fitness and recreation.
    - Compared with non-military communities, most installations offer a relatively high-level of safety for pedestrians and bicyclists because of low speed limits and low traffic.
4. **Efforts to apply m-PAC also uncovered a number of active design challenges.**
    - The CACHE pilot revealed that design standards for some existing installations don't incorporate active design goals or principles. (Note that this observation does not necessarily apply to the HBI pilot sites.)
    - Like most American cities, military installations have been designed for cars.
    - Although sidewalks and trails are common, poor connectivity between districts sometimes makes walking or biking beyond the installation boundary infeasible or unattractive.
5. **The HBI team encountered several challenges related to completing m-PAC assessments.**
    - The m-PAC assessments are somewhat labor intensive, especially when they involve establishing a baseline.
    - Use of the m-PAC assessment tool needs to be incorporated into a larger planning process to have an impact because measurement by itself can raise awareness but does not guarantee changes. The U.S. Army Public Health Command is continuing to develop the CACHE Toolkit, which will include some version of m-PAC. In addition, m-PAC could be incorporated into the Installation Development Plan process to help maintain continuity of goals.

C.3 Observations and Lessons Learned from Bikeshare Programs

1. **The DLA was the only location to implement a bikeshare program.** At DLA the program was funded through the Commander's discretionary funds and is popular, especially at lunch. However, the bikes are mainly used for fitness and recreation, rather than transportation.
2. **There is interest in bikeshare programs at many installations, but funding is an issue.** The HBI team explored the possibility of working with companies that provide bikeshare programs in other cities, but potential restrictions on public-private partnerships emerged as a significant barrier to implementation. In some instances, there was concern about the influence of private-sector interests, including concern about how key stakeholders and potential partners would perceive contractual obligations or agreements with private organizations. Similarly, civilian groups may be concerned about regulations and restrictions that could make partnerships with the military difficult to navigate. These kinds of barriers to implementation may be reduced when installations are supported by trusted partners in the community. In some cases, existing partnerships — an example is the Fort Meade Alliance — could be a helpful resource for launching new public-private efforts such as a bikesharing program.
3. **Most commercial bikeshare programs require significant capital investment.** For this reason, other installations — though they were interested — could not find a way to implement the initiative.

C.4. Observations and Lessons Learned from the StairWELL to Health Program

StairWELL to Health can benefit from creative input to make it fun and engaging. For example, DLA created multiple posters to discourage elevator, and escalator use, and encourage stair use.

1. **Incorporating StairWELL to Health into other walking, weight-loss, or fitness programs can work for both.**
2. **Stair counters were perceived as a burden or a security issue.** If measurements were not required, installations might be more likely to adopt the program.
3. **The program typically does not require major renovations to be implemented, but some stairwells could use appearance upgrades** like lighting, paint, or electronic door holders to make taking the stairs more attractive and accessible.
4. **Building managers are concerned about the appearance and locations of signs.** The local fire marshal may require non-flammable or fire rated signs and any changes to fire stairs will require approval.
5. **Dose delivered matters.** The HBI team concluded that if all stairwells were labeled and opened for use, an installation or agency was likelier to achieve success in making stair use more the norm, instead of the exception.

C.5 Observations and Lessons Learned from Enhanced Fitness Facilities

1. **Limited hours of operation can affect the use of fitness facilities.** As in the civilian world, facilities and programs that focus on the customer and the customer's needs are more heavily utilized and more successful. Limited hours at many fitness centers are a common source of frustration. Many service members express a desire for facilities that offer 24-hour or close-to-24-hour access so that they can incorporate fitness into their already busy lives.
2. **When work intrudes on fitness time, service members find it difficult to exercise effectively.** Many service members complained that they were often approached about work issues while using fitness facilities on their installation.

3. **Overcrowding is an issue.** The CRA found that many respondents viewed existing facilities as overcrowded. This led to frequent suggestions that installations should have more satellite operations or extended hours.
4. **Initiatives that address access to fitness facilities work better for individuals who are already self-motivated.** These initiatives worked particularly well with members of the military community who are already in the habit of exercising regularly. They were less successful for individuals who need more nudging to exercise regularly.

C.6 Observations and Lessons Learned from the 24-Hour Fitness Program

1. **This program was very well received by participating installations.**
2. **Maintaining the operational status of the CAC reader on doors was challenging at some locations.**
3. **Facilities were not required to provide 24-hour security monitoring, though 24-hour closed circuit video surveillance was in place.**

C.7 Observations and Lessons Learned from the Fitness on Request Program

1. **DoD's effort to consolidate equipment purchases for this program resulted in long lead times and delayed deliveries to installations.**
2. **The program was well received at installations once it was in place and operational.**
3. **Installation leads liked the opportunity to provide more group aerobic opportunities at lower cost.**
4. **Once HBI pilot installations received equipment for Fitness on Request, they expressed a desire to keep the program going after the end of HBI.**
5. **Finding suitable permanent locations for Fitness on Request equipment in fitness centers or other highly utilized areas on the installation was challenging.**
6. **This intervention was popular with HBI installations because the cost to sustain it was low, and it was relatively easy to operate.**

C.8 Observations and Lessons Learned from the Warrior Well Program

1. **Warrior Well was the only comprehensive fitness program tested as part of the HBI demonstration, and it was only implemented at Camp Dodge, Iowa.**
2. **A total of 52 Iowa National Guard members and 8 significant others, ranging in ages from 20 to 57 years old, participated in Warrior Well.** The duty status of these participants included traditional M-Day Drilling Soldiers, AGR/Technician/ADOS full-time Soldiers, and selected spouses of included individuals. This diverse sample was selected to evaluate the team-based approach against different duty statuses and the known scheduling conflicts of each occupation. Participants self-reported their average daily activity level at the start of the intervention. They were asked to select an activity level from three options. These responses were recorded as a benchmark and used to construct each participant's personalized nutrition program.
3. **At Camp Dodge, the program was well received and supported by installation leadership.**

4. **Individualized coaching and teamwork helped individuals reach their goals.** Experience with Warrior Well showed that not every service member can reach his or her fitness goals on their own. By enlisting coaches who are veterans or active military and by developing a team structure, individuals who required more guidance and motivation got the support they needed to achieve their goals. Statements like: "I use nutrition labels to make healthy food choices," "I adjust my nutrition based on the amount of exercise I do," "exercise is an important part of my daily routine," and "I try to maintain a consistent sleep schedule" were used to educate and motivate participants to change their behavior.
5. **Overall outcomes indicated positive change for a majority of individuals who participated in the Warrior Well training.** The behavioral health measurements captured during the HBI initiative are supported by tangible health outcomes in both body composition and physical strength and endurance. The strengths of the Warrior Well model, which included personalized training, veteran coaches, and hybrid engagement mechanisms using technology and face-to-face interactions, were highlighted in the outgoing satisfaction survey. A deeper integration of wearable activity monitors with the technology platform and greater flexibility in the scheduling of individual and team events, both over the telephone and in person, were identified as areas for improvement.
6. **More research is needed on whether the Warrior Well model would work with Active Duty service members.** Because Warrior Well was tested in a Reserve environment, the question remains whether this model works best in a Guard/Reserve environment or whether it can also be adapted to work in the Active Duty environment.

Health and Wellness Observations and Lessons

This section summarizes lessons learned from HBI initiatives related to health and wellness. The section begins by providing general observations about the challenges of addressing health and wellness in the DoD context. Later subsections describe specific lessons learned from implementation experience with particular HBI health and wellness initiatives.

A. Overview

HBI tested a number of different initiatives to promote health and wellness that are described in detail in Chapter 5.

B. General Lessons Learned from HBI Health and Wellness Initiatives

As the HBI team tested different interventions to promote health and wellness, lessons emerged that were outside the scope of any particular initiative. These general lessons and observations are summarized below.

1. **Existing health and wellness programs are not always utilized.** The HBI team found that many participating HBI installations already offered a plethora of health and wellness resources and programs. But many program managers felt their programs were underutilized or not very well known within the community. Efforts to market these programs may have been limited by a lack of funding or resources and program utilization may have been affected by limited hours, limited resources/staff, program location and distance from customers, and limited online/mobile accessibility. Another barrier to utilization could be a lack of personal motivation or awareness about how these programs can help change behavior and support participants' commitment to change.

2. **Frequent duplication of efforts points to a number of untapped opportunities for partnerships.** Many existing resources and programs were developed in response to an expressed need or desire to close a gap in services; nonetheless, these programs are often underutilized. Partnering opportunities among programs or stakeholders often remain unexplored due to organizational silos or independent funding streams. This issue may be especially pertinent in joint-base environments, where, for example, two tobacco cessation programs may be offered at a single site, each run by a different Service. This situation can result in duplicative efforts and inefficient use of resources; moreover, if leaders of similar programs fail to routinely communicate with each other, an opportunity for knowledge sharing about best practices is lost. As a result, some service members and their families may be unable to access quality services located just on the other side of the installation.

3. **Convenient, strategic marketing is essential to program success.** Outreach is most successful if it reaches individuals and families where they live, and if it leverages communication platforms that are already in use by the target population. Most installations were interested in leveraging existing social media platforms to push out information to their target population (e.g. Facebook, Twitter, etc.). And many installations recognized the need to do more outreach using mobile platforms.

4. **Families face enormous stress in the military.** Any efforts to promote healthy eating, active living, or reduced tobacco use must take into consideration the amount of stress commonly experienced by military families. Many military spouses spend long periods of time alone or as a single parent when their partner is deployed; in addition, many families are away from extended family and have less support as a result. Finally, many military families move every two to three years and are often relocating to unfamiliar environments. A number of implementation challenges for HBI emerged as a result of these common circumstances:

   - **Access to resources** – Information about the resources available to military families is not always adequately communicated to service members and their spouses. Families in a new location may be unaware of the resources available to them in the community and on the installation; moreover, they may have difficulty accessing information about these resources.
   - **Marketing of programs** – Many programs on military installations are marketed using social media, but whether this is enough to expand utilization is questionable. Spouse and family groups could be better utilized to market programs and more systematic approaches to helping newcomers, such as buddy or mentorship programs, have been suggested.
   - **Lack of customer focus** – Many programs and resources at military installations are siloed in different departments – health and wellness, physical activity, childcare, etc. However, most individuals and families do not organize their lives according to these divisions. With the rise of commercial mobile apps and other technological advances, individuals have come to expect information tailored specifically for them. By the same token, they are not interested in being inundated with information that is not relevant to them. When organizations or installations fail to tailor information flow to the customer, recipients may begin to disregard all the information from that source.
   - **Combined child and adult programming** – Most programs target either children or adults. Given how frequently access to drop-in childcare is cited as a barrier to participation, more combined programming for children and adults would be desirable.
   - **Financial stress** – The financial challenge of buying healthy food was a frequent theme, as was the perception that fruits and vegetables cost more than other types of food.[xxxvi]

5. **Because most military families live off base, there needs to be more coordination and leveraging of resources with adjacent communities.** Approximately 70 percent of military families live off post, in surrounding communities. When it comes to challenges related to obesity reduction, healthy eating, active living, and tobacco cessation, many communities around the country are facing the same issues. In many cases, military communities can tap into existing efforts at the local, county, and state levels. For example, there may be non-profits in the community working on similar issues that would be interested in

working with the installation. And even if a community is not working on these issues, installation leadership may be able to inspire local elected officials, community organizations, and local businesses to reinforce the concepts of healthy eating, active living, and tobacco cessation.

6. **Data collection is a challenge for many programs, especially in the case of programs that target children.** Collecting outcome data for programs that address healthy habits for children can be demanding, and can even create its own constraints unless it occurs as part of a formalized study. For example, information on pre- and post- BMI levels would have been desirable as a measure of outcomes. But collecting this type of information, particularly in the case of BMI, is a highly sensitive subject in military and civilian communities alike. There was also sensitivity around how this information would be used. Stakeholders (e.g., medical providers, schools, etc.) might have provided partnering opportunities for data collection, but these opportunities were generally not explored for various reasons, including reasons having to do with the difficulty of overcoming agency silos, independent funding streams, and staffing needs. Going forward, OLW may provide a platform for new efforts to address some of these barriers to collaboration.
7. **Flexibility and creativity are needed to implement programs effectively.** While it was important for each initiative to have a set implementation process and plan for measurement, it was beneficial for program managers to be able to exercise creativity and flexibility in adjusting to unforeseen barriers.
8. **Recruitment and participation can be challenging.** Though the programs implemented under HBI attempted to reach children through various means (afterschool programs, curriculum changes, etc.), many challenges emerged when it came to recruiting children and families to participate. Because of childcare needs, it is often easier to offer programs that allow families to participate together.

C. Observations and Lessons Learned from HBI Experience with Specific Health and Wellness Initiatives

Insights and lessons learned from the implementation of HBI health and wellness initiatives are summarized in this section. The discussion reflects input gathered from interviews with key personnel at the HBI pilot sites as well as results from available measurement tools and the CRA.

C.1 UltimateMe

1. **Analysis indicates that Health-Related Quality of Life (HRQOL) is a valid measure for evaluating the health of individuals in the DoD community.** HRQOL has long been used in the civilian sector by the CDC and other organizations. In addition, HRQOL was used to define one of the foundational objectives for the Healthy People 2020 initiative and is being applied at the national level to measure progress toward that initiative's established goals. However, despite its acceptance and use in the civilian community, HRQOL has attracted only limited study and application in the military setting. UltimateMe provided a vehicle for testing the utility of HRQOL in the DoD community.

   The Research Facilitation Laboratory (RFL) conducted the assessment of the CDC HRQOL-4 (CDC, 1993) as part of UltimateMe implementation within the HBI pilot. Participants included all men and women who completed the UltimateMe assessment at least one time within the data collection time frame (i.e., May 1, 2014 through May 31, 2015). The total sample included 912 individuals. Most of them were active duty service members (48.1 percent), predominantly white (46.1 percent) and female (54.7 percent). Their average age was just over 39 years old. Specifically, the UltimateMe assessment included the four questions that are used to measure HRQOL and that have been included in the CDC's annual Behavioral Risk Factor Surveillance System (BRFSS) questionnaire for more than 20 years (i.e., since 1993).[xxxvii] Two measures are used to quantify HRQOL: (i) an index of Overall Health, based on self-rated overall health and (ii) a Healthy Days Index, based on self-reported "unhealthy days" due to mental or physical health problems.

Results indicated that HRQOL was significantly predictive of almost all evaluated indicators of physical and psychosocial health. Specifically, participants with a higher HRQOL had lower BMI, total cholesterol, blood pressure, risk of dental caries, and better RealAge Scores. They were also more likely to pass the relevant physical fitness test. These individuals also reported sleeping more, being more physically active, spending less time on profile/injury status, and eating better (e.g., consuming more servings of whole grains, fruits, vegetables, and nuts). This group was also less likely to use tobacco products. A similar pattern of results (although with fewer statistically significant relationships) was seen with the Healthy Days Index when the HRQOL-4 was used as the predictor.

Participants who reported greater Overall Health and more Healthy Days also reported less financial stress, greater marital happiness, less isolation, and less catastrophic thinking.

Overall, the results showed HRQOL to be a "valuable measure of health status among UltimateMe participants."[xxxviii] They further suggest that HRQOL serves as a potentially useful measure and predictor of health status among UltimateMe participants.

2. **HRQOL is a better predictor of health than RealAge.** A series of analyses aimed to examine whether the HRQOL Overall Health Score and the RealAge Score could contribute in a significant way to predicting selected health outcomes and, if so, whether one serves as a more robust predictor than the other. Across these analyses, the HRQOL Overall Health Score was a more consistently significant predictor of health outcomes than the RealAge Score.
3. **Effective programs recognize the importance of activating individuals to change their behavior.** Preliminary analysis of data from UltimateMe indicates that it is possible to apply the "*Transtheoretical Model of Behavior Change*" to individual behaviors related to health and wellness.[47] These models, together with outcome data, can be very useful for assessing whether programs are effective, identifying gaps, allowing for adjustments, providing web-based or community resources to individuals in real time, and ultimately achieving better outcomes at lower cost.
4. **Technology barriers and some information technology (IT) policies hindered initial efforts to implement mobile and personal computer access.** UltimateMe provided valuable insights into the challenges of using new and emerging technologies to improve data collection. In fact, lower-than-expected rates of participation were attributable in part to problems with accessibility. For example, to receive an email message with links to resources from UltimateMe, the user had to log into UltimateMe with a 15-character password. The log-in did not always work, and there was no mobile application for UltimateMe. In addition, installations reported that it was sometimes difficult to access UltimateMe via government and personal computers. Feedback from the program indicates that the ability to access systems through mobile-friendly devices, either using the CAC or a reasonable length password, would reduce these barriers to participation. In addition, personnel at several installations voiced interest in gaining the capability to link to other social media platforms, such as Facebook and Twitter, and to utilize fitness wearables, such as FitBit and Jawbone Up.
5. **Programs like UltimateMe can be a source of valuable real-time health data.** Publically available population-level health data (such as data from the Health Related Behavioral Survey, which is performed every three years) do not provide real-time information to stakeholders and decision makers about the specific needs of a community. To allocate resources efficiently, meaningful, up-to-date information on behavior is needed. This information is helpful for identifying system and local challenges, as well as root causes. UltimateMe showed how valuable this type of fine-resolution information can be. For example, early analysis of nutrition data from participants at Yokota was extremely helpful in identifying barriers to healthier eating. The assessment indicated lower fruit and vegetable consumption and, upon further study, the team was able to identify port closures and higher prices as important causes for this finding.

[47] For example, the "Transtheoretical Model of Behavior Change" (also called the Stages of Change Model), was developed in the late 1970s to help explain why, in studies of smoking behavior, some people were capable of quitting on their own while others required outside intervention or treatment. The Transtheoretical Model focuses on intentional, individual decision-making and posits that people generally do not change behaviors quickly and decisively, but rather move through a process of

6. **In the context of HBI implementation, UltimateMe faced development challenges and time constraints.** The full value of UltimateMe could not be realized due to the short timeframe for testing this initiative. More time was needed to resolve a number of development challenges and fully implement the initiative.

7. **Accessing data to target potential participants was difficult.** Additional population and usage information on current UltimateMe participants would have helped installations target outreach and marketing messages.

8. **More work is needed to develop health indicators to measure program outcomes.**

   - Low participation rates were secondary to the technical challenges that delayed the launch of UltimateMe. This meant that there were not enough data to assess program outcomes as they relate to HBI. Efforts are currently underway to improve the program. An assessment of the motivational aspects of the program and potential health indicators will be published in January 2016.
   - Early assessment results produced illogical RealAge estimates for some participants; as a result, end users questioned the tool's validity and did not take it seriously.
   - UltimateMe provided an opportunity to explore the utility of using a single, standardized measure of health status for the DoD community, such as RealAge and HRQOL.
   - Between May and December of 2014, 520 people completed UltimateMe. The findings revealed clear opportunities for improvement in the areas of nutrition and sleep.

9. **Strategic communications were critical to program success.**

   - Partnering with key stakeholders across the installation helped increase exposure to additional audiences beyond those individuals who sought health-related resources on their own initiative.
   - Although social media, leadership briefings, and other group events were leveraged to increase program utilization, participation levels remained low. Promotional materials were also distributed through wellness centers, military treatment facilities, public affairs offices, installation commissaries and exchanges, MWR offices, text alerts, e-mail newsletters, newspapers, Facebook, Twitter, marquees, posters, and on-installation events.
   - Supplying installations with UltimateMe promotional materials helped reduce the burden on installation staff to create their own materials for distribution.
   - Multiple installations noted that marketing efforts required significant time due to competing priorities and limited resources/personnel. In fact, planning for marketing activities typically needed to start six weeks ahead of the start date for program promotion.
   - Some installations suggested condensing the promotion timeline and targeting outreach efforts in order to maintain interest. Promotions that run too long tend to lose momentum and are more difficult to maintain from a marketing perspective.

10. **Partnering with the President's Council on Fitness, Sport, and Nutrition produced a positive response.** The UltimateMe PALA+ Challenge encouraged participants to earn individual Presidential Active Lifestyle Awards (PALA+) by logging activity on UltimateMe. Each individual participant had the opportunity to be entered to win a weekly prize and each installation had the opportunity to become the Ultimate Healthy Base, with a chance to earn a celebration from UltimateMe and/or health resources for the community.

