



Health Program

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Clinician Perspectives on Electronic Health Information Sharing for Transitions of Care

Bipartisan Policy Center Health Information
Technology Initiative

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Doctors Helping Doctors
Transform Health Care





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ABOUT BPC

Founded in 2007 by former Senate Majority Leaders Howard Baker, Tom Daschle, Bob Dole, and George Mitchell, the 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 policy making with strong, proactive advocacy and outreach.

DISCLAIMER

The findings expressed herein are solely based on the results of a survey conducted on behalf Doctors Helping Doctors Transform Health Care and do not necessarily represent the views or opinions of the Bipartisan Policy Center, its founders, or its board of directors; Doctors Helping Doctors Transform Health Care; the American College of Physicians; AmericanEHR Partners and other collaborating medical societies.

A report from Doctors Helping Doctors Transform Health Care

In collaboration with the Bipartisan Policy Center and the following clinician-led organizations

American College of Physicians

American Academy of Pediatrics

American College of Surgeons

AmericanEHR Partners

American Society of Clinical Oncology

Association of Medical Directors of Information Systems

About the Survey

In collaboration with the Bipartisan Policy Center (BPC), the survey was developed and its results analyzed by Doctors Helping Doctors Transform Health Care, a collaborative effort led primarily by doctors, for doctors, to support the transformation of health care through health IT and the American College of Physicians, the largest medical-specialty organization and second-largest physician group in the United States.

The survey was fielded by:

- AmericanEHR Partners, a program founded and managed by the American College of Physicians and Cientis Technologies and with the support of 17 additional medical societies
- American Association of Medical Directors of Information Systems
- American College of Surgeons
- American Academy of Pediatrics

Survey results informed findings and recommendations of the Bipartisan Policy Center report *Accelerating Electronic Information Sharing to Improve Quality and Reduce Costs in Health Care*.

About Doctors Helping Doctors Transform Health Care

Doctors Helping Doctors Transform Health Care is a non-profit, collaborative effort led primarily by doctors—for doctors—to support the transformation of health care, initially through health information technology, given the foundational role it plays in improving the quality, safety, and efficiency of care.

Several non-profit, clinician-led organizations and medical societies collaborate with and provide input to the work of Doctors Helping Doctors. Collaborators include the American Academy of Family Physicians, American College of Cardiology, the American College of Physicians, American Medical Association, the American Osteopathic Association, the American Society of Clinical Oncology, the Association of Medical Directors of Information Systems, and the Physician's EHR Coalition.

About the American College of Physicians and AmericanEHR Partners

The American College of Physicians (ACP) is a national organization of internists—physicians who specialize in the prevention, detection, and treatment of illnesses in adults. ACP is the largest medical-specialty organization and second-largest physician group in the United States. Its membership of 133,000 includes internists, internal medicine subspecialists, and medical students, residents, and fellows.

AmericanEHR Partners is an online resource designed to aid the medical community with the selection, implementation, and effective use of health information technology and electronic health records. It does not endorse any electronic health record vendor. AmericanEHR Partners was founded by the American College of Physicians and Cientis Technologies and is supported by 16 medical societies and five health IT organizations with a combined membership of more than 700,000 clinicians.

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Executive Summary

Health information technology plays a critical role in supporting high-quality, patient-centered, cost-effective care.

New delivery-system and payment models that will help our health care system achieve the triple aim—better health, better experience of care for patients and families, and reduced costs—are now rapidly emerging with leadership by the federal government, the private sector, and states.

These new coordinated, accountable, patient-centered models of care require information technology that can facilitate the effective, efficient, and safe exchange of health information across the multiple clinicians and other provider organizations that deliver and support care for any individual patient. This exchange of information is especially important during transitions of care, when responsibility for a patient's care is "handed off" from one clinician to another.

This report presents the results of a survey of clinicians about their needs and preferences regarding electronic health information: what type of information they want in various care transitions, how they would like to receive it, and how quickly. Their answers constitute invaluable data that will help both the public and private sectors plan, develop, and implement health information-sharing capabilities that effectively meet the needs of clinicians and the patients they serve.

Key Findings

1. A MAJORITY OF CLINICIANS BELIEVE THAT ELECTRONIC EXCHANGE OF HEALTH INFORMATION WILL HAVE A POSITIVE IMPACT ON HEALTH CARE.

A clear majority of clinicians surveyed believe that the electronic exchange of health information across care settings will have a positive impact on improving the quality of patient care, the ability to coordinate care, and the ability to not only meet the demands of new care models, such as the patient-centered medical home and accountable care, but also participate in third-party reporting and incentive programs.

2. ABOUT 70 PERCENT OF CLINICIANS SURVEYED BELIEVE THAT THE LACK OF INTEROPERABILITY AND AN EXCHANGE INFRASTRUCTURE, AND THE COST ASSOCIATED WITH BOTH, ARE MAJOR BARRIERS TO ELECTRONIC INFORMATION SHARING.