11. **UltimateMe was more popular with women and personnel with desk jobs.** The CRA showed that participation in Ultimate Me was higher among women and staff members whose jobs entailed regular access to computers.

C.2 Community Health Promotion Councils

1. **Gathering support to create and implement a CHPC can be challenging.** Such councils must involve the full spectrum of community members, including leadership, tenants, and any relevant stakeholders. One of the greatest initial hurdles for the Health Promotion staff — including the HPO and Health Promotion Research Assistant (HPRA) — is garnering support from all stakeholders on the installation. At Army sites, even though guidance exists under Army Regulation 600-63, and stakeholders are required to participate in the CHPC, bringing everyone to the table has proved challenging.
2. **The support of senior leadership is needed for success.** Installations have noted that the participation of senior leadership gives CHPC meetings higher priority and results in better attendance. Typically, senior leadership's participation is indicative of the overall level of support for health and wellness initiatives on an installation.
3. **Data collection is a challenge for many installations.** Some installations reported difficulty in accessing meaningful data to inform their strategic plans and initiatives. This may reflect a lack of data or it may reflect difficulties in the process for obtaining data.
4. **CHPCs serve as community forums for integrating and synchronizing health-promoting activities at the installation level.** CHPCs set public health priorities, champion the installation's health programs, identify program gaps and overlap, and measure program impact. In line with the standard model for CHPCs developed by USAPC, a CHPC would be chaired by the SC and facilitated by a dedicated HPO; together, they would work with council members — including key health stakeholders on the installation — to facilitate integration across medical, mission, and garrison operations. CHPCs serve to improve community health by reducing duplication and inefficient resource use across health programs, and by strengthening programs through reliance on data-driven decision making.

C.3 Community Resource Guides

1. **Identifying and updating information about community resources is difficult and time-consuming.** Many installations noted that establishing a process for reviewing available community programs, services, and resources is one of the most difficult aspects of developing a CRG. Moreover, once a process is established, regular maintenance is required to keep the CRG up to date.
2. **A shortage of funding and personnel affects installations' ability to provide CRGs.** CRG platforms vary from installation to installation and require different levels of effort to maintain. Less complex, web-available CRGs can be developed and maintained in a PDF format. These CRGs can be downloaded as needed, or distributed in hard copy form by the installation's welcome center or through other venues. More complex web-based CRGs exist, but they may require a full-time employee to maintain. On the other hand, more complex web-based CRGs have they important advantage of providing access to time-sensitive information at the end user's convenience. Information that is meaningful, easy to find, and up-to-date is critical for helping service members and their families navigate resources and services in the surrounding community. In addition, most service members, as well as National Guard and Reserve personnel, live off-installation or far from an installation. CRGs can also be helpful to these personnel if they provide information on distance, travel options, TRICARE® covered benefits or procedures, and military discounts.
3. **Best practice models for CRGs are web-based.** However, many installations report difficulties in funding a full-time employee to maintain the CRG. The result is that responsibility for the CRG is often shared across multiple employees or assigned to a staff member who has other competing obligations. CRGs serve as an online, "one-stop shop" that describes all of the community resources available at a given installation in a standardized format. Resources included are intended to support needs from initial entry into the Service, through basic training, transitions, employment, deployment, and military exit. By providing access to health

and wellness resources on a single site, CRGs support service members and their families through a holistic approach to health. CRGs aim to ease military families' transitions onto a new installation, reduce the time it takes to locate reputable resources, and empower them with the information they need to take control of their health and well-being.

4. **A lack of feedback on CRG quality or usefulness makes it difficult to evaluate the success of this initiative.** As many installations push out annual versions (digital or hardcopy) of their resource guides via email or website, there is little to no quantifiable evidence of their use or value to the community.
5. **One of the best models is San Diego's Integrated Health Community Portal (ICHP).** This portal is unique as it includes a comprehensive listing of all health and social services found at area military facilities and provides a listing of community services within San Diego county that are available for free or low-cost to MHS beneficiaries. Unlike typical CRGs developed solely by the installation, the IHCP is the product of a partnership between Naval Medical Center San Diego, Naval Hospital Camp Pendleton, and 2-1-1 San Diego (part of United Way). The IHCP is also routinely updated to ensure that it provides the most current information on available resources. The "Refresher Leader" role within the IHCP is a part-time staff position with responsibility for working with program champions to update information on a quarterly basis. Further, 2-1-1 has a trusted vetting process to capture low- to no-cost community resources, as well as providers that offer a military discount; all community resources provided by 2-1-1 are subject to the vetting process, ensuring that users are directed to quality resources only. Ultimately, the portal serves to improve overall population health and quality of life for members of the San Diego community, including Active Duty, Guard and Reserve members, family members, and retirees. However, maintaining a CRG like the San Diego IHCP is costly and resource prohibitive for some installations. As a result, no HBI pilot locations implemented an IHCP in this manner. However, several installations are actively exploring partnerships with their local United Way. For example, the HBI team connected leaders at Camp Dodge, including the HPO, with the local 2-1-1 network to explore options for collaborating around the installation's CRG. In coordination with 2-1-1, Camp Dodge is also developing a state map to enable geographically dispersed Guard members to access services across all 99 counties in Iowa. Both installation leadership and 2-1-1 quickly saw the value of partnering in these efforts and are committed to working together to help Guard members connect with services in their communities. As Guard members, unlike Active Duty, are not stationed on the installation on a daily basis and often live a significant distance from their training site, helping them access health resources in their local communities is especially important.
6. **Legal concerns can be a barrier to implementation but others have addressed this issue.** Some installations reported difficulty in receiving approval from their Office of General Counsel to include off-installation programs, services, or resources due to potential legal implications associated with DoD endorsements. 2-1-1 has a trusted vetting process to capture low- to no-cost community resources and it applies inclusion criteria and AIRS standards to identify the best resources for the database. The portal features an extremely detailed disclaimer (created by the Naval Medical Center San Diego legal team), which clearly states that DoD is in no way endorsing outside community resources.[xxxix]

C.4 Group Lifestyle Balance

1. **Group Lifestyle Balance demonstrates a concept that can serve as a "force multiplier" for an installation's medical home and other programs.** In fact, the program leads adapted the program to incorporate resources provided by the Health Promotions team and the commissary (commissary tours). The program also supports installation medical homes by providing support, guidance, and information to individual patients.

2. **Reliance on contract personnel added to time needed for program implementation.** The acquisition process was lengthy and after the contract was awarded, there was an additional three-month timeline for hiring personnel. This greatly affected the length of time the program was offered. Additionally, as a pilot program, a period of adjustment was needed to work out issues with respect to participation and recruitment.
3. **Sustainability is an issue for this program going forward.** Currently, there is no funding to continue this program. Further resources would be needed to support the installation's needs, including funding for additional training (such as for a Certified Diabetes Educator®), informational and other resources (e.g. nutrition care manuals, food samples, etc.), and marketing materials.

C.5 Holly-Graham

1. **The Holly-Graham program was not well received.** Most installation POCs found the Holly-Graham messages repetitive and the motion activation irritating. They also noted that few passersby stopped to interact with the avatar by choosing messages or scanning QR codes because they were in a hurry to finish a workout, or found the interface unusual or creepy. Most of these complaints, it is worth noting, came from POCs who sat fairly close to the device, rather than from individuals who might have interacted with it. By contrast, when Holly-Graham was first set up on different bases, it generated a lot of news stories and excitement. It's possible that the device can be re-used in other strategic communication efforts. For example, European Region Medical Command saw Holly-Graham at Fort Sill and has expressed interest in obtaining the device despite the negative feedback.
2. **Maintaining Holly-Graham was time-consuming – simply setting up and transporting the device typically required two hours and the aid of maintenance staff.** Finding locations for the device was also challenging as there were objections to placing it in a number of settings, including medical clinics and child development centers.
3. **The Holly-Graham avatar was too large.** The actual avatar was fairly large and bulky and thus was difficult to place in many locations. It also had to be near an electrical outlet and could not be outside. For some of the same reasons, it was difficult to quickly move the avatar for use at a special event.
4. **It was difficult to modify the avatar.** This made it difficult to modify Holly-Graham in response to initial feedback. Requests for changes — such as removing the motion activation, putting all messages on one memory card to avoid having to change cards, recording and sharing new messages, and adding the capability to track usage rates and review data in real time — were therefore difficult to accommodate.
5. **Once Holly-Graham was discredited, it was difficult to test the device with other audiences.** Most sites had one primary installation POC, who had to convince other venues on base to accept Holly-Graham. For example, children and teens may have found the device "cooler" and less "creepy" than adults, but once the device generated negative reviews from other locations, youth and teen centers did not want it.

C.6 Ambassadors for Health

1. **This initiative was not implemented with a high degree of fidelity at all sites; as a result, reaction to the initiative was mixed.** The assessments required to implement Ambassadors for Health take some effort to complete. They include questions that are written to reflect the best science, and that are intended to apply to a broad set of worksite structures, including worksite structures that are not specific to the military. Guidance on the full scope and intent of the program and on structuring a team to complete the assessment phase did not successfully reach the MTFs at all sites, and therefore the tool was not fully utilized at HBI pilot sites.

This contributed to some confusion and resistance, particularly from MTFs that did not engage with the full array of resources and coaching support provided through the program.

2. **Recognition is a motivator.** Naval Hospital Jacksonville — although not an HBI site — is participating in Ambassadors for Health and received an "A" grade in the WorkHealthy assessment for their tobacco-free campus and for the tobacco cessation benefits and services they offered to employees. Accordingly, this facility received Gold Star recognition from Prevention Partners. Staff at the hospital was recognized in a ceremony attended by the Assistant Secretary of Defense for Health Affairs. Resulting media coverage prompted three other MTFs to reach out for information about how to join the initiative.
3. **Leadership makes a difference.** Ambassadors for Health has been most effective at MTFs with champions who are eager to act, who are willing to make changes, and who have fewer competing priorities.
4. **Data driven, easy-to-understand reports can yield change.** The 374th Medical Group at Yokota Air Force Base used results from WorkHealthy America, the Ambassadors for Health assessment tool, to advocate for installing a gym in the MTF.
5. **Who collects the data can make a difference.** With two distinct populations working for the military (active duty and civilian), it is important to understand who is completing the assessments and on behalf of which population.
6. **MTFs need to assemble a team to complete the assessment.** A team is needed to comprehensively answer numerous questions on a variety of topics (e.g., physical activity, nutrition, tobacco, wellness, etc.) and from a variety of perspectives (e.g., benefits, policies, built environment). Typically, the leaders and personnel who should be involved include civilian and military human resource leaders, hospital/MTF commanding officers and executive officers, public health officers, wellness center leaders, MWR leaders, exchange leaders, nutrition directors, and installation leaders. Getting all of these individuals to participate proved challenging. The sites that chose to participate in coaching sessions about this team approach in the early stages of implementation were more successful with this initiative.
7. **Some improvements are beyond the control of local-level staff and require broader changes in policy.** MTFs that completed the assessments recognized that decision-making authority for some changes was appropriately located at the policy-setting, leadership level. These changes were therefore beyond the facility's control. For example, offering benefits for nutrition therapy is a policy matter that falls under the purview of TRICARE®, which provides health benefits for active duty personnel, or under Federal Employee Health Benefits in the case of civilian employees. If these benefits are not already provided, MTFs do not have authority to change the rules. Similarly, pricing for food served in MTFs is often determined centrally and must be coordinated from pre-selected vendors. These are issues that must be addressed at the system or policy-setting level. However, a local-level change like labeling or providing nutrition information could be undertaken by an individual MTF at its own initiative.
8. **The Ambassadors for Health assessment tool is not tailored to DoD MTFs.** Similarly, the grading does not reflect some DoD policies. For example, active duty personnel have different requirements than civilian employees and MTFs often did not know on behalf of which group to respond. In some instances, this lack of clarity skews scoring downward. In short, assessments used in the private sector need to be tailored to be effective in military environments. The pilot phase can be used to inform revisions that reflect the military employee environment.
9. **Implementing recommended changes required time and may require modest resources.** Once an MTF completed its assessments, considerable time and effort on the part of hospital leadership and staff were often needed to implement changes. It was important for MTFs to understand that the assessments were important not just for benchmarking and gap analysis, but also for making sustainable improvements. Thus, leadership communications needed to emphasize that Ambassadors for Health would not be a one-year effort — rather three to four years is the typical time required to implement all recommended changes and see a

change in the culture of health. Modest funding may be needed to implement a select number of recommendations — and in most cases this funding was not included in the budget for implementing this initiative. For example, posting signs to mark a tobacco-free campus requires some funding. While funds may be repurposed or included in future budget cycles, it is essential to allow time to plan and execute these changes for some of the recommendations.

C.7 Operation KidFit

1. **The program name confused parents who thought Operation KidFit (OKF) was targeted to kids.** Many parents focused on the "KidFit" portion of the program's name and were initially interested in participating because they thought the program was for their children. However, this intervention aims to educate parents and doesn't directly involve children.
2. **Lack of childcare or child programming during classes affected participation.** Childcare or concurrent child programming was not offered during the time of the parent course. Especially in military families where one parent might be deployed, it can be very difficult to leave a 4–11 year old without childcare. One parent attended with her child, who then passed the time playing on an electronic device. The child development center on base offered discounted childcare to participants, but some parents still perceived this issue as a barrier because they believed there were limits to how much they could use the child development centers.
3. **Parental perceptions about whether a child is obese/overweight affected participation.** OKF was only open to parents who have obese or overweight children. These parents often do not want to acknowledge that their child is obese or overweight due to stigma. Parents are also reluctant to join because they are afraid it will cause low self-esteem in their children.And children who are aware that their parents are participating could feel stigmatized because they would view the program as intended for families whose children are fat.
4. **Weight limitations turned some parents away.** Some parents expressed interest in the program, but were turned away because their child was in the healthy weight range.
5. **Difficulties were encountered in coordinating referrals from Primary Care Medical Home (PCMH) or schools.** Schools are often reluctant to measure BMI in children because parents complain when their child is deemed fat, obese, or overweight. Without BMI data, it was difficult for schools to provide referrals to the program. Outreach has occurred through the PCMH and some doctors have referred patients, but the link could be stronger. Though promotional materials were provided to PCMHs, they cannot replace a face-to-face discussion with a healthcare provider, which may be the most effective means of engagement. But, often physicians with busy schedules have trouble fitting such conversations into short appointment times. Another reason this link was not stronger could have been that accessing the PCMH proved difficult for some of the contractors implementing OKF, and they could not be sure that the materials provided were distributed effectively.
6. **Parents have limited time to dedicate to program participation.** The OKF course is time-consuming and parents tend to attend some, but not all of the classes.

C.8 5210 Healthy Military Children

The 5210 program was implemented in two iterations over the course of HBI. 5210 Healthy Military Children is an OSD-driven marketing campaign, while Let's Go 5210 is an Air Force-specific adaptation of the 5210 concept. The first two observations below are specific to 5210 Healthy Military Children; the remaining points are based on experience with implementing the Air Force's Let's Go 5210.

1. **Collecting data for 5210 Healthy Military Children was challenging.** This made it difficult in turn to determine how to measure impact. Collecting data on weight or BMI was considered inappropriate for this initiative.
2. **Finding funding for supplies to support 5210 Healthy Military Children was an issue.** The installation, Mountain Home, wished to sponsor a number of activities in support of the program (e.g., plant a vegetable garden, use pedometers to count steps, and print materials) but did not have funds for this purpose. The HBI team recommended using other resources, and the installation was able to do so for some needs.
3. **Let's Go 5210 faced challenges in terms of participation.** This initiative had good support from leadership but did not elicit strong interest in participation from the eligible population. Over time, adjustments were made to better reach the target population, such as promoting recruitment through various avenues, including the primary care clinic, new parent support groups, health fairs, child development center classes, and deployment support organizations. Recruitment efforts in the primary care setting included using referrals and doctor postcards and tagging into wellness visits as an extra service.
4. **Obesity stigma emerged as a barrier to participation in Let's Go 5210.** The HBI team heard that some parents had a hard time volunteering to participate in the program because they felt that doing so meant admitting that their child had a weight problem and, by extension, that they were bad parents.
5. **Data collection was a challenge in terms of evaluating post-intervention outcomes.** During initial program implementation, parents would attend a few classes but would not participate long enough to complete the post-assessment.
6. **Lack of childcare and free time was a barrier for some parents.** These barriers made it difficult for some parents to attend classes. When information was provided in a single one-on-one session instead of multiple classes, parents had no incentive to come back. This further complicated the task of gathering follow-up data.
7. **Contracting lags slowed program implementation.** Let's Go 5210 was executed by contract personnel. The acquisition process was lengthy and after the contract was awarded, hiring personnel took an additional three months. This greatly shortened the time the intervention was available. Additionally, as a pilot program, there was a period of adjustment to work out issues with respect to participation and recruitment. (Note that this issue also affected a number of other MC&FP initiatives, such as StairWELL to Health, Fitness on Request, and 24-Hour Fitness.)
8. **The sustainability of Let's Go 5210 was in doubt** due to a lack of sufficient funding for course supplies, marketing materials, and education materials. Additional funding for personnel to undergo the training required for a Certified Diabetes Educator would have also added to this initiative. Program managers were not provided an explicit plan for implementation for Let's Go 5210. As a result local program managers did not specifically allocate funding for Let's Go 5210 implementation and the majority of the funding went into the Group Lifestyle Balance program. Marketing materials (posters for various locations and flyers) were supplied to each installation through the Air Force's H2H Initiative. When needed, the program managers sought out support for supplies (giveaway items, additional education and marketing material) from local, state, and community organizations. Since the initial launch of Let's Go 5210 at various H2H pilot sites, best practices for implementation have been identified and shared among stakeholders and local program managers. Installation resources and needs vary and therefore implementation of a standard program across installations is difficult. However, use of a formalized program that captures comparable process and outcomes measures has been strongly encouraged by Air Force Health Promotion leadership. Participating installations are exploring the implementation of programs similar to those being used at Yokota Air Force Base.

School Initiatives Observations and Lessons

A. Overview

As part of HBI, the Healthy Schools Program (HSP) was offered to DoDEA and public schools at HBI pilot sites. (Among the fourteen HBI pilot sites, three sites — Yokota, Quantico, and Ft. Bragg — have DoDEA schools. The other sites have public schools on or near the military installation.) This comprehensive, evidence-based school health and wellness program was designed by the Alliance for a Healthier Generation. The Alliance, which has worked with more than 30,000 schools around the country, provided technical advisors to work with schools at HBI sites that were interested in implementing the program. Overall, twenty-two schools at six HBI pilot sites participated, including Fort Bragg (nine schools), Quantico (two schools), Fort Meade (seven schools), Fort Sill (two schools), Mountain Home (one school), and Twentynine Palms (one school). Yokota did not participate because of its overseas location, but Yokota experimented with other health and wellness interventions that are described later in this section. Of the twenty-two schools that implemented this program, twenty-one completed baseline assessments and twenty developed action plans for improving student health and safety.

Technical advisors from the Alliance were called HSP Managers. They provided in-person core workshops and ongoing virtual assistance to help participating schools create a culture in which healthy eating and physical activity are the norm, not the exception. Following a continual improvement process, participating schools completed a baseline assessment and a follow-up assessment to identify the strengths and weaknesses of their policies and programs. In addition, participating schools could access a customer support center, success stories, and evidence-based resources, as well as virtual and in-person trainings with school health experts.

In addition, HA promoted the evidence-based initiative "Recess Before Lunch" at DoDEA schools. This low-to no-cost intervention involves a simple change – scheduling recess before lunch as opposed to after lunch. It has been shown to generate a wide range of positive impacts, including:

- Increased student consumption of fruits and vegetables and significantly reduced food waste
- Fewer discipline referrals and injuries
- Improved cafeteria behavior
- Increased focus in afternoon classes

B. General Lessons Learned from HBI School Initiatives

As the HBI team tested different interventions, it became clear that the task of creating a healthy environment in schools is complex and multi-faceted. Important lessons learned from implementing HBI programs in both DoDEA and non-DoDEA schools are summarized here.