More than 70 percent of clinicians surveyed identify lack of interoperability, lack of an information exchange infrastructure, and the cost of setting up and maintaining interfaces and exchanges as a major barrier, preventing clinicians from exchanging information with others.

3. ACCESS TO MEDICATION LISTS AND RELEVANT LABORATORY AND IMAGING TEST RESULTS ARE COMMONLY RECOGNIZED AS HIGH PRIORITIES FOR TRANSITIONS OF CARE.

More than 80 percent of clinicians surveyed believe that medication lists, relevant laboratory test results, and relevant imaging test results are very important or essential types of patient health information to receive during transitions of care.

Not surprisingly, an overwhelming majority of clinicians surveyed also believe that the following are very important or essential:

- A discharge summary (defined as a summary of care provided and changes to the treatment plan) upon a patient's discharge from the hospital.
- A reason for referral when a patient is referred to a consulting clinician.
- A summary of care provided by and treatment plan changes recommended by a consulting clinician for review by the referring clinician.

4. MORE THAN HALF OF RESPONDENTS PREFER THAT INFORMATION THEY VIEW AS "ESSENTIAL" GET "PUSHED" TO THEM, WITH THE ABILITY TO ACCESS THE REST OF THE INFORMATION THROUGH A QUERY.

When asked how they would like to receive or access information from other care settings to support clinical decision making, more than half of clinicians surveyed indicate they would like only the information they characterize as "essential" to be "pushed" to them (e.g., somewhat like secure email), with the ability to access the rest of the information through a query (e.g., look-up function). About 20 percent said they would like all of the information to be "pushed" to them, and about 10 percent said that they would like to receive an alert that the information is available, with the ability to query any of the information needed.

5. TIMELINESS OF INFORMATION IS IMPORTANT. A CLEAR MAJORITY OF CLINICIANS CONSIDER "WITHIN 24 HOURS" TO BE A REASONABLE TIMEFRAME FOR THE EXCHANGE OF INFORMATION WHEN A PATIENT REQUIRES FOLLOW-UP CARE OR IS BEING TREATED FOR AN URGENT PROBLEM.

More than 80 percent of clinicians surveyed consider "immediately" or "within 24 hours" to be reasonable timeframes for the exchange of information when a patient requires follow-up care or is being treated for an urgent problem. More than 70 percent feel that "within 24 hours" or "within three business days" is a reasonable timeframe if the problem is non-urgent and/or no follow-up care is necessary.

6. WHEN UPDATING THE ELECTRONIC HEALTH RECORD WITH INFORMATION RECEIVED FROM AN EXTERNAL SOURCE, CLINICIANS PREFER TO BE ABLE TO SELECTIVELY PICK AND CHOOSE THE INFORMATION THEY WANT INTEGRATED

When asked how they want to update their EHRs (if they currently use them) with information received from an external source, 57 percent of clinicians surveyed said they prefer to selectively "pick and choose" the external information they want to integrate into their own EHR (Figure 15), rather than import all the information (16 percent).

Introduction

Rising costs and inconsistent quality are the primary problems facing the U.S. health care system. When well-designed and implemented, health information technology (IT) plays a critical and foundational role in improving the quality and cost-effectiveness of care.

New delivery-system and payment models that promote higher-quality, cost-effective care are rapidly emerging in the marketplace, spurred by investments by the federal government's Center for Medicare and Medicaid Innovation program; significant leadership by private-sector health plans in collaboration with clinicians, hospitals, and other providers; and state efforts to improve health outcomes and control costs in light of budget pressures.

Health IT and the electronic sharing of health information across the multiple clinicians and other provider organizations that deliver and support care for any individual patient are central and necessary components of coordinated, accountable, patient-centered models of care that are shown to improve quality and reduce costs.

The Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009 brought an unprecedented investment of \$30 billion in health IT to improve the quality, safety, and efficiency of care. A majority of this investment is in the form of incentive payments to hospitals and clinicians through the Centers for Medicare and Medicaid Services' (CMS) Medicare and Medicaid Electronic Health Record (EHR) Incentive Programs—informally known as "Meaningful Use." The just-released final rules associated with Stage 2 of the Meaningful Use Program—which will go into effect in October 2013 for hospitals and January 2014 for eligible professionals—contain many requirements related to the electronic sharing of information to support transitions in care.

In addition, hundreds of new models of care are being implemented all over the country, fueled by investments by the federal government, the private sector, and states. Nearly all of these arrangements require health information to flow across care settings—in many cases, for the first time—to support coordinated, accountable care.

The electronic sharing of health information among clinicians is especially important during transitions in patient care, when responsibility for a patient's care is "handed off" from one provider to another. This may happen when a patient is discharged from the hospital or when a primary care clinician refers a patient to a specialist for a specific health problem. When the treating physician receives appropriate, relevant, and timely information about a patient, he or she is better equipped to provide effective and efficient care.

Most clinicians coordinate with hundreds of other clinicians in any given year. A typical primary physician coordinates with an average of 229 other physicians located in 117 different practices just for Medicare patients.¹ Breakdowns in transitions of care result in gaps and duplications in care, causing unnecessary costs and uneven quality.