1. **Schools are faced with many issues, and gaining support for HBI took leadership and promotion.** Schools across the country are faced with many issues from managing budget cuts to implementing the Common Core standards. Adding a commitment to actively promote health and wellness is challenging and requires leadership at many levels, as well as effective marketing to communicate how healthy eating and active living influences academic achievement.
2. **Visible DoDEA leadership was key to promoting healthy schools' initiatives at DoDEA schools.** DoDEA support was critical to HBI's success, but it was also important that this support was apparent to installations with DoDEA schools. For future school-based health and wellness initiatives to be successful, DoDEA leadership will need to be visibly supportive at the level of OSD, the Services, DoDEA regional staff, and DoDEA schools.

3. **DoD needs to identify messengers to non-DoDEA schools.** Communication with non-DoDEA schools falls to school liaison officers (SLOs) who already have multiple responsibilities. A key question is how to better communicate initiatives like HSP or other evidence-based programs of this type to non-DoDEA schools.
4. **Installation leaders have many responsibilities and public schools are not always viewed as a major part of their job portfolio.** Although many children from military families attend public schools on or near military installations, there is not always a clear communications channel between schools, school districts, and installation leadership. Some installation leaders play a more direct role – for example, the MWR director at Fort Sill challenged all public schools near Fort Sill to achieve the bronze level of the Alliance's HSP. Other installation leaders have a packed portfolio and lack the time or know-how to influence surrounding schools.
5. **At an individual level, some public school officials were unaware of the number of federal and non-profit grants and programs available for promoting health and wellness in schools.** This gap likely reflects a communications/marketing issue.
6. **SLOs don't work for DoDEA or for public school districts, they work for the installation.** At most installations, HPOs or POCs rely on SLOs to inform them about school-related issues and developments. In addition, anything DoD wants to implement has to be run through the SLOs. These individuals thus serve a "lynchpin" communications function. However, SLOs work for the installation, not for DoDEA or for the local school district, and there is no direct communication with DoDEA. SLOs viewed HBI implementation as an ancillary or secondary obligation and, while they were generally willing to facilitate meetings, many did not see why HBI should be added to the many tasks already in their portfolio.

C. Observations and Lessons Learned from HBI Experience with Specific School Initiatives

C.1 Alliance for a Healthier Generation Healthy Schools Program

This section includes observations that are specific to HSP as well as other observations that are not specific to HSP, per se, but that relate to other issues. Many of these observations are based on the HSP assessment tool as applied to the schools that participated in HBI.

1. **Many public schools and DoDEA schools were unaware of HBI.** A breakdown in communications meant that most school personnel at HBI locations — including staff at both DoDEA and public schools — had never heard of HBI and why it was important until representatives from the Alliance for a Healthier Generation arrived on site. This resulted in some awkward moments.
2. **Some school districts found the HSP assessment too difficult and too time-consuming.** As a result, some school districts stopped working with the Alliance, while others expressed willingness to conduct the assessment but never completed it. Since participation in HSP, as with all HBI programs, was voluntary, there was no mechanism to compel schools to complete assessments.
3. **Many schools embraced HSP and welcomed the technical assistance the Alliance for a Healthier Generation provided.** At Fort Sill, the Geronimo Road Elementary School reached the bronze level in 2014 and was recognized at a national event with former President Clinton. Geronimo school worked hard and in the 2014-2015 school year achieved the silver designation and is working towards gold in the 2015-2016 school year. Fort Sill leaders have challenged seventeen school districts near Fort Sill to follow in Geronimo's footsteps. At Fort Meade, Meade Heights Elementary School and Pershing Hill Elementary achieved bronze level status.
4. **HSP is designed around a four-year implementation protocol, whereas HBI was launched as a one-year demonstration project.** Given this difference in implementation timeframes, schools like those at Fort Sill and Fort Meade that achieved or will achieve national-level recognition under the HSP within the HBI demonstration period had to significantly accelerate their efforts. They deserve to be commended for their achievements.

5. **Providing 60 minutes of physical activity per day, as recommended by the CDC, was a challenge for both HBI DoDEA and non-DoDEA schools.** *DoDEA guidelines* for physical activity mirror *CDC guidelines*, which state that, "Children and adolescents should have 60 minutes or more of physical activity daily that include aerobic, muscular strengthening, and bone strengthening activities."[48] The accepted standard from the National Association of Sports and Physical Education (NASPE) is 150 minutes of PE per week in school as part of the 60 minutes of daily physical activity recommended by the CDC. Despite this standard, many schools around the country are not meeting the CDC guidelines or the 150-minutes-per-week PE standard. This is in part because schools are under increased pressure to focus on testing and academics, which leaves less time and fewer resources for PE and other extra-curricular programs (such as art and music). Available data indicate that DoDEA elementary schools at HBI pilot sites are falling short of PE guidelines: only two out of eight participating DoDEA elementary schools report providing 150 minutes of PE weekly. All (three out of three) DoDEA middle and middle/high schools required students to take PE for the equivalent of more than one academic year but less than all academic years. Though nearly all (seven out of eight) participating DoDEA elementary schools reported 20 minutes of daily recess, only one DoDEA school at any level reported providing before and after school physical activity opportunities. Four additional schools offered before or after school opportunities, but not both. This still left six of eleven schools that provided neither before or after school activities; in addition, very few schools provided daily physical activity breaks during the school day.

6. **Some schools, however, have made considerable progress toward increasing physical activity during the day.** Among DoDEA schools, Fort Bragg schools are providing classroom physical activity breaks: for example, Bowley Elementary School has begun using *GoNoodle*[49] and Butner Elementary School has implemented *Brain Breaks*[50] in the classroom. In addition, Gordon Elementary School has a Healthy Base Club where students in grades 1-4 meet every Thursday for 60 minutes (30 minutes of nutrition education and 30 minutes of vigorous physical activity). Though not a DoDEA school, Geronimo Road Elementary School at Fort Sill has increased both PE and physical activity time, to the point where Geronimo Road is even exceeding state requirements. This school has also implemented Recess Before Lunch.

7. **HBI DoDEA schools wanted technical assistance to implement USDA's Smart Snacks guidelines.** Now that USDA has announced new guidelines for a la carte and vending items, DoDEA schools would like more help in implementing the guidelines. DoDEA headquarters sent a policy letter[xi] at the beginning of the 2014–2015 school year and developed some tools for DoDEA schools, but as with any change in guidelines, DoDEA, like other school districts around the country, will need help implementing Smart Snacks.

8. **Some DoDEA schools needed help implementing the federal Healthy Hunger-Free Kids Act guidelines.** DoDEA is compliant with the new standards and guidelines for federal reimbursement, but individual DoDEA schools, like other schools, would like more help with menu planning and are interested in ideas for presenting new food options.

9. **HBI DoDEA schools scored lower than state and national averages for community and family involvement in school health and wellness efforts.** Fewer than one-third of DoDEA schools included families in decision making; fewer than one-fourth received feedback from students/family members on foods served, sold, or offered on campus; and fewer than one-half allowed access to school facilities outside of school hours.

10. **Only half of the HBI DoDEA schools reported that they provide comprehensive health education with respect to physical activity and healthy eating.** In addition, none of the HBI DoDEA middle or high schools required health education. On a more positive note, however, it is worth noting that DoDEA schools exceed state and national averages in health education.

[48] According to the CDC guidelines, most of the 60 minutes should consist of aerobic, that is, "moderate to vigorous activity." Muscular-strengthening and bone-strengthening activities should each occur as part of the 60 minutes or more of daily exercise at least three days of the week. Further information is available at the CDC's Physical Activity Guidelines for Children and Adolescents website (http://www.cdc.gov/healthyyouth/physicalactivity/guidelines.htm) and at http://www.dodea.edu/wellness/physicalActivity.cfm.

[49] More details can be found at: https://www.gonoodle.com

[50] More details can be found at: http://www.energizingbrainbreaks.com

11. **Interest in HSP is likely to extend beyond the HBI demonstration phase.** For example, one regional DoDEA representative was so impressed with the program he said he would introduce it to other schools in his region. As already noted, the program is available to any interested school in the United States. Ft.Sill's Geronimo school is pursuing gold status.

C.2 Observations Specific to the Recess Before Lunch Program

Recess Before Lunch was implemented at two DoDEA schools – at the Yokota and Fort Bragg HBI pilot sites. (As noted previously, the DoDEA school at Yokota did not participate in HSP.) Experience with this policy yielded two observations that would likely be relevant to future Recess Before Lunch implementation efforts, and to other, similar initiatives.

1. **One person can make the difference.** After learning about the benefits of recess before lunch, the school nurse at Yokota West Elementary School worked with school administrators in 2011 to make this change in the school schedule.
2. **Many schools are likely to be receptive to implementing Recess before Lunch.** DoDEA elementary schools at Fort Bragg have committed to implementing Recess Before Lunch in grades 3–5 in the 2015-16 school year. This change will affect Bowley Elementary, Devers Elementary, Irwin Intermediate, Gordon Elementary, and Shughart Elementary. Principals will implement Recess Before Lunch to the maximum extent possible considering staffing needs and playground area available to students.

Tobacco Observations and Lessons

This section summarizes lessons learned from HBI initiatives that sought to reduce tobacco use in the military community. The section begins with some general observations about the challenges to addressing this issue in the DoD context. Later subsections present lessons learned for specific HBI anti-tobacco initiatives.

A. Overview and General Observations

Throughout HBI, the issue of tobacco and tobacco control policies proved contentious. Many discussions about potential strategies to reduce tobacco use were met with concern for the protection of service members' individual rights to use tobacco as they see fit. Further, many service members expressed that view that tobacco use has positive aspects: it can help people stay awake during long hours of work and as a social activity — smoking pits were cited as an example — smoking provides an opportunity to develop camaraderie. Other concerns shared by installation support staff centered on the potential loss of revenue associated with reduced sales of tobacco products and on the challenge of negotiating with unions.

The HBI team initially focused on arguments about the culture and dangers of tobacco use. To obtain the necessary support from OSD-level leadership, however, the conversation had to move beyond health to issues of avoided cost, productivity, readiness, and retention. Additionally, legislative inquiries regarding tobacco use and sales gave priority and urgency to this set of issues. Given current efforts to discourage tobacco use, or the lack thereof, any changes to the military's tobacco policies will require extensive coordination across DoD. In interviews with installation leads, a constant theme emerged. All installations requested more help from the 'enterprise level' — whether from the Services or OSD — to help create more tobacco free policies and enforcement strategies. Base commanders felt they could not take on these issues at the installation level. Responding to this feedback during HBI, DoD established the DACT with the aim of developing a

comprehensive, DoD-wide tobacco control plan that addresses tobacco use areas, tobacco cessation efforts, tobacco sales, and secondhand smoke. The plan is currently being reviewed by the Secretary of Defense for a final decision. As part of HBI, several initiatives to address tobacco use were tested at several pilot sites and described in Chapter 4.

B. Observations and Lessons Learned from HBI Experience with Tobacco Cessation Initiatives

This section summarizes HBI experience with specific anti-tobacco initiatives.

B.1 Parity Pricing

1. **Support from OSD-level leadership was necessary to implement this policy change.** While many participating HBI installations supported parity pricing in principle, the general perception was that this policy change could not be implemented at the installation level without OSD-level support. Existing policy dictates the pricing of goods at military exchanges and commissaries in ways that align with what is permissible by law. Given the scope and authority of HBI, it was difficult to change or seek exemptions to these policies without addressing tobacco on a larger, DoD-wide scale.

B.2 Increasing Tobacco-Free Areas

1. **Enforcement is an issue for restrictions on tobacco use on military installations.** While the Services already have policies that restrict tobacco use in many areas on military installations, enforcement of these policies varies by Service and by installation. There seems to be little accountability for enforcement, even though policies do identify individuals or offices responsible for enforcement. Adding a layer of accountability for maintaining and enforcing a partially tobacco-free installation (say, 75 percent tobacco-free) would give leadership some direction and tangible goal to achieve.
2. **Perceived union opposition was a major impediment to implementation.** Policy changes at a higher level are required to provide authority to make changes at individual installations. In particular, a more collaborative effort is needed among stakeholders (including AT&L, Installation Vendors, HA, Child and Youth Programs, etc.) to maintain and enforce tobacco-free areas. Such an effort is already in place at Yokota AB, where the Health Promotions team took the lead in conducting an inventory of all DTAs on the installation, and developing a map and comprehensive plan for reducing DTAs over time in partnership with the Civil Engineering Squadron. As previously mentioned, Yokota AB's DTA Map was studied as a promising practice and shared with other installations who did not have similar maps. The work at Yokota AB demonstrates that increasing tobacco free areas is challenging but entirely possible, and is dependent on the desire and perceived ability of the installation commander to enforce policy.

B.3 Tobacco Counter-Marketing

1. **Each of the Services preferred to create its own counter-marketing and anti-tobacco messages to make them more meaningful.** The initial idea was to create a DoD-wide counter-marketing campaign for use at the point of sale for tobacco products. Existing material was leveraged from HA and DHA and provided to installations for consideration and use. Although the messaging focused on a universal "Save to Spend" concept and was not tailored to any one Service, it was not utilized.
2. **To be effective, counter-marketing campaigns must resonate with service members and their family members and reach them through a variety of marketing channels.** For example, one of the most successful Service-specific campaigns was led by the MCX, which delivered tobacco cessation messages specifically designed to resonate with Marines at sixteen installations across

the country, including the HBI sites Quantico and Twentynine Palms. The campaign utilized a variety of marketing channels, including print, email, social media, point-of-purchase and in-aisle signage at the Exchange, and promotions. Ultimately, participating installations recorded a reduction of $133,638 in tobacco sales and 38,314 fewer units sold during the course of the campaign.

INGREDIENTS OF A SUCCESSFUL ANTI-TOBACCO MESSAGING CAMPAIGN

As noted in the main text, the Marines developed and implemented a particularly effective tobacco counter-marketing campaign that featured carefully crafted messages and used a variety of channels to deliver these messages. The campaign unrolled in phases:

- **Phase I** –"Facing the Truth"– educated Marines about the harm of tobacco products.
- **Phase II** – "Is it Worth it?" – underscored the monetary cost of tobacco use (e.g., demonstrated how money spent on tobacco over time could be used to buy a new motorcycle or even fund a bachelor's degree).
- **Phase III** –"We're Here to Help!"– highlighted tobacco cessation products offered by MCX and expressed empathy for the challenges of quitting.
- **Phase IV** – "Make the Commitment"– encouraged individuals to make some sort of commitment to quit tobacco, culminating in the Great American Smokeout.

As part of this program, Facebook users were asked to take a survey regarding what they struggle with when trying to quit any bad habit. To promote participation in the survey, respondents were entered to win one of ten $100 gift cards to the MCX. MCX leaders also developed a "Field Guide" detailing their approach in detail. The Guide is a valuable tool that leaders across the Services could leverage to develop similar campaigns.

B.4 Kicking Butts for Points

1. **Coordination with the NIH went well.** Although coordination with NIH required additional steps, there were no technical issues with the text messaging platform, data read-outs were received weekly, and communication with NIH was clear and transparent throughout.
2. **The ability to protect anonymity was valued.** User information is anonymous in the texting platform.
3. **Mobile use was possible without a mobile app.** The Kicking Butts for Points competition successfully reached people in "life space" through mobile phones without development of a mobile app.
4. **Marketing at housing units was effective.** Marketing through housing units was effective at Fort Sill; this strategy should be continued.
5. **Non-smokers participated.** Roughly two-thirds (64 percent) of participants did not use tobacco.
6. **There was interest in competing with other installations.** Several installations requested access to an installation leader board that would enable them to track their results in real time and compare to results at other installations, thereby promoting a spirit of competition.
7. **Some installations desired increased flexibility.** Specifically, installations expressed a preference for increased flexibility with respect to the timing of the program, for example so they could coordinate with various expos and with programming for World No Tobacco Day.

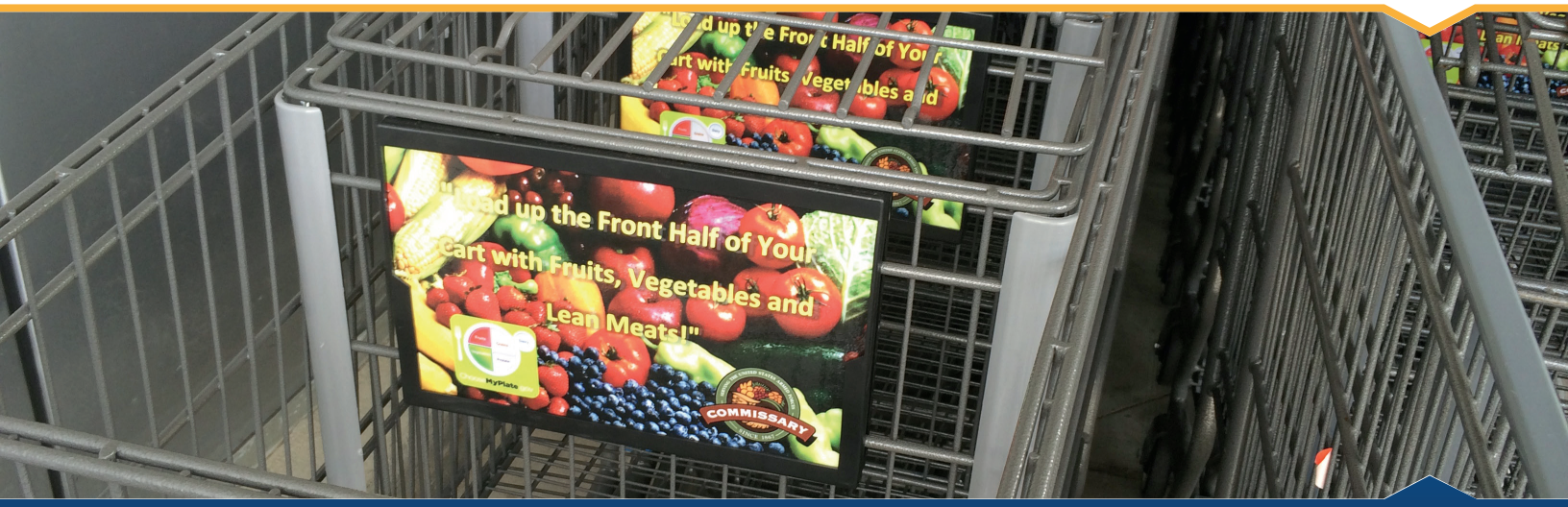
8. **Customization was limited.** All sites used the same time-based message library. This made customization limited.
9. **The team requirement was limiting.** Requiring participants to form teams of four was limiting – only 32 out of 115 enrollees participated as part of a full team.
10. **Efforts to collect information needed to go through an Institutional Review Board (IRB) approval process.** Installations had to determine their data needs in advance and obtain IRB approval to collect any information about participant smoking habits.
11. **Marketing was challenging without leadership messengers.** Marketing responsibility for the program primarily fell to tobacco cessation counselors and there was limited use of unit leaders to spread information through word-of-mouth. Better strategies are needed to engage leadership and utilize word-of-mouth marketing.
12. **Concern about "spam" texts inhibited participation.** Some potential participants were reluctant to sign up because they thought they would receive spam texts.

B.5 Fight the Enemy

1. **Low effort was needed to implement this program.** Most installation POCs found Fight the Enemy to be a fairly low-effort initiative that generated decent media for those bases that participated. The primary effort for bases involved marketing the program through various channels—school liaison officers, teen and youth centers, and spouses' clubs were the most popular avenues. Bases also had to develop their own installation-level prize, which usually was provided by MWR. Although eight sites marketed the contest, HBI received submissions from only four sites (Fort Sill, Yokota, New London, Quantico) and only eight videos overall (five from Fort Sill and one each from Yokota, New London, and Quantico). Those who participated in the program enjoyed it, but the reach could have been better.
2. **Fight the Enemy provided an opportunity to collaborate "outside the gates."** Schools outside the installation participated, as did applicants from military and non-military families, so it was a good chance to spread awareness about HBI to the broader community. This contest also gave DoD the opportunity to collaborate with nonprofits like Campaign for Tobacco Free Kids, which provided initial guidance on running an anti-tobacco video contest. The local Students Working Against Tobacco (SWAT) group in Ft. Sill participated. And as a result of collaborating with a sister federal agency, HHS, anti-tobacco public service announcements (PSAs) produced by the U.S. FDA are running at base theaters.
3. **Visible involvement of DoD senior leadership proved meaningful.** An esteemed leadership panel voted on the final winning videos. It was a good chance to involve partners from other agencies and leaders within DoD. The leadership panel included, among others, the Assistant Secretary of Defense for Health Affairs, Dr. Woodson; the Director of the Defense Health Agency, Lt Gen Doug Robb; and the then-Acting U.S. Surgeon General, RADM Boris Lushniak.
4. **The program was recognized on the Armed Forces Network and on local news.** Fight the Enemy generated good media attention, which served as a multiplier for the program's anti-tobacco message.[51] The HBI team was also able to re-shoot the top *two videos* from Fort Sill, so they could be aired on the Armed Forces Network.[52]

[51] Examples of media coverage of this initiative can be found at: http://health.mil/News/Articles/2014/11/26/Teens-from-Oklahoma-Connecticute-Win-Fight-the-Enemy-Video-Contest; http://www.kswo.com/story/27840839/lawton-students-tie-for-first-in-fight-the-enemy-video-contest; http://foxct.com/2014/12/04/teens-from-groton-tie-for-first-place-in-national-anti-smoking-video-contest/; and http://m.quanticosentryonline.com/mobile/news/article_230cc856-ae0e-11e4-a276-fba7e19712c4.html

[52] All videos are stored on the Operation Livewell YouTube page: www.youtube.com/operationlivewell.



Chapter 12. General Recommendations

As with any demonstration project, HBI yielded a number of lessons for all of the stakeholders involved in its development and implementation. These lessons can be useful to DoD at the enterprise level and at the installation level. DoD's experience with HBI may also be instructive for other organizations interested in promoting healthy eating, increased physical activity, and tobacco-free living.

This chapter offers recommendations that pertain not only to individual HBI initiatives, but also to broader systemic issues like procurement and the physical environment at installations. Many of these recommendations can be translated into next steps for DoD and also for other federal agencies, foundations, non-profit groups, and individuals. Most immediately, DoD will incorporate lessons learned and recommendations from HBI in its implementation strategy for OLW.

1. **Develop the strong leadership needed at every level to make a difference.** Recognizing that strong leadership at all levels was integral to success, the HBI team recruited proactive commanders to help propel the demonstration project forward. For OLW and any HBI-like effort to succeed in the future, leaders must be identified and recruited at every level of decision-making and at every installation, including unit commanders, MWR directors, Youth and Children program directors, DoDEA school principals, child development center directors, public affairs officers, and HPOs, among others. Changing the status quo is difficult and will take time, and requires commitment from leadership at all levels if it is to succeed. A key question for DoD and other organization is how to exert leadership and encourage all significant stakeholders to work together toward the common goal of establishing healthy living as the norm and not the exception to the rule.
2. **Listen to the consumer and think like the consumer.** The HBI CRA revealed very interesting information about how DoD service members and personnel feel about healthy eating, active living, and tobacco use. This information points to the need for better integration and coordination of services and programs in ways that are responsive to the needs and preferences of service members and their families. At present, most programs and initiatives are siloed according to their funding sources, which makes it difficult to provide "one-stop" convenience to users of those programs. Creative use of technologies already in the civilian marketplace could help DoD design programs that put the customer at the center and ensure that the customer receives only the information that is relevant to them. At the same time it will be important to tailor programs to the needs of different customers. In the military, for example, some service members and employees are single, some are married, some have kids, some don't, some

are just starting to serve, and others are close to retirement. All these customer differences can help DoD curate programs and tools to more effectively help service members and their families get on a path to wellness.

3. **Increase the Dose of Interventions.** Further iterations of HBI-like initiatives will be more successful if the dose delivered of the interventions is increased. Limited-dose interventions delivered at large locations, like installations, will produce limited results if they are implemented at only one venue. Interventions need to be broad-based to have an impact. For example, if there is menu labeling, the labeling should be implemented at every food venue.

4. **Share experience and programming with all installations.** HBI was implemented at only fourteen locations. At the time, other installations asked if they could implement some of the programming HBI was offering and other institutions, like DeCA, were interested in implementing initiatives like Cooking Matters at all their commissaries. DoD is sharing HBI programming, lessons, and recommendations with additional installations and agencies through the *Commander's Toolkit*,[53] which can be found on the secure, non-public *COI.*[54] The toolkit helps installations identify and implement initiatives by describing program options and outlining specific implementation steps. Other options include working with installations or the Services who want to sustain programs. Since there is interest in continuing certain HBI programs at some installations, the Services should program appropriately to obtain the necessary resources to further this effort.

5. **Convene a meeting on key topics to address challenges uncovered during HBI.** The HBI team identified several areas of opportunity for supporting healthy lifestyles. Many of these opportunities require a comprehensive, holistic approach. For example, if installations want to offer healthier menu items, they also have to address procurement, preparation, dietary standards, training, presentation, and recipes. These issues are complex and warrant further exploration. A potential next step would be to convene key stakeholders and decision makers for a discussion of questions and recommendations. Potential examples are listed below; they are geared to DoD but could also be adapted to the civilian sector.

    a. **Military Food Summit** – Bring together all departments and agencies responsible for NAF and APF food for the military community as a whole to discuss policies and procedures that could be improved to encourage healthy eating.

    b. **Building a Healthier Installation** – Bring together all the parties involved in making planning and construction decisions at the installation level.

    c. **Combatting Obesity in Schools, Youth Centers, and Child Development Centers** – The civilian sector has been addressing the issue of obesity through a range of efforts and organizations like Let's Move!, the Partnership for a Healthier America, the Robert Wood Johnson Foundation, and more. The Office of Family Readiness Policy (OSD MC&FP) should continue to foster relationships with these civilian organizations to explore how they can join forces more effectively to address child obesity in the military community through policies, programs, implementation, and measurement.

6. **Break down institutional silos within DoD and create cross-departmental working groups. At the same time, apply consistent best practices across the Services.** In the civilian world, efforts by government agencies and large foundations to promote healthy living are often fragmented and uncoordinated, even though holistic approaches would generally be more effective. Because the same holds true for the U.S. military, DoD should consider how to break down current department barriers and acknowledge that responsibility for health and wellness rests not only with HA, but with every department that touches the lives of people in the military community. A first step might be to identify and categorize all programs and contracts in each Service and look for redundancies[xli] that could be leveraged to save money. Although the HBI demonstration project has ended, DoD still has numerous programs, initiatives, and policies in place that target health and wellness and that could be categorized under

[53] More details can be found at: (http://www.militaryonesource.mil/health-and-wellness/healthy-base-initiative
[54] CAC users can find more details at: https://www.milsuite.mil/book/groups/hbi

TFF and OLW. But current funding practices, which tend to promote a siloed approach to program implementation, together with other institutional factors, can result in unnecessary redundancy and substantial missed opportunities to leverage resources more efficiently. To begin identifying these opportunities, DoD should conduct a thorough survey of existing programs and initiatives, while also exploring existing contracts and activities that could be deployed to the other Service branches. For example, during HBI implementation, it emerged that two Service branches were pursuing a similar effort in health technology, and in each case dedicating substantial resources to these efforts. A preferable option would be for Service branches to undertake more joint efforts and then brand the results separately, as appropriate. In addition, DoD should be using best practices at every level of the enterprise. This means that all APF and NAF establishments should follow best practices for restaurants with respect to food preparation, procurement, recipes, technology, etc. Similarly, DoDEA schools should follow best practices for healthy schools and child development centers.

7. **Create a clear governance structure and include all relevant departments.** A clear governance structure encompassing all the relevant departments and agencies that influence an individual's health and performance is critical for the success of an effort like OLW. More specifically, representation is needed from (at a minimum) Acquisition, Technology and Logistics (AT&L), Personnel & Readiness (P&R), including MC&FP, DoDEA, DeCA, DLA, the Exchanges, the Joint Chiefs of Staff, each Service (e.g., Army, Navy, Air Force, etc.), NAF and APF food managers at the Service level, and HA. This governance structure should provide the requisite authority to (a) hold departments/offices accountable, (b) direct funding to where it is needed, (c) encourage and reward cross-collaboration, and (d) create and implement enterprise-wide solutions.

8. **Audit existing policies and look for opportunities to implement improvements.** DoD should review all policies that affect food, the built environment, physical activity, and tobacco with two objectives in mind:

   a. To assess whether existing policies need to be updated, adapted, or changed to promote a healthy military community.

   b. To benefit from experience with other, similar efforts. At the same time, DoD should work with other agencies to review broader federal policies that could improve the health, wellness, and performance of the military community, and should issue the necessary Issuances to reflect those policies.

9. **Work more closely with sister federal agencies.** DoD should work more closely with other federal agencies, many of which are also tackling obesity and tobacco use. Specific sub-recommendations for achieving closer interagency coordination follow:

   - **Connect installations with regional agency reps:** Almost every federal agency has regional representatives, many of whom would welcome the opportunity to work with the military. DoD should communicate with the national offices of each relevant agency to ask how best to connect installations with their regional representatives. Agencies to consider include USDA for nutrition and food procurement efforts; HHS/CDC for health initiatives; the Department of Transportation and the Environmental Protection Agency (EPA) for the built environment, the General Services Agency (GSA) for procurement and office space, and OPM for personnel incentives and rewards.
   - **Continue to use the U.S. *Surgeon General's National Prevention Council*[55] to request greater collaboration:** At present, seventeen federal agencies, departments, and offices meet with the U.S. Surgeon General on a regular basis to update each other on the implementation of the *National Prevention Strategy*.[56] DoD already participates, through HA, and gives updates. The Council presents an opportunity to ask for help from other participating of the agencies.
   - **Choose locations for future initiatives in locations where other agencies are deploying resources:** Many federal agencies are deploying programs to improve the health of civilian communities through messaging and marketing

[55] More details can be found at: http://www.surgeongeneral.gov/priorities/prevention/about/
[56] More details can be found at: http://www.surgeongeneral.gov/initiatives/prevention/strategy/

campaigns, changes to the built environment, improved transportation, and repurposing contaminated sites slated for clean-up, otherwise known as *Superfund sites*,[57] to host farmers markets and parks and riverways, etc. When DoD decides to embark on any effort, it should consider what other agencies are already doing in certain communities and build on those efforts at nearby installations.

- **Offer to help other federal agencies in their efforts:** DoD should consider how OLW and other programs can support other federal agencies in their efforts, thus creating a relationship of mutual benefit.

10. **Partner with non-military organizations interested in the same issues as a way to leverage national- and community-level resources and expertise.** HBI created some robust relationships with non-profits and academic institutions by using existing programs and measurement tools in the civilian sector and adapting them to the military environment. Examples include Share Our Strength's Cooking Matters, the Alliance for a Healthier Generation's HSP, Johns Hopkins' Program Fidelity Tool, Cornell Brand Lab's Smarter Food Movement, the Culinary Institute of America's healthy food training, and Prevention Partners' WorkHealthy America. DoD needs to create more partnerships as it moves forward to better leverage existing expertise and outside resources.

    - **Identify relevant non-profit, commercial, and academic programs before embarking on its own programs:** DoD and the Services tend to build their own programs, often implicitly assuming that outside organizations would not understand the military or would not have programs that meet the military's needs. However, most challenges the DoD and its service members face are also present in the civilian sector. Instead of re-inventing the wheel, DoD should look to outside partners for relevant experience and expertise.
    - **Find ways for outside world to know how to work with military installations and DoD:** Many community-based and other organizations are eager to work with DoD and with individual installations. DoD should develop and share criteria for working with partners. In addition, DoD should designate people at the enterprise and installation level whose job requires them to identify, recruit, and communicate with outside partners.
    - **Replicate the Fort Meade Alliance:** The Fort Meade Alliance has been very helpful to the HBI effort. It offers a good model for how a non-profit can work closely with an individual installation. DoD should explore ways to replicate the Alliance at key installations around the country.
    - **Work more closely with community leaders and local elected officials:** Since 70 percent of the service members and their families typically live off base, installation leaders should expand their engagement with representatives of the local community, such as mayors, county executives, school boards, etc., as well as with local government agencies. A first step might be to conduct environmental scans around installations to identify locally and regionally available assets and explore how these assets could be leveraged to promote health and wellness within the military community. DoD's efforts can also be matched with other healthy community initiatives being undertaken or sponsored by the CDC, HHS, USDA, EPA, the Robert Wood Johnson Foundation, the California Endowment, the Kellogg Foundation, the Prevention Institute and the Convergence Partnership, and individual chambers of commerce, mayors and county executives, and other local governments and community organizations. At an enterprise level, DoD should also engage with national organizations that represent elected officials, such as the *National Governor's Association,*[58] the *National League of Cities,*[59] *NACCHO,*[60] the

[57] More details can be found at: http://www2.epa.gov/superfund/superfund-site-reuseredevelopment and http://www2.epa.gov/superfund-redevelopment-initiative/sustainable-redevelopment
[58] More details can be found at: http://www.nga.org/cms/home.html
[59] More details can be found at: http://www.nlc.org/
[60] More details can be found at: http://www.naccho.org/

U.S. Conference of Mayors,[61] the National Association of Counties,[62] and the National Conference of State Legislators.[63]

11. **Use rigorous assessment and measurement to improve future efforts.** This means ensuring that all programs and initiatives are measured consistently. Standard reporting mechanisms should be developed and measurements should be tied to future funding. Many businesses, federal and state agencies, and foundations are working to measure the return on their investments in health and wellness programs and to better understand the connection between health and performance and productivity. In contrast to common practice in the non-profit and commercial sectors, however, military installations and agencies are often given funding without a strong measurement or reporting requirement. As DoD undertakes future health and wellness initiatives and policy changes, it will be important to pay attention to how these efforts can be measured. DoD should determine whether the HBI measurement model is one that can be used for future program assessments and take other, specific steps to improve its measurement and assessment capabilities with respect to future health and wellness initiatives:

    a. **Require the use of measurement tools like *m-NEAT,*[64] m-PAC, and CACHE at all installations and agencies,** so that they are all in a position to establish a health baseline.

    b. **Require reporting and measurement for all DoD-funded health and wellness initiatives:** This will help ensure that funding is being used effectively. In addition, each participating Service and installation should be required to report on how funding was used and how programs/efforts were measured. In addition, the metrics for each program should be provided back to DoD and made available to all. Additional funding would only be provided if the metrics show an effective program that is achieving OLW goals.

    c. **Create standard forms of measurement:** For example, the PFT and other measurement tools created during HBI should be used as standard ways to measure all programs and initiatives.

    d. **Teach measurement at key points in military life cycle:** Not everyone understands measurement, and there is often disagreement between outputs and outcomes. A class on "Charting the Course to a Healthier Force," which is currently Army-focused, could be adapted to teach service members how to collect data and evaluate programs with measurement mechanisms.

12. **Explore more evidence-based research on healthy lifestyles.** HBI and other ongoing DoD initiatives (e.g. the Army Performance Triad and the Joint Chiefs of Staff TFF program) have focused on healthy eating, active living, and tobacco-free living as three areas of particular opportunity for improving force retention and readiness. Meanwhile, new research is showing that other areas like sleep and stress also affect health, productivity, and performance. Going forward, DoD needs to stay abreast of current research and incorporate new findings to develop evidence-based programming that addresses all aspects of healthy living.

13. **Include the entire military community in future efforts.** HBI focused on service members and the families, but the military community is much broader and includes civilian employees as well as retirees. Many businesses are finding out that health and wellness programs are most effective when they target the entire family. Future DoD efforts should therefore include all members of the military community and families, as well as individuals.

14. **Create incentives or prizes/recognition programs.** Rewards help motivate action. A number of existing federal restrictions make it harder to implement rewards, but DoD should consider developing a policy that allows for incentives and recognition without running afoul of government restrictions. Additional ideas that should be considered under this heading include the following:

    a. **Create incentives for implementation.** Tying implementation success to staff evaluations or adding health of forces under command to the evaluation criteria for leadership promotion would also serve to create incentives.

[61] More details can be found at: http://www.usmayors.org/
[62] More details can be found at: http://www.naco.org/Pages/default.aspx
[63] More details can be found at: http://www.ncsl.org/
[64] More details can be found at: http://www.med.navy.mil/sites/nmcphc/Documents/health-promotion-wellness/healthy-eating/DoD-mNEAT-Fact-Sheet.pdf

b. **Create a recognition program for successful installations.** Much like the gold, silver, and bronze levels recognized under the *Healthy U.S. Schools Challenge,*[65] DoD should consider developing a recognition program for installations. Such a program could be based on the *Let's Move Cities, Town and Counties*[66] initiative, which requires each participating location to meet certain criteria, such as improved food offerings, bike lanes and sidewalks, schools in the *Healthy Schools Program*,[67] child development centers active in *Let's Move Childcare*,[68] etc.

c. **Create rewards/incentives for service members, spouses, and children who become wellness champions.** At present, there is no incentive to be an HBI champion – you get paid the same regardless. DoD should create some reward, recognition, or incentive for initiative champions.

d. **Add modeling healthy behavior to job description/evaluation of all DoD service members.**

15. **Develop a strong implementation plan that is resilient to personnel changes.** Implementation is difficult when there are changes in key staff. Ensuring that a strong plan is in place that can be executed despite personnel is key. In addition, it would be helpful to create some type of CHPC at the installation level. As with the governance structure at the enterprise level, buy-in by all key stakeholders is also important at the installation level. For this reason, representatives from all relevant departments, offices, and agencies must be included in the installation-level implementation plan. A CHPC, which some installations already have, can function as this inter-departmental integrator. Besides encouraging cross-collaboration, the CHPC can also be charged with developing a dashboard to monitor the health of the target population and formulating additional strategies to achieve health and wellness goals.

16. **Communicate benefits of participation to commanders, service members, and military families.** In presenting OLW, OSD needs to clearly communicate how participation in OLW benefits service members, commanders, and families and links directly to core DoD missions with respect to retention, readiness, and resilience. Conversely, OLW needs to track participation and outcomes and show that these programs are achieving results that are relevant to DoD's core mission.

17. **Integrate the Healthy Living System into DoD's overall strategic plan.** Use lessons from Altitude, Inc.'s research to develop a comprehensive strategic plan aimed at creating a "base of the future" and a "virtual military community" that provides education, a social network, curated programs, rewards and incentives, measurement and evaluation, and enthusiasm at all levels of leadership to effect change in the military environment/systems and in individual behavior.

18. **Educate leaders at every level about the need for individual behavior change and system change, and about the options and resources available to them for promoting change.** Leaders want solutions. They and their subordinates need to understand the importance of combatting obesity and tobacco use. As importantly, leaders at every level need to be aware of what programs and resources exist to promote healthy behavior changes and to create a military environment that supports healthy lifestyles. The natural stages of the military lifecycle (recruitment, basic training, advanced training, first duty station, career, retirement) afford multiple opportunities to train personnel and service members about the need for a healthy military and also the need for individual change and system change.

19. **Create internal communication mechanisms at each location.** Many installation websites offer an abundance of information and are often cluttered. Programs and venues are using the websites to drive participation. As part of the transfer/enrollment process at an installation, some system should be in place that allows the installation lead to gather email addresses and phone

[65] More details can be found at: http://www.fns.usda.gov/hussc/healthierus-school-challenge-criteria-application-criteria
[66] More details can be found at: http://www.healthycommunitieshealthyfuture.org/about-us/lets-move-cities-towns-and-counties/
[67] More details can be found at: https://www.healthiergeneration.org/take_action/schools/
[68] More details can be found at: https://healthykidshealthyfuture.org

numbers for every service member and their spouse (if applicable), so information can be actively transmitted in a regular way. An intake form that stated preferences would be even more useful, because it could be used to request information in certain areas according to individual preferences and needs. For example, a service member without children does not want to know about after school programs or youth sports. (Note that one possible forum for gathering this information could be through Permanent Change of Station [PCS] orders that personnel coordinate with installation transportation offices when they move.)

20. **Use technology to create a virtual military community.** Given trends in the civilian population, growing numbers of individuals in the military are interested in topics like food and where it originates, sustainability, alternatives to driving, and socially responsible uses of technology. DoD should adjust its outreach strategy as well as its programs to respond to this groundswell of interest, and make use of technology to connect to these individuals. As in the civilian sector, technology and social media can create communities of interest; moreover, technologies tailored to the military could create even more focused communities. Facebook, Twitter, and Instagram are useful tools, but DoD should also consider using technologies that are better suited to fostering social interaction and information-sharing in a more closed community.