But just what kind of information should be shared? What is most useful? How quickly must it be available? And how? These questions are best answered by those who rely on the information to care for patients.

This report presents and discusses the results of a survey of clinicians about what types of electronic health information they want in various care transitions, how they would like to receive it, and how quickly.

Their answers constitute invaluable data that will help the public and private sectors plan, develop, and implement health information-sharing capabilities that effectively meet the needs of clinicians and the patients they serve.

The survey was designed with two main goals in mind:

1. To gain an understanding of clinician needs and preferences regarding electronic health information sharing necessary to support transitions in care.
2. To ensure that clinician preferences inform the public and private sectors as they develop the policies, systems, and infrastructure needed to support electronic health information exchange across settings.

The survey asks clinicians to think about their health information needs and preferences in three scenarios: when a patient in their care is discharged from the hospital, when they are caring for a patient referred to them by another physician, and when they refer a patient of theirs to another physician. Respondents are asked to rate the importance of receiving specific types of information, as well as how they would like to receive it and when.

About the Survey Respondents

The clinicians who responded to the survey are predominately primary care providers who work in practice settings that include ten physicians or less and who are electronic health record (EHR) users. A detailed analysis of the survey population is summarized below.

Specialties Represented

The clinicians who responded to the survey are predominantly primary care clinicians followed by specialty clinicians in medicine and surgery. Fifty-one percent of survey respondents identified their specialty as primary care, while 32 percent identified themselves as having a medical specialty, followed by 15 percent who identified themselves as having a surgical specialty. The remaining 2 percent identified themselves as "other."

Practice Size

Figure 1. Primary Work Setting

As outlined below, more than half (58 percent) of respondents work in settings that have five physicians or fewer. A clear majority (74 percent) of respondents work in settings that have ten or fewer physicians.

PRACTICE SIZE	PERCENTAGE
100+ Physicians	11%
21-100 Physicians	9%
11-20 Physicians	6%
6-10 Physicians	16%
2-5 Physicians	34%
1 Physician	24%
Total	100%

A chart showing the distribution of practice sizes. The data is presented in a table above. Brackets on the right side group the data into three categories: '58%' covers the first four rows (100+ Physicians down to 6-10 Physicians); '74%' covers the first five rows (100+ Physicians down to 2-5 Physicians); and the final row 'Total' covers the entire 100%.

Figure 2.

About half of survey respondents work in a private ambulatory care office, with the remaining half working in a variety of settings. Respondents' primary work settings break down as follows:

PRIMARY WORK SETTING	%
Private ambulatory care office	49%
Academic medical center	15%
Private community hospital	10%
Multi-specialty clinic	9%
Community health center or clinic	9%
Other	8%

Figure 3. Electronic Health Record Usage

Nearly three-quarters of respondents already use EHRs, as shown below.

USE OF EHR	%
Yes	71%
Yes, but looking for a new one	4%
Purchased but not yet implemented	8%
No	17%

Figure 4.

Forty-four percent of those who use EHRs have used them for more than five years; 31 percent for one to five years; and 26 percent for less than one year.

LENGTH OF USE OF EHR (IF APPLICABLE)	%
Less than one year	26%
One to five years	44%
More than five years	31%

Survey Findings

A majority of clinicians believe that electronic exchange of health information will have a positive impact on health care.

A clear majority of clinicians surveyed believe that the electronic exchange of health information across care settings will have a positive impact on improving the quality of patient care (80 percent), the ability to coordinate care (80 percent), and the ability to not only meet the demands of new care models, such as the patient-centered medical home and accountable care (78 percent), but also participate in third-party reporting and incentive programs (72 percent).

More than half of clinicians surveyed believe that the electronic exchange of information will have a positive impact on improving efficiencies in their practice setting (69 percent) and reducing health care costs (57 percent).

Figure 5. Clinician Views on the Effects of Electronic Exchange of Information

AREA OF IMPACT	PERCENTAGE OF CLINICIANS WHO PERCEIVED SOMEWHAT OR VERY POSITIVE IMPACT
Improving the quality of patient care	80%
Ability to coordinate care	80%
Meeting the demands of new care models (e.g., patient-centered medical home, accountable care)	78%
Third-party reporting (e.g., quality reporting, public health reporting, etc.)	72%
Ability to participate in incentive programs	72%
Improving efficiencies in my practice setting	69%
Reducing health care costs	57%

Clinicians were asked what effect they believed the electronic exchange of health information across care settings would have on the areas identified above. Response options included: "very negative," "somewhat negative," "no effect," "somewhat positive," and "very positive."

The American Academy of Pediatrics fielded the same survey in September 2012, with similar results, with a majority (80 percent) of those surveyed believing that the electronic exchange of health information across care settings will have a positive impact on improving the quality of patient care as well as the ability to coordinate care, meet the demands of new care models, and participate in third-party reporting and incentive programs.

About 70 percent of clinicians surveyed believe that the lack of interoperability and exchange infrastructure, and the cost associated with both, are major barriers to electronic information sharing.