21. **Develop and deploy strong strategic messages/messengers/marketing plans.** DoD needs to put effort into creating and delivering strategic messages and identifying messengers. Several additional recommendations underscore the importance of effective messaging:

    a. **Integrate OLW goals in overall strategic planning process and the National Security Strategy:** DoD leadership should clearly convey the message that OLW objectives are part of DoD's strategic priorities for the next several years — not just a temporary commitment. Consistent with this commitment, OLW objectives should be included in the National Security Strategy. In addition, DoD leadership should emphasize, that each Service/agency has a role to play, outline how it can play that role, and communicate the benefits of participation, not just in terms of health and health care costs, but also in relation to each Service/agency's specific objectives/performance goals.

    b. **Market OLW to all levels of DoD leadership, as well as to service members and their families:** An all-out effort to market and communicate OLW to OSD leaders, service leaders, installation commanders, agency heads, and service members and their families is needed. This marketing effort should persuasively make the connection between individual and system health and DoD's mission, recruitment, retention, readiness and resiliency.

    c. **Share OLW success stories:** DoD needs to show that these initiatives are working. This means sharing information about successful nutrition, physical activity, built environment, tobacco cessation, and health affairs programs, as well as stories about individuals who benefited from OLW.

    d. **Communicate the message that OLW is intended to operate as an umbrella and complement to existing Service efforts:** OLW is a 20-year project focused on physical activity, nutrition, sleep, mental health, tobacco cessation, and integrative wellness and HBI was a demonstration project of OLW. Many Service-level and installation-level initiatives could be branded as part of OLW if they meet certain standards, including standards for evaluation and measurement. OLW can be viewed as vehicle for branding and amplifying other initiatives that may already be underway.

Chapter 13. Recommendations by Wedge

As a demonstration project, HBI was intended to inform future efforts to implement OLW. This chapter provides more specific, programmatic recommendations by HBI "wedge" area. The recommendations are intended for all DoD offices and other organizations involved in OLW implementation, including MC&FP, DoDEA, DeCA, and AT&L, as well as the Services, and the individual installations. They are based on the lessons learned described in Chapter 11, as well as data from the PFT and the CRA.

General Recommendations in the Area of Healthy Eating

Based on observations and lessons learned from HBI initiatives related to healthy eating, DoD should consider taking the following actions:

- **Hold food system summits/meetings.** Such meetings would provide an opportunity to approach key leaders at relevant departments to discuss lessons, observations, and recommendations from the HBI demonstration project and explore how recommendations can be implemented. In particular, DoD should consider holding a "Healthy Eating Summit" for food suppliers and prime vendors to ensure that all vendors understand DoD's healthy eating goals. DoD could also use this opportunity to ask for vendors' support in meeting key goals like reducing obesity, improving performance, and adding more recommended foods in the U.S. Dietary Guidelines, such as fruits, vegetables, and whole grains. Participants in such a summit would include U.S. Foods/Sysco, all the prime vendors, and major concessioners (Sodexo), etc., as well as representatives from both OSD and the Services. DoD should also ensure that prime vendors are aware of and have copies of DoD nutritional standards. Finally, DoD should identify healthy products that are lacking from prime vendor catalogues, determine if the prime vendor can supply the item, and seek prime vendor support in adding to existing catalogues.
- **Convene a working group of key stakeholders to look for opportunities to promote healthy eating through programs that target military spouses, children, and families.** The working group should include, at a minimum, MC&FP, MC&FP's Office of Family Readiness, each Service's Office of Children and Youth, HA, DoD dietitian representatives, Service support center representatives, and other key stakeholders.
- **Work with the Joint Subsistence Policy Board (JSPB), which provides — under the direction of OSD (AT&L) — overall guidance for DoD APF food service programs.** While AT&L establishes DoD policy for APF dining facilities, JSPB develops revisions to food policies and practices and develops uniform DoD menu standards, among other roles. MC&FP should consider coordinating

with AT&L to participate in JSPB meetings as a way to share the lessons and recommendations from HBI and resolve issues uncovered during HBI to foster more healthy eating.

- **Explore centralizing oversight over food service operations.** Although AT&L has policy oversight and the Services have operational oversight over food service operations, DoD should explore whether one office within DoD should be given responsibility for these operations to ensure consistency between APF and NAF funded venues and to use DoD's buying power more effectively.
- **Leverage DoD's buying power.** Specifically, DoD should look for one or two major, high-impact opportunities to leverage its considerable purchasing power. For example, DoD could look to improve food procurement by assessing existing policies and by developing new procurement protocols aimed at improving food quality and nutritional content. This should include efforts to evaluate other systems of food procurement and to approach all decision makers in the food procurement process, from DLA to the Joint Centers for Culinary Excellence and from the individual Services to installation-specific DFAC and MWR locations.
- **Improve the APF and NAF model for food procedurement and delivery.** Opportunities to improve efficiency and collaboration in the procurement, preparation, and sales of food at NAF and APF locations must be identified and pursued. Successful elements of the Air Force's Food Transformation project and the Marine Corps contract with Sodexo might provide useful information for this effort. DoD should also research the college/university food service model, with its mix of retail and dining hall outlets run by the same central management, as a possible adaptation for the military environment. This would encourage DFACs to operate more like businesses that focus on taste and consumer demand. Service members could "pay" with meal cards (the facility would be reimbursed by the government for each "swipe" of the card); non-service members would pay cash. This would allow for centralized purchasing/procurement — centralized management of all DFACs (including exchange snack bars, etc.) — and make it possible for everyone to use installation DFACs (not just service members).
- **Drive shift toward healthier brands when bringing on new franchises, products, etc.** DoD must develop a policy that encourages or incentivizes franchise relationships with brands that have a certain percentage of healthier offerings – e.g., 25 percent/50 percent/75 percent in their current menu.
- **Review APF and NAF contracts and policy standards with the aim of increasing access to healthy, affordable food.** Specifically, DoD should consider reviewing existing food supply, vending, and fast food processes and contracts to ensure that appropriate menu (and nutrition) standards are in place and enforced.
- **Conduct a department-wide assessment of all vending operations to ascertain if nutrition standards are being used, what nutrition standards are being used, and how the vending operators are monitored for compliance.** Based on the assessment, the Department, in collaboration with the Military Departments, the Department of Education, and the state licensing agencies who oversee the Randolph-Sheppard Act blind vending contracts should work to meet the U.S. Surgeon General's challenge to integrate healthy food service guidelines into appropriate policy(ies), such as the HHS/GSA Health and Sustainability Guidelines for Federal Contracts and Vending Operations by January 1, 2017.
- **Support smaller food outlets' ability to buy and serve healthier items.** DoD should consider conducting a survey of installations to identify healthy products that are not being supplied by prime vendors. In addition, contracts should be reviewed to ensure they support efforts to purchase healthier items in smaller quantities. DoD could then work with prime vendors to make those products available for purchase.
- **Review and update DLA catalogue with key purchasers to purchase healthier, locally sourced products.** Specifically, DoD could work with food specialists and vendors like Sodexo and Aramark to update the DLA catalogue to ensure that its offerings are

consistent with DoD policy and to promote healthier products. The Joint Subsistence Policy Board should work with DLA to identify product specifications and update all catalogues.

- **Increase the accessibility and availability of healthy foods at dining halls.** To ensure that menu items are healthy, the Services, DLA and others on the Joint Subsistence Policy Board should work together to agree upon and establish healthy menu rotations within their 14- and 21-day rotation. This effort would include standard recipes, specifications for product to be used, and cataloguing of required products. Concurrent steps could be taken to review the prime vendor catalogues, ensure there are product specifications and that offered products meet those specifications, and review and revise existing recipes. The Culinary Institute of America could provide assistance and Cornell experts could provide guidance on menu composition, recipes, and specifications, as well as on smart strategies for marketing menu changes.
- **Market and broaden use of tools developed during HBI to increase the accessibility and availability of healthy food.** Working with outside organizations, the HBI team was able to develop two tools that are available to installations and other organizations. One tool, called the *Recipe Guide*,[69] was developed with the Culinary Institute of America, and provides healthy recipes for different military environments. The other tool is a farmers market guide *Opening a Farmers Market on Federal Property: A Guide for Market Operators and Building Managers*,[70] that was developed with assistance from USDA and Wholesome Wave to help installations and other locations understand the steps needed to create viable farmers markets.
- **Expand and implement Go for Green® program in all dining environments.** Installations can help educate consumers by fully implementing the JCCoE's Go for Green®[71] in all APF dining environments
- **Include child development centers in food procurement and delivery improvements.** Child development centers already follow USDA requirements for reimbursement, but could work more closely with the USDA's FNS and Team Nutrition to offer meals that are more appealing to kids. In particular, FNS can help DoD develop recipes that meet the new CACFP guidelines and include more fruits and vegetables.[72]
- **Consider creating a federal guideline tracking system to leverage guidelines and tools developed by other agencies, such as USDA and HHS.** Specifically, DoD should consider develop a tracking system to alert staff members to resources available at the national, regional, and local levels, as well as communicate when the federal guidelines have been turned into Issuances.
- **Explore ways to implement *USDA school snack guidelines* in DoD youth centers.** In 2013, the USDA created healthy standards for vending machines and snack bars in schools. DoD should consider copying these standards for youth centers.[73]
- **Look at removing candy and treats from certain check out aisles.** DeCA should consider creating healthy check out aisles by removing unhealthy items from all aisles, or by creating a few dedicated "healthy checkout lanes" in each store. A major grocery store chain in Europe has implemented *this approach*.[74] In the United States, WalMart and some other major retailers have also added healthy checkout lanes to some of their stores.
- **DoD should support cooking classes for service members, family members, and children.** As noted previously, there is broad interest among service members and their families in healthier eating and cooking. Cooking classes for families and for single service members who don't have kitchens would help empower the military community to practice healthier eating.

[69] More details can be found at: http://www.militaryonesource.mil/health-and-wellness/healthy-base-initiative
[70] More details can be found at: www.ams.usda.gov/USDA-DOD-FarmersMarketGuide
[71] The Marines use a similar program called Fueled to Fight.
[72] More details can be found at: http://www.fns.usda.gov/cacfp/meals-and-snacks
[73] More details can be found at: http://www.usda.gov/wps/portal/usda/usdahome?contentid=2013/06/0134.xml
[74] The German-owned grocery store chain Lidl has announced that it will start phasing out junk food and sugar-sweetened snacks from checkout aisles in its 600 stores across the United Kingdom. According to a managing director, this move is in response to a customer survey in which seven out of ten parents said they would prefer a treat-free checkout experience. "We're committed not only to raising awareness of the importance of balanced diets and healthy lifestyles, but also to making it easier for our customers to follow them." (http://www.theguardian.com/business/2014/jan/13/lidl-bans-sweets-at-checkout)

Recommendations for Specific Healthy Eating Initiatives

B.1 Recommendations for Assessment/m-NEAT

- **Improve existing assessment.** Gather comments from HBI pilot locations to improve the existing m-NEAT assessment. An updated tool is expected in the spring of 2016 that will use much of the information gathered from HBI.
- **Promote m-NEAT at more locations.** Since the assessment helps installations grade their food environment, DoD should consider testing m-NEAT at more locations to gauge its effectiveness and solicit more input for improvement.

B.2 Recommendations for Recipes/Menu Renovation

- **Consider creating standard healthy recipes for DFAC and NAF locations.** This would include working with the food service leads for the Military Services, JCCoE, and NATICK US Army Natick Soldier Research, Development and Engineering Center to develop and reformulate existing recipes to make them healthier, for use in both APF and NAF environments. Obtain Joint Subsistence Policy Board (JSPB) concurrence to pursue new and revised recipes.
- **Offer technical assistance for standardizing and upgrading recipes for NAFs and APFs locations.** Once new recipes are developed, DoD could consider developing a "train the trainer" model for implementing recipes at both APF and NAF locations. Train cross-functional teams to help food outlets at installations implement new healthy recipes. DoD could obtain JSPB concurrence to add this training to the JCCoE curriculum.
- **Update the recipe rotation schedule for APF locations.** Specifically, DoD could explore ways to ensure that more healthy recipes are in the rotation and that "unhealthy" recipes are removed or upgraded to a "stealth health" option.
- **Identify small changes that have large impact.** DoD could look for small recipe changes that have the potential to make a major impact in both NAF and APF environments (e.g., removing croutons from a salad or changing a sauce to be low-fat/low-calorie).
- **Support the move to a centralized computer system for archiving recipes in the APF environment.** Many of the Services, JCCoE, and others use a tool called Computrition to analyze recipes in the APF environment. DoD should consider using this type of tool to help all installations standardize recipes and substitute healthy options at both APF and NAF locations. As all APF DFACs use the same recipes, adding nutritional analysis (through Computrition or a similar product) should make the nutritional analysis for each recipe available to every DFAC. DoD recipes should also be made available to NAF food programs, and DoD should consider developing an appendix for recipes unique to the NAF system.

B.3 Recommendations for Menu Labeling: Go for Green® and Better For You

- **Enforce Go for Green®/Fueled to Fight labeling at APF locations.** Consider developing an enforcement mechanism to ensure that proper menu labeling is being implemented correctly and consistently at all APF locations. Ensure that the labeling system is communicated, promoted, and explained to all customers.
- **Develop compelling marketing and messaging focused on performance.** Create marketing and messaging about menu labeling to educate consumers. Consider focusing more on improving performance (physical, academic, mental, etc.)
- **Improve and increase dose delivered of BFY.** Since BFY was employed at such a small number of NAF locations at a single installation, consider testing this intervention at more locations where the dose delivered may increase to all NAF locations. Identify elements that need to be improved.

- **Support food labeling system for all DeCA Commissaries.** To help reinforce the concepts of Go for Green® and BFY, identify ways to link menu labeling with DeCA's effort to use a food labeling system at commissaries.

B.4 Recommendations for Choice Architecture: Smarter Food Movement

- **Get buy-in from military leaders.** As with any intervention, for the Smarter Food Movement to be effective there needs to be leadership and support from the top – the Services, OSD, installation commanders, leaders on installations, etc. In addition, there are implementation costs. If left to the bases to fund, many installations will not implement this program, or will implement it in a very limited way. Providing funding to relocating fixtures and equipment is recommended.
- **Include behavioral economics and choice architecture in the food service curriculum.** The concepts and science of choice architecture and behavioral economics should be introduced as part of the food service curriculum at JCCoE, and in the existing food service training classes offered by the military Services for NAF managers and key staff.
- **Include Smarter Food Training at installations.** All front line staff need training to explain what the Smarter Food Movement and choice architecture is; why these changes are being implemented; and why staff should make efforts help generate buy-in. In addition, there is a need for training on how to implement recommendations. Even a short, 30-minute session at all locations would be helpful.
- **Include the right people for training and implementation.** The people who actually carry out the work have the most important role in assuring the success of this initiative. For example, if new signs are to be installed that designate names or portion sizes, the staff members who implement these changes need to be educated.
- **Ensure that the program message focuses on performance, not health.** Framing initiatives as a way to improve performance, rather than health — and not as a mandate or requirement — is more effective. The "Fit to Fight" and "Soldier Fueling" messages resonate. Tying the Smarter Food Movement to those known brands will help make it more of a standard operating procedure. Simply telling people to eat healthy does not work. The Smarter Food Movement helps people make behavior changes without knowing they have changed.
- **Expand Smarter Lunchroom principles to all appropriated and NAF food facilities.** Product placement marketing, and merchandising should work together to promote healthier food choices. Implementing Smarter Lunchroom principles will help show how important marketing, and merchandising are to consumers' food choices.

B.5 Recommendations for Increasing Fruit and Vegetable Sales: Farmers Markets

- **Develop and market guide to farmers markets for installations.** Working with the USDA, Wholesome Wave, and other stakeholders, OSD developed a farmers market guide for installations. The process included interviewing vendors, customers, and state agriculture departments, reviewing existing research, and getting advice from stakeholders and subject matter experts, including experts within DoD. The guide also addresses frequent issues like food safety, security, emergency response, and legal and contractual matters. Issued under the title Commander's *Guide for Farmers Markets on Military Installations*, the goal is to provide information to help installation leads make an informed decision as to whether to launch a market, initiate planning and execution, etc.[75]
- **Provide contact information.** The Guide offers extensive resource/contact information for support agencies and organizations.
- **Communicate farmers market policy and encourage placement of farmers markets in high visibility locations.** High-visibility

[75] The guide is available at www.ams.usda.gov/USDA-DOD-FarmersMarketGuide

locations can set the standard for the rest of DoD and communicate buy-in from leadership. When the Pentagon started a farmers market in 2015, it set an example for the rest of the military.[76]

- **Cross-promote farmers markets, DeCA, and NAF locations.** Creative cross-promotional opportunities exist between farmers markets, commissaries, and NAF locations; for example, NAF venues could consider purchasing and highlighting "local" menu items from the farmers market (e.g., every Thursday lunch at the club is "Farm Fresh Buffet").
- **Place farmers markets near housing developments and public transportation.** Markets will naturally attract more customers if they are located near high traffic areas, such as near housing developments or public transportation hubs.

B.6 Recommendations for DeCA

- **DeCA should consider expanding Cooking Matters to all commissaries.** The challenge will be to find and organize the funding and staff resources, and work with food vendors to implement the program at more locations and provide the coupons for healthier items.
- **DeCA should consider ways to implement recommendations from the Smarter Food Movement at more locations.** DeCA should begin by examining the barriers encountered during HBI implementation when it came to making changes at commissaries to promote healthier food options.
- **Continue to track sales of fresh fruits and vegetables.** Since DeCA serves such a large military population, it can be a source of valuable information about food buying habits in the military community. This information is also important for tracking the effects of future interventions to promote healthier eating habits.

B.7 Recommendations for Cooking Matters

- **DoD should work with state-level USDA Food and Nutrition Directors and local nutrition organizations to sustain Cooking Matters.** This would include replicating the efforts at Fort Bragg, Fort Sill, and other installations that are described in the installation highlights (Chapter 6).
- **Implementation of Cooking Matters and similar programs should involve installation leadership and provide for a dedicated POC.** Experience with this program shows that the vocal and engaged support of leadership is critical to success and sustainability. It is important that installation leadership at all levels is not only aware of these programs, but actively encourages soldiers, airmen, sailors, and Marines to take advantage and participate. At a minimum, the list of individuals or offices that should be involved includes the garrison/wing commander, the commissary store director and DeCA leadership, health, health promotion, nutrition, and fitness program staff, the public affairs office and MWR, and Army Community Services, Airman Readiness Center, and Fleet and Family Service.
- **A dedicated POC is essential for Cooking Matters and similar programs to be successful and sustainable over time.** Critical roles for the coordinator or POC include promoting the program, recruiting tour leaders and participants, and leading tours as needed. During program start-up, coordinators often served as points of contact, but to sustain the program for the long run, it would be preferable to have a dedicated organization or agency (e.g., clinic, hospital, wellness or fitness center) serve as the primary POC and oversee the program. Share our Strength takes a "train the trainer" approach to ensure that qualified individuals are available to serve in this role. Indeed, volunteer recruitment and retention are essential to sustaining the CMATS program.
- **Cooking Matters should be incorporated into existing programs.** Share Our Strength had great success working with existing

[76] More details can be found at: http://www.health.mil/News/Articles/2015/02/24/Pentagon-Farmers-Market-Puts-Healthy-Fresh-Food-Choices-Within-Reach

agencies and organizations at different installations to incorporate Cooking Matters into other programs that were already being offered, like Group Lifestyle Balance and Mission Nutrition. Registered dietitians, nurses, and wellness/fitness centers are also potential partners and advocates – they can work with service members who have minimum requirements for nutrition education and outreach. Additionally, CMATS can be seamlessly incorporated into existing curricula, like Ship Shape.

General Recommendations in the Area of Active Living/Built Environment/ Physical Activity

Insights and observations from HBI implementation can help inform future DoD efforts to promote active living across all installations and Service branches through physical activity programs and facilities and changes in the built environment.