Far more than any other issues, clinicians cite lack of interoperability between EHR systems (i.e., the inability of different EHR systems to “communicate” with one another), the lack of an information exchange infrastructure, and the cost of setting up and maintaining interfaces and exchanges as major barriers that prevent clinicians from electronically sharing information to support clinical care.

As noted in Figure 6, more than 70 percent of clinicians surveyed identified these issues as major barriers, followed by 25 percent of clinicians who cited concerns about liability, privacy, and security as major barriers.

Figure 6. What Barriers or Issues Are Preventing You From Electronically Sharing Clinical Information?

BARRIER	MAJOR BARRIER	MINOR BARRIER	MAJOR OR MINOR	NOT A BARRIER
Inability for my EHR to communicate electronically with other systems (lack of interoperability)	71%	17%	88%	12%
Lack of information exchange infrastructure	71%	17%	88%	12%
Cost of setting up and maintaining interfaces and exchanges	69%	17%	86%	14%
Concerns about the liability associated with not acting on the clinical data made available	25%	42%	67%	33%
Concerns about privacy and security	25%	39%	64%	36%
Concerns specifically about HIPAA	22%	36%	58%	42%
No business case to justify exchanging information (e.g. no financial incentive)	22%	30%	52%	48%
Lack of ability to use the information given limitation of time	19%	35%	54%	46%
Tradition (we just haven't done it in the past)	16%	32%	48%	52%
State policies which limit the exchange of health information	14%	35%	49%	51%
Concern that I can't trust the data	8%	31%	39%	61%
Concerns about physician self-referral and anti-kickback laws	7%	25%	32%	68%

Clinicians were asked, “If they are not exchanging clinical information electronically with other clinicians, hospitals, laboratories, or other settings at any significant level today, what issues or barriers are preventing them from doing so?” Response options included: “major barrier,” “minor barrier,” and “not a barrier.”

The survey of pediatricians yielded similar results. More than 70 percent of pediatricians surveyed cite lack of interoperability between EHR systems (i.e., the inability of different EHR

systems to “communicate” with one another), the lack of an information-exchange infrastructure, and the cost of setting up and maintaining interfaces and exchanges as major barriers that prevent clinicians from electronically sharing information to support clinical care.

A survey of the members of the American Society of Clinical Oncologists in 2011 revealed similar results. Fifty-one percent of oncologists surveyed were either unsatisfied or very unsatisfied with the data interoperability of their EHRs with other systems, while 3 percent were very satisfied and 8 percent were satisfied.²

Further, 52 percent of oncologists surveyed indicated that the “lack of ability to communicate with current systems” was a factor that contributed to their non-use of an EHR, with 22 percent citing this issue as a primary factor and 32 percent citing this issue as a factor. An additional 34 percent of those surveyed identified this issue as a concern (but not a factor for non-use of the EHR).³

Access to medication lists and relevant laboratory and imaging test results are commonly recognized as high priorities for transitions of care.

The survey asks clinicians to share insights about their health information needs and preferences in three scenarios: (1) when a patient in their care is discharged from the hospital, (2) when they are caring for a patient referred to them by another physician, and (3) when they refer a patient of theirs to another physician.

Across all three scenarios, clinicians on average rate medication lists, relevant laboratory test results, and relevant imaging test results as very important or essential types of patient health information to receive during transitions of care. In addition, other information needs surfaced—specific to each scenario. A description of information needs identified by the survey for each type of care transition is provided below.

SCENARIO 1: INFORMATION NEEDED UPON HOSPITAL DISCHARGE

In 2010, there were nearly 35 million discharges from U.S. nonfederal hospitals.⁴ When patients leave the hospital, their primary care physicians need comprehensive, timely, and accurate information about their treatment during hospitalization and their discharge instructions in order to provide appropriate, effective, and timely follow-up care.

Survey participants were asked this question: “When a patient under your care is discharged from a hospital, what information do you want to receive?” and given a list of possible responses. To describe the relative importance of the different types of information listed, respondents could choose from a five-point Likert scale, with responses ranging from 1=not important to 5=essential.

As shown in Figure 3, on average, clinicians surveyed rated the following types of information very important or essential:

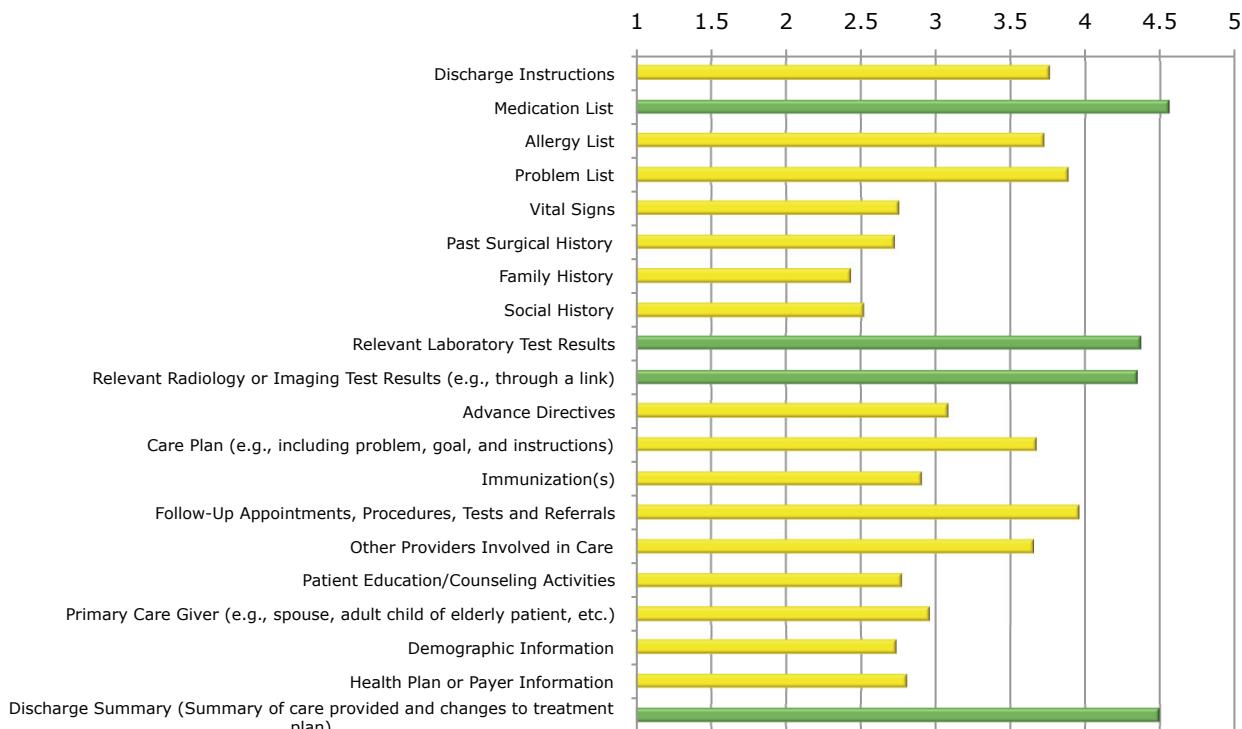
- Medication list (4.6 average rating, with 88 percent of clinicians surveyed rating this as very important or essential).
- Discharge summary, defined as a summary of care provided and changes to treatment plan (4.5 average rating, with 88 percent of clinicians surveyed rating this as very important or essential).
- Relevant laboratory test results (4.4 average rating, with 85 percent of clinicians surveyed rating this as very important or essential).
- Relevant radiology or imaging test results (e.g., through a link) (4.4 average rating, with 84 percent of clinicians surveyed rating this as very important or essential).

Respondents from primary care, medical specialties, and surgical specialties are fairly consistent in how they prioritize their information needs.

Pediatricians surveyed also rate the four above-identified types of information as very important and essential, along with problem lists and follow-up appointments, procedures, tests, and referrals. A clear majority of pediatricians also believe that prenatal and birth history are very important or essential, and, for newborns, birth weight and gestational age.

Figure 7. When a patient under your care is discharged from the hospital, what information do you want to receive?

Based on 5 point Likert scale (1=not important, 5= essential)



Clinicians were asked, "When a patient under your care is discharged from the hospital, what information do you want to receive?" Response options included: 1=not important, 2=somewhat important, 3=important, 4=very important, 5=essential.

SCENARIO 2: INFORMATION NEEDED WITH REFERRAL REQUEST

Primary care clinicians are referring more and more patients to specialists for care. Between 1999 and 2009, the probability that an ambulatory visit would result in a referral increased 94 percent. The absolute number of visits resulting in a referral increased 159 percent, from 41 million to 105 million.⁵ Specialists who receive these referral requests need relevant information about referred patients in a timely manner in order to provide effective, appropriate, and coordinated care.

Survey participants were asked, "What information do you want to receive from a referring clinician, in addition to the referral request?" To describe the relative importance of the different types of information listed, respondents could choose from a five-point Likert scale: with responses ranging from 1=not important to 5=essential.