- **Consider instituting CACHE assessments at regular intervals (e.g., every two to three years) at all DoD/Service locations and incorporate m-PAC assessments in installation development plans (IDPs).** This would promote leadership understanidng of the built environment at their installations within the timeframe of a commander's tenure. Results from these assessments should be used to prompt ideas for long-term and short-term changes and should be coordinated with IDPs, which are conducted every five years, as well as with the master planning effort as a whole. The same protocol should be followed at agencies and regional offices.

The CACHE Toolkit

The *CACHE*[77] Toolkit consists of three assessment tools: (1) the m-NEAT, a nutrition environment assessment similar to NEMS, (2) the Promoting Active Communities (PAC) assessment tool, a physical activity environment assessment adapted from the Michigan Department of Health PAC, and (3) the Quantitative Indicators for Tobacco Systems (QITS), a tobacco policy and environment assessment adapted from the CDC's CHANGE tool. Together, these assess a community's built environment and policies related to the promotion and support of healthy eating, physical activity, and for tobacco-free living. The CACHE toolkit also contains supporting materials to help users understand key principles of the built environment, communicate the toolkit to installation stakeholders, encourage participation, report findings, and create an installation action plan.

- **DoD could look to a number of efforts in civilian sector for guidance.** The NACCHO MAPP initiative is a key component of efforts by the DoD's CHPC to promote changes in the built environment. The Urban Street Design Guide created by the National Association of City Transportation Officials and the Active Design Guidelines created by New York City are excellent references for creating safe, attractive communities that enable and encourage an active lifestyle.
- **Raise level of awareness among key decision-makers as to how the built environment affects health and mission-readiness.** Publications from organizations like the American Institute of Architects (AIA), the Urban Land Institute (ULI) and the American Planning Association (APA) can provide useful summaries of key concepts.

[77] More details can be found at: http://armymedicine.mil/Documents/Panel-C-CACHE-Info-Brief-v2.pdf

- **Bring built environment issues to the MHS Executive Review Council.** The Review Council brings all stakeholders together and can help integrate and elevate the issues that motivated HBI and Operation Livewell.
- **Incorporate recommendations for features that help promote active living, healthy eating, and tobacco cessation into installation and facility design guidelines such as the Unified Facilities Criteria** (e.g., reduce the number of tobacco use areas, enhance the connectivity of sidewalks and bike lanes networks, adopt Complete Streets standards or similar, etc.).
  - Community leaders should be provided with non-technical versions of design guidelines to promote broader understanding of the benefits of active design.
  - Planners should consider factors such as walkability and bikeability in their master plans. Models for such criteria include *Active Design Guidelines*;[78] the *"Complete Streets" policy*, which aims to ensure that roadways allow for safe use by pedestrians, bicyclists, and motorists;[79] and the *NACCHO MAPP*, a community-driven strategic planning process.[80]
- **Establish a Community Health Promotion Council (CHPC) or similar group at each installation.** On many installations, existing organizations or groups may already be serving this purpose, but they could operate more effectively by leveraging lessons learned and best practices from CHPCs. Installations would be well-served by having these cross-disciplinary groups work to reduce redundancies and improve program outcomes across the installation. Existing groups do not have to be re-labeled as CHPCs – rather, flexibility in name and structure is desirable to ensure that groups meet local needs and reflect local preferences.
- **Pedestrian and bicycle friendly design could be less expensive for the installation and help advance DoD goals with respect to environmental sustainability.** In general, it is much less expensive to build sidewalks and trails than roads or parking lots. Walking, bicycling, and shared transportation systems reduce the number of single-occupant vehicle trips and reduce energy use and air pollution. An option to promote a more pedestrian-friendly built environment is to recommend that some of the funding related to parking and roads be redirected towards sidewalks and trails, or from motor pools to bike-sharing and car-sharing programs. As installations implement requirements for road setbacks and parking, they can incorporate design for all forms of transportation and prioritize walkable/bikeable communities.
- **Micro changes can provide quick wins.** Small changes like standing desks, accessible stairwells, walking meetings, supervised walking and biking routes to schools, and participation in nationally promoted events like Bike to Work Week can help raise awareness about the importance of moving/being active throughout the day.
- **Explore options to develop fitness facilities near childcare facilities.** This recommendation addresses the need for more convenient access to drop-in childcare to enable more parents to work out. No quick solutions exist, obviously, but as part of master planning for installations, opportunities for clustering childcare facilities, physical fitness areas, and K-12 schools in future development should be considered.
- **Test different types of fitness support for service members, dependents, civilians, and retirees.** Every individual needs different levels of support to increase his or her physical fitness. HBI tested the idea of expanding access to fitness facilities with 24-Hour Fitness and Fitness on Request, which work well for individuals who are self-motivated. Warrior Well worked for those individuals who needed more hands-on support. DoD should consider providing other levels and forms of support to individual service members, their family members, and employees. Given the plethora of fitness options that are available, DoD may want to test other forms of support, such as mobile fitness programs that can be accessed anywhere and that often don't require equipment, online or text coaching support, peer fitness groups, and tools for measuring daily physical activity through wearable devices.

[78] More details can be found at: http://centerforactivedesign.org/dl/guidelines.pdf
[79] More details can be found at: http://www.smartgrowthamerica.org/complete-streets/changing-policy/policy-elements
[80] More details can be found at: http://www.naccho.org/topics/infrastructure/Mapp/index.cfm

Recommendations for Specific Active Living/Built Environment/Physical Activity Initiatives

D.1 Bikeshare recommendations:

- **Develop partnerships to allow bikeshare facilities on installations.** At present there is interest but funding is a barrier. With its new policy on partnerships, DoD should consider exploring ways for the Services to develop partnerships with national bikeshare companies to implement programs on installations across the U.S. and overseas. In addition, bikeshare could become an MWR program. Many cities, large and small, have seen tremendous success and have not lost money on bikeshare programs.[81]
- **A university campus bikeshare model for operations might be more feasible.** On many campuses the bicycle program is funded through subscription by various departments who wish to have access to a bicycle fleet. The program purchases and distributes the bikes and provides necessary maintenance. In this model, each department schedules and manages it bicycle fleet. On other campuses, bikes are acquired from campus security impoundments of abandoned bikes or are donated by students who are leaving the school. These programs are managed by volunteers and operate largely on the honor system.

D.2 StairWELL to Health

- **Implement StairWELL to Health on a DoD-wide basis.** This intervention is a cost-effective and convenient option for encouraging and enabling people to be more active in their daily lives. Signs in stairwells can also provide useful health information.

D.3 Expanding Fitness Facilities and Resources

- **Fitness on Request could be made more widely available.** The cost per unit ($15,000-$30,000) is low and the return on investment can be significant.
- **The number of fitness facilities with 24-hour access should be increased.**
- **To address concerns about personal security, future security systems should be designed wherever possible so that video surveillance at fitness facilities can be tied into base networks, thereby allowing for real-time video monitoring of these facilities.**
- **The Navy's Family Fitness Room should be tested for use in other Service branches.** For many service members, inadequate access to drop-in childcare is a barrier to regular access. The Family Fitness center offers two play areas where children can be safe and monitored, while parents and family members exercise in nearby areas within the facility. Family-oriented fitness facilities have been successful at Navy installations and offer a promising model for reducing barriers to exercise for families with children.
- **DoD should consider low-cost ways to partner with non-profits like the YMCA to expand access to fitness facilities and programs for service members, families, civilians, and retirees.** With more than 1,900 locations nationwide, the YMCA can be an important resource, especially for installations that do not have their own full-service fitness facilities. The YMCA currently has a *military outreach program* that offers free membership to service members and their families,[82] but aspects of the national-level YMCA policy (such as the requirement that service members be deployed or have a deployed sponsor) could be changed to further expand access, particularly for spouses and other family members. (Under the current YMCA policy, some family members may only be permitted to use YMCA facilities if there is no DoD fitness facility within a 50-mile radius of where they are stationed or living.)

[81] As of August 2014, 600 cities worldwide had bike sharing programs, including the following U.S. cities: Austin, TX; Boston, MA; San Francisco, CA; Boulder, CO; Fargo, ND; NYC, NY; Washington, DC; Honolulu, HI; Houston, TX; Indianapolis, IN; Columbus, OK, Chicago, IL; Chattanooga, TN; Charleston, SC; Broward County, FL; Kansas City, MO; Miami Beach, FL; Minneapolis, MN; New Palz, NY; Salem, MA; Salt Lake City, UT; Seattle, WA.
[82] More details can be found at: http://www.ymca.net/military-outreach/memberships.html

D.4 Coach-Based Initiatives:

- **DoD should further explore programs like Warrior Well that help those who need more help incorporating physical fitness and healthy nutrition in their lives.** Explore options for adapting the Warrior Well model to reach more people at lower cost or identify other evidence-based programs that includes coaches and peer support to help those individuals who need more motivation to change their behavior.

General Recommendations in the Area of Health and Wellness

- **Gather behavioral data using tools like UltimateMe.** Individual measurement tools like UltimateMe can help DoD measure whether programs are effective while also identifying gaps where some members of the military community may need more help in maintaining a healthy lifestyle.
- **Continue to identify evidence-based programming in the civilian sector as well as at installations or in the Services.** HBI taught the team that there are many existing programs in the civilian sector, like the Diabetes Prevention Program and WorkHealthy America, that could be replicated in a military environment. Similarly, the effort to identify promising practices showed that the Services and installations have initiatives that could be replicated and measured at more locations.
- **Develop adult/child programming for initiatives.** A consistent theme across all HBI initiatives was the need for childcare to enable full adult participation. Even when children could participate in a program, it was difficult to effectively educate parents at the same time. Planning for future initiatives should aim to include high-quality adult/child programming to effectively reach the whole family. This would include finding activities that will engage children while their parents are learning and developing programs that can be offered to parents while their children are in school or in after-school programs.
- **Future initiatives should aim to provide healthy living education to all families.** Military families are very interested in learning more about healthy living, including nutrition, cooking, physical activity, and general health and wellness in a hands-on environment. More programming should be developed to help parents and children learn and sustain healthy habits.
- **DoD should explore options for working with the Boys and Girls Clubs of America, the National Recreation and Park Association, the Alliance for a Healthier Generation, and installation youth centers to adopt the Healthy Out of School Time (HOST) standards.** The Boys and Girls Club and the National Recreation and Park Association have already committed to adopting the Alliance's HOST standards at 5,400 sites and clubs nationwide. OSD and the Services should consider meeting with these three non-profits to explore how they can help military youth centers adopt these standards as well, especially since the Boys and Girls Clubs already serve many military children. This would also fit with OSD's interest in finding ways to expand partnerships and leverage existing resources.[83]

[83] Recently, the Alliance for a Healthier Generation announced a partnership with Nemours Children's Health System and the American Heart Association to extend services to early childhood wellness from ages birth to 5 years. For more information: https://www.healthiergeneration.org/news__events/2015/08/11/1304/

Recommendations for Specific Health and Wellness Initiatives

F.1 UltimateMe

- **DoD should explore options for creating a mobile platform.** Any initiative of this type should have a mobile app. This is because success requires that users be able to use the program with ease and as part of their daily, personal routines. The program also needs to keep up with technology; for example, it should be able to sync with popular wearable devices such as FitBits and others.
- **Other means of generating data about health initiatives, including patient-generated data, should be explored or developed.**
- **DoD should explore options for implementing HRQOL as the single, standardized measure that captures the health status of the entire DoD community.**
- **Future health IT program design should account for the different security considerations that apply to personal vs. electronic health records.**
- **This initiative appears promising,** especially as a tool to collect individual level data, but more work is needed to promote the tool and achieve credible baseline and follow-up data.

F.2 Community Health Promotion Councils

- **The CHPC model should be promoted with an emphasis on data collection and accountability.** This should include updating current instructions and/or directives.
- **The Army's tools and instructions for developing the CHPC model should be promoted.** A positive aspect of this initiative is that it includes an extensive evaluation process and is highly metric driven. Other Services' public health commands should seek to emulate metric-based evaluations. This will require making changes to current instructions.

F.3 Community Resource Guides

- **DoD should consider developing a platform for CRGs that is maintained by a coordinating office responsible for overseeing the health, readiness, and resiliency of the total force.** Additionally, the coordinating office should help installations identify community partners that can help provide resources (e.g., United Way). This approach will ease some of the burden on installations.
- **The use of free tools, like Google analytics, should be explored as a potential means of tracking use of the site by interest area** (e.g., which links receive the most clicks, user location, duration of average session).
- **A sustainable process needs to be established for updating CRGs.** This may require visible support from command leadership, at least initially, to establish that updating installation information; this is considered a priority.

F.4 Recommendations for Group Lifestyle Balance

- **DoD should monitor testing at the six non-HBI locations that tried the program for additional lessons and measurements.**
- **DoD should consider other locations** for testing since it was only monitored at one HBI location.

F.5 Recommendations for Holly-Graham

- In the short-term, DoD should identify a way to repurpose the Holly-Graham technology so bases can use the projector to create their own messages. Bases have expressed interest in wanting to share messages from leadership or advertising special events through the projector. This would happen not using the human-cut out, but a basic projector screen. Several modifications could be considered:
  - **Where Holly-Graham is used, the motion-sensing feature should be deactivated so that activation is triggered only by user touch.** This would reduce message repetition and minimize annoyance to personnel working in the area.
  - **All Holly-Graham messages should be consolidated on one memory card.**
  - **Placement of the avatar is important,** therefore areas should be sought that have less repeat traffic and where users have time to interact with the device. The avatars were originally created for use at airports.
  - **In the long-term, the technology could be re-programmed to include a searchable CRGs.**
  - **The technology should be rebranded and use a different name given the negative feedback.**

F.6 Recommendations for Ambassadors for Health

- **DoD should set expectations early.** This means ensuring that bases know the time commitment upfront and have a governance group in place that wants to pursue this program. Changing the culture within MTFs and installations will take time, including time for benchmarking, improvement, recognition, and evaluation. Attention to these factors will help ensure a sustainable culture of health that delivers improved recruitment, retention, readiness, and resilience.
- **DoD should convene a cross-Service advisory body to guide environmental and policy changes at MTFs.** This advisory body should bring together key MTF decision makers to examine policy and environmental recommendations from the WorkHealthy assessments and to consider whether these recommendations should be pursued system-wide. Clarification on policy-making should be provided to any sites that choose to participate in a program like Ambassadors for Health.
- **DoD should align and research existing tools for assessing the MTF environment.** Specifically, DoD should explore how assessment tools in use across the Services, like m-NEAT, m-PAC, CACHE, and OPM's Wellcheck, as well as WorkHealthy America, can be leveraged to improve the environment at MTFs.
- **DoD should develop a user-friendly "Healthcare Benefits 101" explanation guide for civilian employees and service members.** Often MTF staff lacks awareness of all the benefits available to TRICARE® beneficiaries. This makes it difficult to tap into existing resources. DoD may want to consider how to educate MTFs on different benefits and how to better communicate and promote these benefits.
- **DoD should clarify policies for data collection.** Specifically, DoD should determine how best to collect information on behalf of both Active Duty and civilian populations for data analysis and reporting.

F.7 Recommendations for Operation KidFit

- **DoD should open the program to all parents and rebrand to focus on health rather than obesity.** Specifically, all parents should be able to participate regardless of the weight status of their children. This would help address barriers related to stigma. In addition, the program should be rebranded as a way to learn healthy habits and not just combat obesity.

- **Child programming should be provided during the course.** DoD should create and support some type of concurrent child programming during OKF so that parents can focus on lessons while their kids are occupied. Ideally, this programming would involve some form of physical activity while also imparting age-appropriate information about healthy habits.
- **A digital version of OKF should be made available to military families.** A web-based version of the course is under development; once available it should provide added flexibility for those parents who have difficult schedules or face other barriers to attending in-person classes. The web version should also be adapted for mobile technology.
- **OKF should offer incentives for participation.** DoD should consider developing and funding such incentives (for example, incentives could be offered to medical home referred participants who complete the course).

F.8 5210

- **DoD should look for effective ways to disseminate the extensive marketing materials that were developed for 5210 Healthy Military Children.** These materials were developed by the Office of Children and Youth in MC&FP in collaboration with Penn State. They have been offered to all child development centers and the Services, but opportunities exist to better target key audiences and stakeholders and promote these materials further.
- **DoD should develop measurement tools for 5210 Healthy Military Children.** Measuring and gauging the impact of any marketing program can be difficult. DoD should explore the idea of working with Penn State to develop a measurement and evaluation plan that could be included with the marketing program/tool kit.
- **Child programming should be added during Let's Go 5210 classes.** Since drop-in childcare is a barrier, childcare should be provided and/or concurrent child programming should be offered at the same time as adult classes.
- **Incentives or recognition should be used to promote participation in Let's Go 5210.** Some form of recognition for institutions that participate and some type of incentive for individual participation could help boost program effectiveness and reach.
- **DoD should consider expanding the Club 2150 model at Yokota Air Base to other sites.** Club 2150 draws on installation partnerships to provide an engaging after-school program for elementary school students that includes a physical activity component, and nutrition and behavior education components. Program data suggest that Club 2150 had a positive impact on students' nutritional habits and fitness scores.

General Recommendations in the Area of Schools

The following recommendations are based on lessons learned from implementing the Healthy Schools Program and Recess Before Lunch as part of the HBI demonstration project.

- **DoD should convene a working group of key stakeholders to look for opportunities to improve health and health education in all schools that serve children of military families.** Specifically, the working group would be tasked with looking for opportunities to inform and educate public schools about the particular needs of military children, and with exploring how partners like the Alliance for a Healthier Generation can help create a culture of health in all school settings.
- **DoD should strengthen relationships between SLOs and lead installation officials.** For example, SLOs should be included in commander meetings that concern OLW, and points of contact should strive to bring SLOs into broader OLW implementation efforts.
- **DoDEA should market an online toolkit for schools.** This marketing effort should target individual DoDEA schools as well as public schools that serve the military community. An online toolkit should list all available federal programs and resources, as well as other non-profit organizations and tools that can help individual schools reach their health and wellness objectives. Resources that should be considered for inclusion in the toolkit include:
  - The Alliance's Healthy Schools Program
  - The USDA's Healthy U.S. Schools Challenge
  - Other USDA programs, including *Farm to School*, the *School Breakfast Program*, the *Fruit and Vegetable Program*, the *Summer Food Service Program*, and the *Special Milk Program*[84]
  - *Let's Move Active Schools*[85]
  - *5210 Healthy Military Children*[86]
  - *President's Council of Fitness, Sport and Nutrition, Presidential Youth Fitness Program*[87]
  - *Recess Before Lunch*[88]
  - *USDA's Team Nutrition*[89]
  - *USDA's FNS regional offices*[90]

[84] More details on these programs, can be found at: (respectively) http://www.fns.usda.gov/farmtoschool/farm-school; http://www.fns.usda.gov/sbp/school-breakfast-program; http://www.fns.usda.gov/ffvp/fresh-fruit-and-vegetable-program; http://www.fns.usda.gov/sfsp/summer-food-service-program-sfsp; http://www.fns.usda.gov/smp/special-milk-program.
[85] More details can be found at: http://www.letsmoveschools.org
[86] More details can be found at: http://5210.healthymilitarychildren.psu.edu
[87] More details can be found at: http://www.fitness.gov/participate-in-programs/presidential-youth-fitness-program/
[88] More details can be found at: http://www.actionforhealthykids.org/storage/Recess_Moves_A_Toolkit_for_Quality_Recess.pdf
[89] Team Nutrition is an initiative of the USDA Food and Nutrition Service to support child nutrition programs through training and technical assistance for foodservice, nutrition education for children and their caregivers, and school and community support for healthy eating and physical activity. More details can be found at: http://www.fns.usda.gov/tn/team-nutrition
[90] More details can be found at: http://www.fns.usda.gov/fns-regional-offices

G.1 Recommendations for Healthy School and Recess Before Lunch Programs

- **Consider offering the Healthy Schools Program to all DoDEA schools.** Since the Healthy Schools Program is available to any school in the U.S., DoDEA could work directly with the Alliance for a Healthier Generation regional directors to offer the program to all DoDEA schools. Online tools make it possible for any DoD school to participate.[91] In addition, the Alliance could help with DoDEA schools in international locations.
- **DoDEA should explore ways to promote the Healthy Schools Program to public schools with large numbers of children from military families.** Every state has different decision makers when it comes to local public schools. DoDEA and other leaders at OSD and in the Services should explore ways to educate and inform leaders in school districts with a large military population about the potential resources and assistance available through the Healthy Schools Program, and through other non-profit and federal initiatives, like Let's Move Active Schools, the Healthy U.S. Schools Challenge, etc.
- **DoDEA should consider making Recess Before Lunch a standard policy, with measurement tools.** Some DoDEA schools have implemented or are implementing Recess Before Lunch, like Yokota and Fort Bragg. DoDEA is considering implementing this program on a widespread basis throughout its elementary schools, including DoDEA schools overseas. Adding measurement tools would help schools evaluate the impact of this program.
- **DoD should enlist the help of USDA's Team Nutrition to assist individual DoDEA schools in implementing both the Healthy Hunger-Free Kids Act and the Smart Snacks guidelines.** The USDA's Food and Nutrition Service (FNS) has regional offices around the nation that can help individual DoDEA schools access technical assistance, USDA child nutrition programs, and other tools and information.[xlii]
- **DoDEA and installations should encourage local schools to hold regular taste testings in DoDEA and public school cafeterias to introduce children to healthier food options.** Involving students, faculty, and cafeteria staff in the introduction and testing of proposed new menu items affords all stakeholders a voice in this process. Many school lunch programs are under catering contracts, which can be difficult to modify as consumer preferences change. But where and when they can be introduced, tasting sessions offer an opportunity to exhibit genuine good faith and build mutual trust. This is especially important for many DoDEA schools, as only about one-quarter of them (three out of eleven) receive feedback from students and family members about foods served, sold, or offered on campus.
- **DoDEA should promote and deliver the USDA's *"Integrated Nutrition Curriculum"* to its schools.** The curriculum can be updated weekly.[92]
- **DoD should encourage DoDEA and public schools to apply for the President's Council of Fitness, Sport, and Nutrition Grant for the Presidential Youth Fitness Program.** This program comes with recognition, which may be attractive to schools.
- **DoDEA should consider how it can use its leadership to help individual DoDEA schools meet the CDC/DoDEA guideline of 60 minutes of physical activity daily.** At many public schools around the country, incorporating 60 minutes of physical activity in the daily schedule, through a combination of recess and PE, is challenging. DoDEA should explore ways to help schools achieve this objective without sacrificing other subjects, for example by integrating physical activity breaks into lesson plans or by looking to leverage community resources and facilities. Schools that have had success increasing physical activity during the school day —

[91] More details can be found at: http://snap.nal.usda.gov/foodstamp/resource_finder_details.php?id=663.