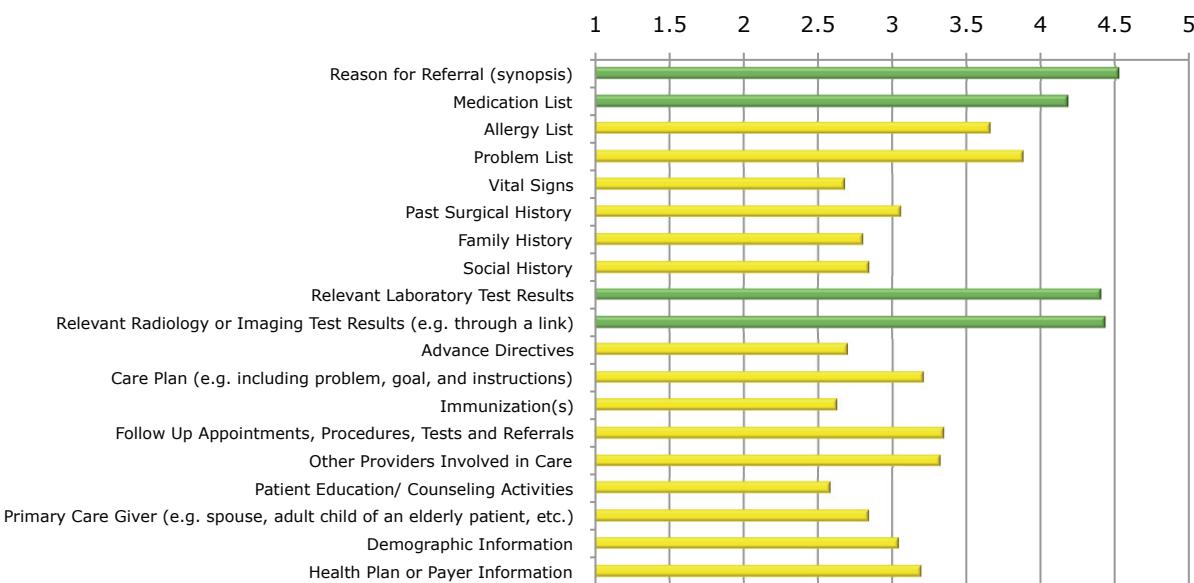
As shown in Figure 8, on average, clinicians surveyed rated the following types of information very important or essential:

- Reason for referral (4.5 average rating, with 87 percent of clinicians surveyed rating this as very important or essential).
- Relevant laboratory test results (4.4 average rating, with 85 percent of clinicians surveyed rating this as very important or essential).
- Relevant radiology or imaging test results (e.g., through a link) (4.4 average rating, with 85 percent of clinicians surveyed rating this as very important or essential).
- Medication list (4.2 average rating, with 80 percent of clinicians surveyed rating this as very important or essential).

Respondents from primary care, medical specialties, and surgical specialties—including pediatricians surveyed—have similar information priorities, although primary care clinicians and pediatricians are more likely to view problem lists as very important or essential than medical specialty or surgical specialty respondents. A large majority of pediatricians surveyed also view birth weight and gestational age, if newborn, as very important or essential.

Figure 8. What information do you want to receive from a referring clinician, in addition to the referral request?

Based on 5 point Likert scale (1=not important, 5= essential)



Clinicians were asked, "What information do you want to receive from a referring clinician, in addition to the referral request?" Response options included: 1=not important, 2=somewhat important, 3=important, 4=very important, 5=essential.

SCENARIO 3: RECEIVING INFORMATION FROM A CONSULTING CLINICIAN

When primary care clinicians refer their patients to specialists for care, they do not relinquish their role as the patient's primary provider. Ideally, specialists and primary care clinicians work collaboratively to coordinate care for their shared patient. Effective teamwork among clinicians who care for the same patient requires sharing accurate and appropriate information in a timely manner.

Survey participants were asked, "What information do you want to receive back from a consulting clinician?" To describe the relative importance of the different types of information listed, respondents could choose from a five-point Likert scale, with responses ranging from 1=not important to 5=essential.

As shown in Figure 9, on average, clinicians surveyed rated the following types of information very important or essential:

- Summary of care provided by the consulting clinician and treatment changes (4.7 average rating, with 94 percent of clinicians surveyed rating this as very important or essential).
- Relevant laboratory test results (4.4 average rating, with 83 percent of clinicians surveyed rating this as very important or essential).

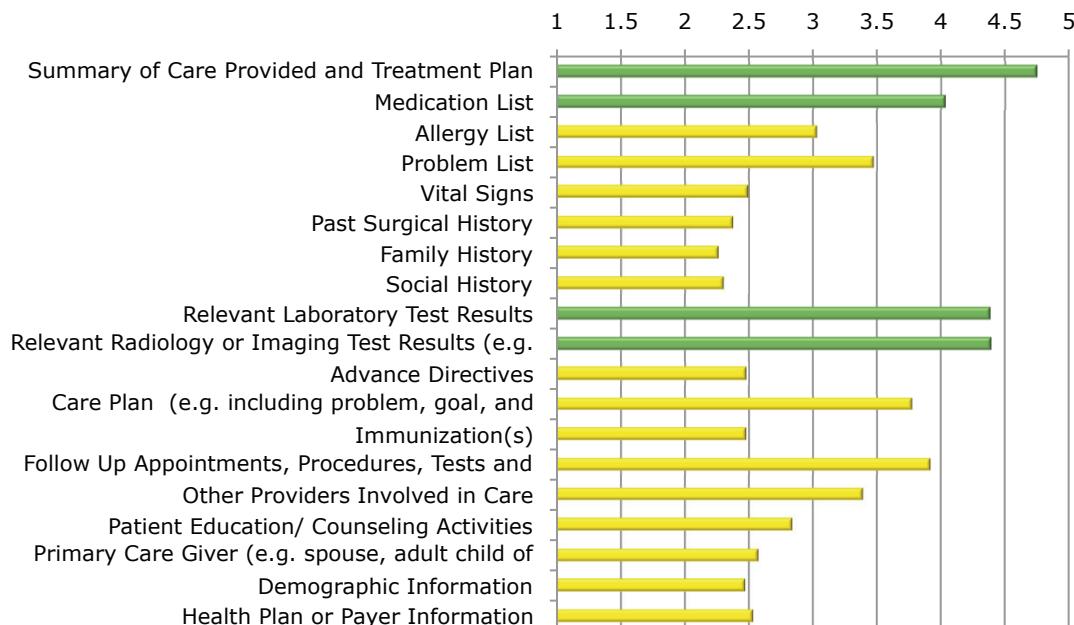
- Relevant radiology or imaging test results (e.g., through a link) (4.4 average rating, with 84 percent of clinicians surveyed rating this as very important or essential).
- Medication list (4.0 average rating, with 73 percent of clinicians surveyed rating this as very important or essential).

It is important to note that the term “summary of care” is a term of art used in the medical profession. At the same time, requirements under the Centers for Medicare and Medicaid EHR Incentive Program call for the use of a summary of care record and are prescriptive regarding the data elements to be included in such a summary. Survey results do not necessarily mean that 94 percent of clinicians view the summary of care record as defined by CMS to be very important or essential.

Respondents from primary care, medical specialties, and surgical specialties prioritize the information needs roughly the same. Pediatricians surveyed also view problem lists and, if newborn, birth weight and gestational age, as very important or essential.

Figure 9. What information do you want to receive back from a consulting clinician?

Based on 5 point Likert scale (1=not important, 5= essential)



Clinicians were asked, “What information do you want to receive back from a consulting clinician?” Response options included: 1=not important, 2=somewhat important, 3=important, 4=very important, 5=essential.

More than half of respondents prefer that information they view as “essential” get “pushed” to them, with the ability to access the rest of the information through a query.

One of the critical issues related to electronic health information sharing on which there is not widespread agreement is the method by which clinicians should receive or access information critical to clinical decision making.

In addition to exploring priorities for the types of information needed to support transitions of care, the survey asks clinicians to indicate how they would like to receive or access health information in each of the same three scenarios: when a patient in their care is discharged from the hospital, when they are caring for a patient referred to them by another physician, and when they refer a patient of theirs to another physician.

Response options included the following:

1. Have only the information characterized as “essential” above “pushed” to me; have the ability to access the rest of the information through a “query,” which enables me to look up the patient’s information.
2. Have only the “essential” information “pushed” to me; don’t need the ability to access the rest of the information through a “query.”
3. Have all of the information (essential and otherwise) “pushed” to me.
4. Alert me that the transition has occurred and the information is available; have the ability to access all information through a “query” if I wish to receive more information.
5. I don’t know.

Across all three scenarios, more than half (55 percent) of clinicians surveyed indicate they would like only the information they characterize as “essential” to be “pushed” to them (e.g., somewhat like secure email), with the ability to access the rest of the information through a query (e.g., look-up function). About 20 percent said they would like all of the information to be “pushed” to them and about 10 percent said that they would like to receive an alert that the information is available, with the ability to query any of the information needed.

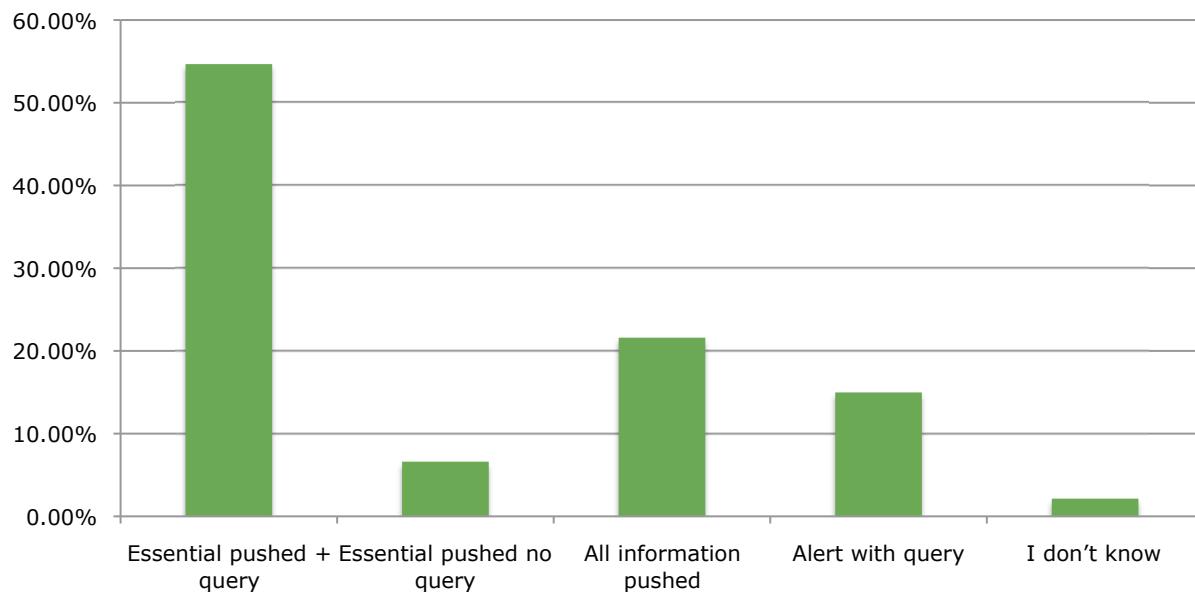
A summary of clinician preferences for how they would like to receive or access electronic health information from other care settings for each of the three care transition scenarios is provided below.