[92] Even where a technical advisor is not available to provide in-person assistance, interested schools can access the Alliance's resources at https://www.healthiergeneration.org/take_action/schools/. The Alliance has also established a system so overseas DoDEA schools can also participate. International schools can connect directly with the Customer Support Center (888 543 4584 or help@healthiergeneration.org) rather than completing the online form. Once they have been registered, their access to resources and online support would be identical to other U.S.-based schools.

such as the Fort Bragg elementary schools discussed previously — could also be asked to share their experience with other DoDEA schools.

- **DoDEA schools should explore options for increasing before- and after-school physical activity opportunities.**
- **DoDEA should develop a more comprehensive health education curriculum for its schools.** For those DoDEA schools that report not having a comprehensive health education curriculum, DoDEA could consider developing a sample curriculum that promotes active living and healthy eating. To this end, the HBI team began working with the DoDEA headquarters branch chief in 2015 to support an integrated health curriculum that will be piloted in the 2016 school year.
- **DoDEA should identify a data collection tool for assessing student participation and attitudes with respect to health- and wellness-related activities.** Identification of such a tool should be undertaken in collaboration with affected areas, districts, and schools.

General Recommendations in the Area of Tobacco Cessation

The Defense Advisory Committee on Tobacco, with support from Defense Secretary Ash Carter, has outlined a number of recommendations for reducing tobacco use in the military community. In addition, the HBI team has outlined general recommendations on tobacco cessation programs and specific recommendations for improving the Kicking Butts and Fight the Enemy programs. Continued efforts to reduce tobacco use and reduce the initiation of tobacco use across all demographics in the military community, including activity duty, children, and spouses, will clearly remain an important element of future DoD efforts to implement OLW.

- **Create a governance structure to facilitate tobacco policy changes.** Since many parts of DoD are affected by tobacco policy, including the exchanges, the Services, housing, etc., DoD should ensure that there is a governance structure for implementing and coordinating changes in its tobacco policies.
- **Increase the number of tobacco-free areas.** All departments within DoD and within the installations should enforce existing policy that restricts all smoking to outdoor areas at least 50 feet from building entrances. Enforcement of these rules will create tobacco-free zones where children live, learn, and play. DoD should also explore the idea of creating tobacco-free zones in multi-unit housing, privatized housing, and other areas frequented by children.
- **Promote initiatives that prevent the initiation of tobacco use and promote the cessation of tobacco use.** DoD should increase marketing and education to prevent individuals from initiating the use of tobacco products, while also continuing to market evidence-based tobacco cessation programs. Lessons learned from the Marine Corps' successful tobacco counter-marketing campaign suggest that such efforts should be tailored specifically to the target population.
- **Ensure parity pricing of tobacco products.** DoD establishments that sell tobacco products should match the average local price of tobacco products in the surrounding community.

Recommendations for Specific Tobacco Cessation Initiatives

I.1 Kicking Butts

- **DoD should consider options for expanding the program to key target populations.**
  - Pilot the program with service members during Advanced Individual Training.
  - Develop an outreach strategy to target tobacco users in future competitions, as 64 percent of participants during the HBI demonstration phase did not use tobacco.
  - Socialize the program with Single Soldier, Sailor, and Marine programs, as this is an avenue to reach junior enlisted members.
  - Consider targeting different groups, such as teens, recently enlisted, actual units, etc.
- **The program should be expanded to cover a broader set of topics in health education.** The program could include trivia on additional health-relevant topics, not just tobacco messaging.
- **Future implementation efforts should explore new messaging options and explain text messaging clearly.** This could include exploring additional ways to use text messaging and providing clearer messaging about the texting platform, particularly given the concern about exposure to spam texts. In addition, text messaging could be leveraged to support for other health/wellness opportunities, like appointment alerts and events. For example, Great Life Hawaii (MWR at Pearl Harbor) utilizes text messaging for MWR events.
- **Future implementation efforts should also embed and leverage existing programs.** In particular, Kicking Butts for Points could be incorporated into existing health and lifestyle programs.

I.2 Fight the Enemy

- **DoD should consider working with DoDEA and partner federal agencies to embed anti-tobacco education into existing science and health curricula and to incorporate Fight the Enemy as a school activity.**
- **Future implementation efforts should expand program marketing.** Efforts to market Fight the Enemy should coordinate with teen/youth centers during the summer. These organizations are often looking for activities to offer students over the summer. Only DoD students attend teen and youth centers. Better relationships should also be developed with SLOs and embedded MFLCs in area schools. These individuals know which military students are attending off-base schools and can help market the program more directly.
- **DoD should consider developing an external website.** To manage the limitations associated with accessing social media on federal computers, DoD should develop an external-facing website that can be viewed by installations and that also has the capability to accept video files and to allow individuals to vote.
- **DoD should consider working with MWR and potential sponsors to offer prizes.** Specifically, DoD should explore options for obtaining sponsorships for prizes, either through base-level or corporate MWR.
- **Installations should be given more time to implement Fight the Enemy.** Establishing a regular cadence around program delivery and providing more advance notice would help ensure that bases are aware of the contest and have sufficient time to market and implement it.

Chapter 14. Conclusion

As noted at the outset, HBI was intended as a short-term demonstration project to inform DoD's longer-term strategy for addressing health and wellness challenges within the military community, and Operation Live Well in particular. HBI successfully supported its strategic objectives and goals. By implementing initiatives and collecting lessons learned, as discussed in detail in Chapters 10 and 11, HBI made a number of specific contributions that will improve the effectiveness of future DOD efforts to improve recruitment, retention, readiness, and resilience by promoting healthy eating, physical activity, and tobacco-free living.

HBI contributed to DoD's longer-term health and wellness strategy by providing information and experience in several key areas.

- **HBI showed how DoD can use assessment, measurement, and consumer feedback to better align resources to meet the needs of a diverse military community.** Specifically, HBI presented an opportunity to:
  - **Test assessment tools.** HBI made use of m-NEAT and m-PAC to help installations measure the health of their food and physical environments, and provided a baseline score that showed installation leaders where they could improve. Experience with HBI is also being used to improve these assessment tools before they are scaled DoD-wide.
  - **Develop a measurement framework.** The PFT was developed to help determine how effective current programming is in the DoD environment.
  - **Deploy a Climate Resource Assessment (CRA) to determine customer preferences.** The CRA helped the HBI team understand which programs appealed to which demographics in the military community.
  - **Develop a dashboard menu, called Quickscore, allowing the HBI management team to understand how the initiatives implemented aligned with the Balanced Scorecard objectives.**
- **HBI successfully identified, leveraged, and tested evidence-based programs from the civilian and military sectors.** By reaching out to sister federal agencies, academia, non-profits, and the Services, HBI was able to leverage existing resources and test both evidence-based programs and promising practices.

- **Installation leaders showed support for HBI and HBI's goals.** Installation commanders and other leaders within the installations understood the connection between healthy eating, active living, tobacco cessation and performance, retention, and readiness. Their commitment to HBI highlighted the importance of champions to the success of future OLW efforts.
- **HBI demonstrated that there is no single intervention or program that will "solve" the problems of obesity, poor physical fitness, and tobacco use in the U.S. military. Change is needed at the level of the environment and the individual.** Most HBI initiatives focused on changing the environment to make the healthy choice the easy choice. But many people also need more individual help to change their behavior.
- **To be successful, future initiatives will have to recognize and be responsive to the unique needs and characteristics of the different Services, different installations, and different segments of the military community.** Results from HBI's Program Fidelity Tool and CRA underscored the diversity of the military community and the differences that exist across different installations. Individual initiatives were more successful at some installations than at others, and, in many cases, they appealed to distinctly different audiences. For example the CRA showed that participation varied depending on factors such as gender, age, marital status, and job type (e.g. desk job versus a job in the field). Some people need more individual help than others. The CRA determined that the individuals who needed the most support participated in HBI.
- **The HBI experience generated several high-level observations that can help inform future efforts:**
  - **More work is needed to create a healthy food environment on most installations.** Dining halls and commissaries generally have the best food options, but there is substantial room for improvement on most installations, especially with vending and fast food.
  - **Installations are built for the car.** As such, the built environment at many military bases and facilities fails to naturally support active living, including biking and walking.
  - **Current physical activity programs are geared toward individuals who are self-motivated.** These individuals are highly interested in more satellite fitness centers and extended hours. But DoD needs more fitness programs that can engage people who are not as self-motivated. In addition, more programs are needed that can effectively serve the needs of dependents, retirees, and civilian employees.
  - **Significant support exists for moving toward tobacco-free campuses.** Tobacco use is a major issue and there is interest in creating more campuses that are tobacco-free and offering programs to help people stop smoking.
- **Experience with HBI points to a number of challenges for OLW and suggests a number of ways that DoD could refine future efforts to reduce costs and increase efficiency.** Specifically, HBI:
  - Identified barriers and opportunities in the food delivery system, built environment, health and wellness, and schools.
  - Showed how the lack of consistent reporting on each Service's retention rates, makes it difficult for OSD to understand the total health and fitness of the entire military community.
  - Identified redundancies in programs already being offered at many installations. These redundancies warrant further investigation to determine why so many programs are needed, and to determine whether opportunities exist to consolidate efforts and address barriers to participation.
  - Underscored the importance of effective marketing, especially for a population that is regularly inundated with programs and information, and that is also highly mobile and moves often.

HBI was only a first step in DoD's long-term effort to address a core challenge to America's military strength and readiness in the years to come. As a demonstration project, it showed that while there is no simple strategy for improving health and wellness in the military community, and while DoD continues to learn about designing and implementing effective programs for healthy eating, active living, and tobacco cessation, the interest and the opportunity exist to make substantial progress in all of these areas. Leveraging that opportunity will require leadership at all levels, increased collaboration within DoD and with outside organizations, and a commitment to applying robust measurement and evaluation tools to continually identify gaps, track outcomes, and refine future efforts.

"The Department of Defense faces the same challenges as the nation in addressing tobacco use and obesity. Tobacco is now the leading cause of death in the U.S., and obesity in the U.S. has risen dramatically in the last 20 years and is a threat to our national security. If obesity rates continue on their current trajectories, by 2030, more than half of potential recruits will not qualify for military service due to their weight. The Healthy Base Initiative (HBI) tackled these strategic issues head on by establishing a strategic roadmap, implementing a multi-faceted approach to test initiatives, measure progress, and share knowledge across 14 pilot sites. HBI was a critical next step in DoD's long-term effort to address a core challenge to America's military strength and readiness in the years to come."

–Mr. Chuck Milam, PDASD (MC&FP)

Appendices

Appendix 1. About the HBI Support Team

Alliance for a Healthier Generation

The Alliance for a Healthier Generation is a catalyst for children's health. The Alliance works with schools, companies, community organizations, healthcare professionals and families to transform the conditions and systems that lead to healthier kids.

The Alliance's goal is to reduce the prevalence of childhood obesity and to empower kids to develop lifelong, healthy habits. Founded by the American Heart Association and Clinton Foundation, the Alliance collaborates with and empowers people and leaders to transform the environments that can make a difference in a child's health: homes, schools, doctor's offices and communities. For more information, please visit: *https://www.healthiergeneration.org/*.

Arrowstreet Architecture and Design

Founded in 1961 and named for the Cambridge street that housed our original studio, today's Arrowstreet, based in Boston, is a firm of professionals dedicated to the creation of satisfying places where people live, work, learn, and relax.

Arrowstreet's success for over four decades and more than a thousand projects is based on the passion and purpose we bring to every project. Our belief in the power of inventive design, grounded in our street-smart knowledge of real estate development, is at the core of our ability to consistently produce successful architecture and planning projects with broad community appeal. Along with our long history of work for the DoD, our work includes award-winning mixed-use developments, hospitality, residential, retail, academic, office and laboratory projects. For more information, please visit: *http://www.arrowstreet.com/*.

The Balanced Scorecard Institute

The Balanced Scorecard Institute (BSI) provides training, certification and consulting services to commercial, government, and non-profit organizations worldwide. BSI helps clients increase focus on strategy and results, improve organizational performance by measuring what matters, align the work people do on a day-to-day basis with strategy, focus on the drivers of future performance, improve communication of the organization's Vision and Strategy, and prioritize in tough economic times. For more information, please visit: *https://balancedscorecard.org/*.

The Bipartisan Policy Center

Founded in 2007 by former Senate Majority Leaders Howard Baker, Tom Daschle, Bob Dole, and George Mitchell, Bipartisan Policy Center (BPC) is a non-profit organization that drives principled solutions through rigorous analysis, reasoned negotiation, and respectful dialogue. With projects in multiple issue areas, BPC combines politically balanced policymaking with strong, proactive advocacy and outreach. For more information, please visit: *http://www.bipartisanpolicy.org/*.

Booz Allen Hamilton

Booz Allen Hamilton is a leading provider of management consulting, technology, and engineering services to the U.S. government in defense, intelligence, and civil markets, and to major corporations and not-for-profit organizations. Booz Allen is headquartered in McLean, Virginia, employs more than 22,000 people, and had revenue of $5.48 billion for the 12 months ended March 31, 2014. In 2014, Booz Allen celebrates its 100th anniversary year. For more information, please visit: *http://www.boozallen.com/*. (NYSE: BAH)

Cambia Health Solutions

Today, Cambia comprises more than 20 companies, all focused on creating a more person-focused and economically sustainable system.

Through numerous Direct Health Solutions companies, Cambia brings transparency to 100 million consumers in 50 states (HealthSparq); provide a direct-pay health care marketplace for high-deductible health plan members (SpendWell); use monitoring technology to help seniors live independently while providing peace of mind to their adult children (Lively); and encourage healthy behaviors through a gamification- and technology-driven wellness solution (hubbub).

Cambia offers six health plans in four states, providing insurance to more than 2 million people; and we offer best-in-class member satisfaction as measured by Forrester CXi. For more information, please visit: *http://cambiahealth.com/*.

The Bronfenbrenner Center for Translational Research and the Cornell Office for Research on Evaluation - Cornell College of Human Ecology

Located in the College of Human Ecology at Cornell University, the Bronfenbrenner Center for Translational Research (BCTR) and the Cornell Office for Research on Evaluation (CORE) link the College's long-standing twin missions of research and outreach to address complex human problems in communities. Translational research is the systematic incorporation of research and practice findings into the development of innovative interventions, practices, and policies that may ultimately improve education, health, and well-being. BCTR (formerly the Family Life Development Center) has over a 20 year history of leveraging the research and extension work of a land grant university in service to the state, national and international community and is currently involved in three DoD evaluation projects. For more information, please visit: *http://www.bctr.cornell.edu/*.

Cornell Food and Brand Lab

The Food and Brand Lab was founded at the University of Illinois in 1997 by Professor Brian Wansink and moved to Cornell University in 2005. The Food and Brand Lab is an interdisciplinary group of graduate and undergraduate students from psychology, food science, marketing, agricultural economics, human nutrition, education, history, library science, and journalism along with a number of affiliated faculty.

Food and Brand Lab research is independently funded by grants and consumer groups. It focuses on better understanding consumers and how they relate to foods and packaged foods. Recent research has driven the creation of the Smarter Lunchrooms Movement and the Cornell Center for Behavioral Economics in Child Nutrition Programs (BEN)—two programs devoted to funding, conducting, and disseminating research concerning children's health. Research from the lab has been reported in dozens of magazines along with coverage on CNN, 20/20, ABC News, NBC News, and on the front page of the Wall Street Journal and USA Today. For more information, please visit: *http://foodpsychology.cornell.edu/*.

The Culinary Institute of America

Founded in 1946, the Culinary Institute of America (CIA) is an independent, not-for-profit college offering associate and bachelor's degrees with majors in culinary arts, baking and pastry arts, and culinary science, as well as certificate programs. As the world's premier culinary college, the CIA provides thought leadership in the areas of professional excellence, health and wellness, sustainability, and world cuisines and cultures through research and conferences. The CIA also offers courses for professionals and enthusiasts, as well as consulting services in support of innovation for the food service and hospitality industry. The college has campuses in Hyde Park, New York; St. Helena, California; San Antonio, Texas; and Singapore. For more information, please visit: *http://www.ciachef.edu/*.

Defense Commissary Agency (DeCA)

The Defense Commissary Agency, which is headquartered at Fort Lee, VA., operates a worldwide chain of commissaries providing groceries to military personnel, retirees and their families in a safe and secure shopping environment. Authorized patrons purchase items at cost plus a 5-percent surcharge, which covers the costs of building new commissaries and modernizing existing ones. Shoppers save an average of more than 30 percent on their purchases compared to commercial prices – savings that amount to thousands of dollars annually when shopping regularly at a commissary. A core military family support element, and a valued part of military pay and benefits, commissaries contribute to family readiness, enhance the quality of life for America's military and their families, and help recruit and retain the best and brightest men and women to serve their country. For more information, please visit: *https://www.commissaries.com/*.

Deloitte Consulting, LLP

Deloitte's Federal Practice has over 7,000 dedicated professionals who work with government agencies to deliver award-winning solutions to complex business challenges. By drawing on industry-leading practices across government and business, Deloitte applies a mix of private-sector perspective and public-sector experience to help federal agencies in their efforts to address today's biggest challenges while building a stronger foundation for tomorrow. Learn more at *www.deloitte.com/federal*.

Department of Defense Education Activity (DoDEA)

DoDEA, as one of only two federally-operated school systems, is responsible for planning, directing, coordinating, and managing prekindergarten through 12th grade educational programs on behalf of the DoD. DoDEA is globally positioned, operating 181 accredited schools in 14 districts located in 12 foreign countries, 7 states, Guam, and Puerto Rico. DoDEA employs approximately 15,000 employees who serve more than 78,000 children of active duty military and DoD civilian families. DoDEA is committed to ensuring that all school-aged children of military families are provided a world-class education that prepares them for postsecondary education and/or career success and to be leading contributors in their communities as well as in our 21st century globalized society.

DoDEA operates as is a field activity of the OSD (Personnel and Readiness). It is headed by a director who oversees all agency functions from DoDEA headquarters in Alexandria, Virginia. DoDEA's schools are divided into 3 geographic areas: Europe, the Pacific, and the Americas. Each area is managed by an area director. Within each of these three areas, schools are organized into districts headed by superintendents. For more information, please visit: *http://www.dodea.edu/*.

Hudson Institute

Founded in 1961 by strategist Herman Kahn, Hudson Institute challenges conventional thinking and helps manage strategic transitions to the future through interdisciplinary studies in defense, international relations, economics, health care, technology, culture, and law.

Hudson seeks to guide public policy makers and global leaders in government and business through a vigorous program of publications, conferences, policy briefings, and recommendations. For more information, please visit: *http://www.hudson.org/*.

Johns Hopkins University Bloomberg School of Public Health

Since its founding in 1916, the Bloomberg School has advanced research, education and practice to create solutions to public health problems around the world.

Faculty, staff and students have helped eradicate smallpox, made water safe to drink, improved child survival, reduced the spread of the human immunodeficiency virus (HIV) and uncovered the dangers of tobacco smoke.
Researchers and scientists are now discovering ways to eliminate malaria, increase healthy behavior, reduce the toll of chronic disease, improve the health of mothers and infants, and change the biology of aging.

Every day, the Bloomberg School works to keep millions around the world safe from illness and injury by pioneering new research, deploying knowledge in the field and educating tomorrow's public health leaders. For more information, please visit: *http://www.jhsph.edu/*.

Kurbo Health

Kurbo Health was founded in 2013 to create a scalable, mobile solution to help children, teenagers and their families eat healthier, lose weight, and exercise more. With 1/3 of all children in the United States overweight or obese, there is a need for a cost effective solution that effectively helps these children reduce their weight and develop lifelong healthy habits.

Using the Kurbo app, families track their food and exercise as well as engage with fun games, challenges and videos to learn nutrition. A personal coach meets with the family once a week via Skype or Facetime to provide support, feedback, and recommendations. The Kurbo system is based on teaching users to understand their food choices, gradually decrease the number of reds (unhealthy foods) over time, and increase exercise. The Kurbo program is based on years of research on pediatric weight control, and is licensed from the Stanford Packard Pediatric Weight Control Program. Both Kurbo and the Stanford program are structured around color-based food tracking and utilize Dr. Leonard Epstein's Traffic Light Diet, one of the most effective and well-researched programs for children. For more information, please visit: *https://kurbo.com/*.

Military Health System (MHS)

The MHS is a global, comprehensive, integrated system that includes combat medical services, health readiness futures, a health care delivery system, public health activities, medical education and training, and medical research and development. The fundamental mission of the MHS, providing medical support to military operations, is different from that of any other health system in the United States. The operational aspects of the MHS are divided among the three Military Departments (Army; Navy, to include Marine Corps; and Air Force), with each Service and the DHA controlling and operating their own medical centers, hospitals, and clinics worldwide. For more information, please visit: *http://www.health.mil/*.

Office of Health Affairs

The Office of the Assistant Secretary of Defense for Health Affairs (ASD(HA)) under the Office of the Undersecretary of Defense for Personnel and Readiness (USD(P&R)) leads the MHS. The MHS is a global system delivering health services - anytime, anywhere - with medical readiness at the center of its mission. It is an integral component of our U.S. military fighting force - ensuring a medically ready force and a ready medical force to respond to the full spectrum of military operations. For more information, please visit: *http://www.health.mil/About-MHS/ASDHA*.

Office of Military Community and Family Policy

The Office of the Deputy Assistant Secretary of Defense for MC&FP is directly responsible for programs and policies that establish and support community quality of life programs for service members and their families worldwide. This office serves as the focal point for a broad range of quality of life issues within the DoD which include (but not limited to): family readiness; community outreach; morale, welfare, recreation and resale policy; non-medical counseling; state liaison education opportunities; and casualty and mortuary affairs. For more information, please visit: *http://prhome.defense.gov/RFM/MCFP*.

PKF Consulting USA, A CBRE Company

PKF Consulting USA (PKF) is active throughout the marketplace, performing financial and market studies and valuations involving hotels, resorts, golf courses, and a variety of mixed-use developments and other hospitality-oriented land uses. PKF also has a rich history of assisting the DoD with addressing complex challenges including service model innovation and enterprise-wide transformation efforts.

Clients rely on PKF for advice on a broad range of hospitality-related issues, the most common of which include:

- Asset Management, Chain and Management Company Selection;
- Real Estate Appraisals and Business Valuation;
- Market and Financial Feasibility Studies;
- Litigation Support, Expert Witness, and Arbitration Services;
- Strategic Planning; and
- Financial Consulting.

For more information, please visit: *http://www.cbre.us/services/valuationadvisory/pkf-consulting/Pages/hospitality-consulting.aspx*.

Prevention Partners

Prevention Partners builds healthier lives through healthy places. With expertise in public health and organizational change, we translate the latest prevention science on tobacco use, physical activity, nutrition and obesity into real-world practices through policies, benefits, and environmental changes. Through technology innovations, Prevention Partners has created nationally-recognized assessment and training products for employers, schools, hospitals and health clinics. Prevention Partners is a 501(c)(3) nonprofit organization. Learn more at *www.ForPrevention.org*.

Share Our Strength

Share Our Strength is working to end child hunger in America by connecting kids to effective nutrition programs like school breakfast and summer meals. This work is accomplished through the No Kid Hungry network, made up of private citizens, government officials, business leaders, and others providing innovative hunger solutions in their communities. These partners work together, implementing solutions that break down the barriers that keep kids from healthy food.

Through its Cooking Matters program, the No Kid Hungry campaign educates and empowers low-income families to stretch their food budgets so their kids get healthy meals at home. Cooking Matters participants learn to shop strategically, use nutrition information to make healthier food choices, and cook delicious, affordable meals.

The No Kid Hungry campaign works to shine a national spotlight on the crisis of child hunger in America, creating a powerful movement of individuals committed to bold action. Share Our Strength builds partnerships that enlist influential individuals in the cause and advocate policy changes needed to achieve its goals. For more information, please visit: *https://www.nokidhungry.org/about-us*.

Spider Strategies

Spider Strategies is a small business dedicated to creating tools and solutions that help our customers achieve the highest level of performance. Spider Strategies' performance management software and customized solutions are used around the world by hundreds of organizations and tens of thousands of users. We are trusted advisers to many of the world's largest companies, U.S. Government agencies, the military, and scores of not-for-profits. Spider Strategies' QuickScore software is the only software fully endorsed by the Balanced Scorecard Institute for adhering to BSI's nine-step framework.

Spider Strategies is headquartered in the Washington, D.C. metropolitan area and has been recognized as one of the Best Places to Work by both the Washingtonian Magazine and the Washington Business Journal. For more information, please visit: *http://www.spiderstrategies.com/*.

Wholesome Wave

Wholesome Wave's mission is to enable people in underserved urban and rural communities to make healthier food choices by increasing affordability and access to fresh, locally grown foods in ways that improve health, generate revenue for small and mid-sized farms and bolster local and regional economies. For more information, please visit: *https://www.wholesomewave.org/*.

Appendix 2. Acronym List

AAFES Army and Air Force Exchange Service
ACC Air Combat Command
AFRS Armed Forces Recipe System
AIA American Institute of Architects
AIT Advanced Individual Training
AMP-IT Aquatic Maximum Power Intensive Training
APA American Planning Association
APF Appropriated Fund
APFT Army Physical Fitness Test
ARB Air Reserve Base
AT&L Acquisition, Technology & Logistics
AWC Army Wellness Center
BAA Buy American Act
BFY Better For You
BMI Body Mass Index
BRAC Base Re-Alignment and Closure
CAC Common Access Card
CACFP Child and Adult Care Food Program
CACHE Creating Active Communities and Healthy Environments
CAIB Community Action Information Board
CDC Centers for Disease Control and Prevention
CHOP™ Choose Healthy Options Program
CHPC Community Health Promotion Council
CMATS Cooking Matters at the Store
COI Community of Interest
CRA Climate and Resource Assessment
CRG Community Resource Guide
DACT Defense Advisory Committee on Tobacco
DeCA Defense Commissary Agency
DFAC Dining Facilities
DHA Defense Health Agency
DHHQ Defense Health Headquarters
DLA Defense Logistics Agency
DoD Department of Defense
DoDEA Department of Defense Education Activity
DODI Department Of Defense Issuance
DPP Diabetes Prevention Program
DTAs Designated Tobacco Areas
E&IE Energy & Installation Environment
EPA Environmental Protection Agency
FBCH Fort Belvoir Community Hospital
FDA Food and Drug Administration
FKSO Fit Kids Coalition of Southern Oklahoma
FMWR Family and Morale, Welfare, and Recreation
FNS Food and Nutrition Service
FSS Force Support Squadron
GIS Geographic Information System
GPC Government Purchase Card
GSA General Services Agency
H2H Healthcare to Health
HA Health Affairs
HBI Healthy Base Initiative
HHS U.S. Department of Health and Human Services
HITT High-Intensity Tactical Training
HPO Health Promotion Officer
HPRA Health Promotion Research Assistant
HRQOL Health-Related Quality of Life
HSP Healthy Schools Program
IDS Integrated Delivery System
IHCP Integrated Health Community Portal
IRB Institutional Review Board
JCCoE Joint Culinary Center of Excellence
JSPB Joint Services Policy Board
L&MR Logistics & Material Readiness
LTP Lifestyles Triple P
M&RA Manpower and Reserve Affairs
MAAP Mobilizing for Action through Planning and Partnerships
MC&FP Military Community and Family Policy
MCAGCC Marine Corps Air Ground Combat Center
MCB Marine Corps Base
MCCS Marine Corps Community Services
MCX Marine Corps Exchange
MDCH Michigan Department of Community Health
MFLC Military Family Life Counselor
MHS Military Health System
m-NEAT Military Nutrition Environment Assessment Tool

MOS Military One Source
MOU Memorandum of Understanding
m-PAC Military Promoting Active Communities
MSG Monosodium Glutamate
MTF Military Treatment Facility
MWR Morale, Welfare and Recreation
NACCHO National Association of County and City Health Officials
NAF Non-Appropriated Fund
NASPE National Association of Sports and Physical Education
NDAA National Defense Authorization Act
NEET Nutrition Environment Enhancement Team
NEM-S Nutrition Environment Measurement Survey
NEXCOM Navy Exchange Service
NIH National Institutes of Health
NLEA Nutrition Labeling and Education Act
NPC National Prevention Council
NPS National Prevention Strategy
NPSP New Parent Support Program
NSLP National School Lunch Program
NSSC Natick Soldier Systems Center
OKF Operation KidFit
OLW Operation Live Well
OPM Office of Personnel and Management
OSD Office of the Secretary of Defense
P&R Personnel and Readiness
PALA+ Presidential Active Lifestyle Awards
PCMH Primary Care Medical Home
PCS Permanent Change of Station
PE Physical Education
PFT Program Fidelity Tool
POC Point of Contact
PoS Point of Sale
PSA Public Service Announcement
PSU Pennsylvania State University
PTLs Physical Training Leaders
QITS Quantitative Indicators for Tobacco Systems
R&FM Readiness and Force Management
SC Senior Commander
SFI Soldier Fueling Initiative
SIO Strategy and Innovation Office
SLO School Liaison Officer
SNAP-Ed Supplemental Nutrition Assistance Program Education
SWAT Students Working Against Tobacco
TFF Total Force Fitness
ULI Urban Land Institute
USAPHC U.S. Army Public Health Command
USCG United States Coast Guard
USDA U.S. Department of Agriculture
WIC Special Supplemental Nutrition Program for Women, Infants, and Children
WRNMMC Walter Reed National Military Medical Center

[i] Defense Health Agency. (2015). Operation Live Well (OLW) Strategic Plan to Inform Senate Committee Report Number 113-85. Falls Church, VA.

[ii] Department of Defense. (2015). Evaluation of the TRICARE Program: Access, Cost, and Quality, Fiscal Year 2015 Report to Congress. Defense Health Agency.

[iii] Mission: Readiness. (2010). Too Fat to Fight: Retired Military Leaders Want Junk Food Out of America's Schools. Retrieved from: http://cdn.missionreadiness.org/MR_Too_Fat_to_Fight-1.pdf

[iv] From information provided by Retired Army General Mark Hertling

[v] Cawley, J. & Maclean, J.C. (2012). Unfit for Service: The Implications of Rising Obesity for U.S. Military Recruitment. Health Economics, 21 (no.11), pp. 1348-1366. Retrieved from: http://onlinelibrary.wiley.com/doi/10.1002/hec.1794/abstract and Mission: Readiness. (2010). Too Fat to Fight: Retired Military Leaders Want Junk Food Out of America's Schools. Retrieved from: http://cdn.missionreadiness.org/MR_Too_Fat_to_Fight-1.pdf

[vi] Campaign for Tobacco-Free Kids. (2014, July 15). Tobacco Use and the Military. Retrieved from: http://www.tobaccofreekids.org/research/factsheets/pdf/0369.pdf

[vii] Mission: Readiness. (2014, September). Retreat is Not an Option. Retrieved from: http://missionreadiness.s3.amazonaws.com/wp-content/uploads/MR-NAT-Retreat-Not-an-Option2.pdf

[viii] Ibid.

[ix] Keifer, F. (2010, September 29). Admiral Mike Mullen: Cost of Military Healthcare is 'not sustainable'. Christian Science Monitor. Retrieved from: http://www.csmonitor.com/Commentary/Editorial-Board-Blog/2010/0929/AdmiralMike-Mullen-Cost-of-military-health-care-is-not-sustainable

[x] Internal communication with U.S. Army Training and Doctrine Command

[xi] National Park Service. (2012). National Park Service Healthy Food Choice Standards and Sustainable Food Choice Guidelines for Front Country Operations. Retrieved from: http://www.nps.gov/commercialservices/docs/Healthy_Parks_Healthy_Foods/NPS_Front_Country_Healthy_and_Sustainable_Food_Choices_05.03.13.pdf

[xii] Definition from http://en.wikipedia.org/wiki/Behavioral_economics

[xiii] Definition from http://en.wikipedia.org/wiki/Choice_architecture

[xiv] Office of the Assistant Secretary of Defense. (2013). Review of DoD Policies Concerning Farmers Markets on Military Installations (Memorandum for Deputy Assistant Secretary of the Army (Civilian Personnel and Quality of Life), Deputy Assistant Secretary of the Navy (Military Manpower and Personnel), Deputy Assistant Secretary of the Air Force (Force Management Integration)). Washington, D.C

[xv] McCormack, G. R., Giles-Corti, B., & Bulsara, M. (2008). The relationship between destination proximity, destination mix and physical activity behaviors. Preventive Medicine, 46 (1), pp. 33-40. http://health-equity.pitt.edu/913/1/09pm.pdf

[xvi] Marshall, W. E., Piatkowski, D. P., & Garrick, N. W. (2014). Community design, street networks, and public health. [Abstract.] Journal of Transport and Health, 1(4), pp. 326-340. Retrieved from: http://www.sciencedirect.com/science/article/pii/S2214140514000486

[xvii] Built Environment and Health Research Group. Neighborhood Walkability. Columbia University. Retrieved from: http://beh.columbia.edu/neighborhood-walkability/; Hamblin, J. (2014). Do We Look Fat in These Suburbs?. The Atlantic. Retrieved from: http://www.theatlantic.com/health/archive/2014/08/blame-the-city/375888/

[xviii] University of Pittsburgh. (2015). Diabetes Risk Test. Retrieved from: http://www.diabetesprevention.pitt.edu/diabetesrisktest.aspx

[xix] University of Pittsburg. (2015). Metabolic Syndrome. Retrieved from: http://www.diabetesprevention.pitt.edu/metabolicsyndrome.aspx

[xx] Taylor M.D., FACP, M. & Bithoney, M.D., FAAP, W. (2012). 10 Steps to Developing a Culture of Health for Hospital and Health Systems. [White paper.] Truven Health Analytics.

[xxi] PreventionPartners. (2015, July). WorkHealthy America Summary Report: Ambassadors for Health, pp. 2.

[xxii] PreventionPartners. (2015, July). WorkHealthy America Summary Report: Ambassadors for Health, pp. 3.

[xxiii] West, Sanders, Cleghorn & Davies, 2010

[xxiv] Campaign for Tobacco-Free Kids. (2014, July 15). Tobacco Use and the Military. Retrieved from: http://www.tobaccofreekids.org/research/factsheets/pdf/0369.pdf

[xxv] National Center for Chronic Disease Prevention and Health Promotion. (2014). Best Practices for Comprehensive Tobacco Control Programs – 2014. Atlanta, GA. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. Retrieved from: http://www.cdc.gov/tobacco/stateandcommunity/best_practices/pdfs/2014/comprehensive.pdf

[xxvi] Ibid.

[xxvii] Healthy Base Initiative Kicking Butts for Points Summary Report. (2015, April). pp. 7.

[xxviii] Healthy Base Initiative Kicking Butts for Points Summary Report. (2015, April). pp. 8.

[xxix] Wholesome Wave. Wholesome Wave's Double Value Coupon Program, Increasing Food Access & Local Farm Business Nationwide: 2009-2012 Outcomes and Trends. [Executive Summary.] Retrieved from: (http://www.wholesomewave.org/wp-content/uploads/2014/07/2012_double_value_coupon_program_executive_summary.pdf

[xxx] United States Senate. (2013). Report # 113-85. Washington, DC: U.S. Government Printing Office.

[xxxi] Donabedian A. (1966). Evaluating the quality of medical care. Milbank Mem Fund Q., 44 (3), [Supplement] pp.166-206.

[xxxii] Mission: Readiness. (2014, September). Retreat is Not an Option. Retrieved from: http://missionreadiness.s3.amazonaws.com/wp-content/uploads/MR-NAT-Retreat-Not-an-Option2.pdf

[xxxiii] Information provided by the Strategy and Innovation Office of Military Community and Family Policy.

[xxxiv] Office of the Assistant Secretary of Defense. (2013). Review of DoD Policies Concerning Farmers Markets on Military Installations (Memorandum for Deputy Assistant Secretary of the Army (Civilian Personnel and Quality of Life), Deputy Assistant Secretary of the Navy (Military Manpower and Personnel), Deputy Assistant Secretary of the Air Force (Force Management Integration)). Washington, D.C.

[xxxv] Davis, B. & Dutzik, T. Transportation and the New Generation - Why Young People Are Driving Less and What It Means for Transportation Policy. Frontier Group, Phineas Baxandall.

[xxxvi] Maury, R. & Stone, B. (2014). Military Spouse Employment Report. Syracuse University Institute for Veterans and Military Families. Retrieved from: http://vets.syr.edu/wp-content/uploads/2014/02/MilitarySpouseEmploymentReport_2013.pdf

[xxxvii] Centers for Disease Control and Prevention. (2011). Health-Related Quality of Life (HRQOL). Retrieved at: http://www.cdc.gov/HRQOL/HRQOL14_measure.htm

[xxxviii] Whittaker KS, Hawkins SA, Perez ALU, Nihil MM. UltimateMe Health-Related Quality of Life Brief Report. Research Facilitation Laboratory, Army Analytics Group. 2015: 1-31.

[xxxix] San Diego Integrated Health Community Portal. NMCSD and NHCP Disclaimers, Copyright and Medical Privacy Notice, and Terms and Conditions of Use of Materials. Retrieved from: https://sd-ihc.communityos.org/cms/disclaimer

[xl] Department of Defense Education Activity. (2014). Requirements for All Foods and Beverages Sold in DoDEA Schools. (Memorandum for DoDEA Area Directors, DoDEA District Superintendents, DoDEA Principals). Alexandria, VA

[xli] DoDI 1010.10, Enclosure 2, para 1f: d. In coordination with the DoD Component heads, periodically reviews the status of non-medical programs initiated in response to References (c) through (f) and the Community Preventive Services Task Force Community Guide (Reference (h)). The review measures management effectiveness and the costs, outcomes, and impacts of these programs.

[xlii] United States Department of Agriculture. Team Nutrition. Retrieved from: http://www.fns.usda.gov/tn/team-nutrition