SCENARIO 1: PREFERRED METHODS OF ACCESS TO INFORMATION UPON HOSPITAL DISCHARGE

Clinicians were asked how they would like to receive or access information from a hospital that has discharged one of their patients. More than half (55 percent) of survey respondents want only the information they view as “essential” to be “pushed” to them from the hospital (e.g.,

similar to secure email) and would like to access the rest of the information through a query (e.g., similar to a look-up function). Twenty-two percent of respondents would like all the information to be pushed to them, and 15 percent indicate they would like to receive an alert that one of their patients has been discharged from the hospital, with the ability to access all of the information through a query. Seven percent of respondents said they would like only the essential information about referred patients and don't need the option of accessing additional information through a query (Figure 10). Results from the survey of pediatricians were fairly consistent with the results outlined above, although a greater percentage of pediatricians prefer to have "pushed" to them only the information they view as "essential," with the ability to access the rest of the information through a query.

Figure 10. When receiving information from a hospital that has discharged one of your patients, how would you like to receive/access the information?



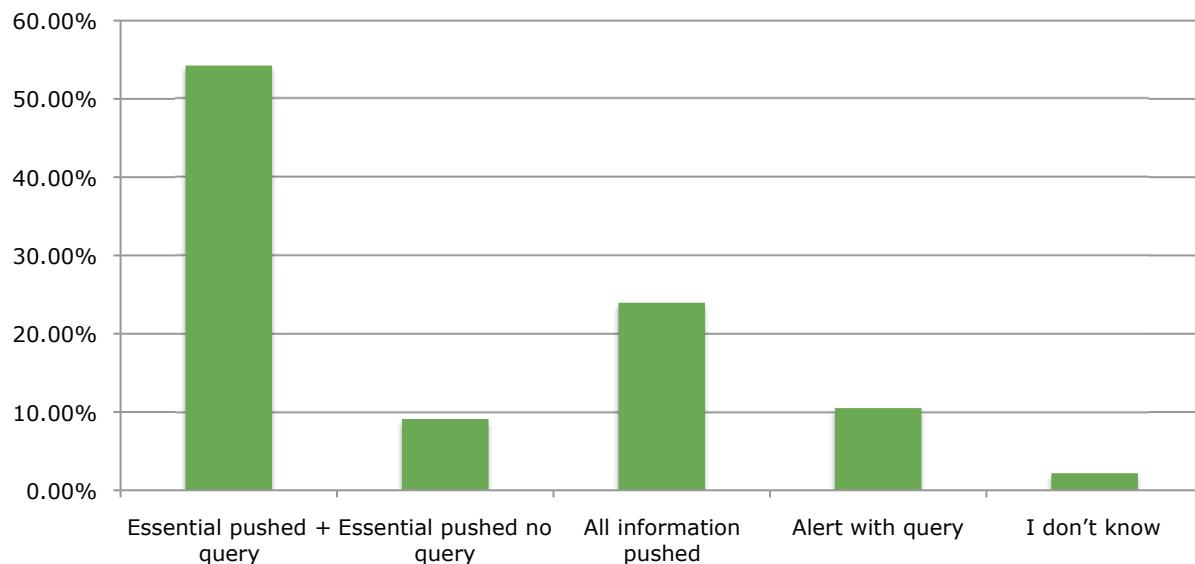
Clinicians were asked, "When receiving information from a hospital that has discharged one of your patients, how would you like to receive/access the information identified above?"

SCENARIO 2: PREFERRED METHODS OF ACCESS TO INFORMATION UPON REFERRAL

Clinicians were asked how they would like to receive or access information that supports a referral request. More than half (54 percent) of clinicians surveyed said they would like essential information about patients to be "pushed" to them from the referring clinician, with the ability to access the rest of the information through a query. Nearly a quarter (24 percent) of respondents said they would like all information about the patient "pushed" to them, and 10 percent said they would like to receive an alert when a patient has been referred to them, with the ability to access all the information through a query. Nine percent of respondents said they would like only the essential information about referred patients, and don't need the option of

accessing additional information through a query (Figure 11). Results from the survey of pediatricians are fairly consistent with the results outlined above.

Figure 11. When receiving information to support a referral request, how would you like to receive/access the information identified above?

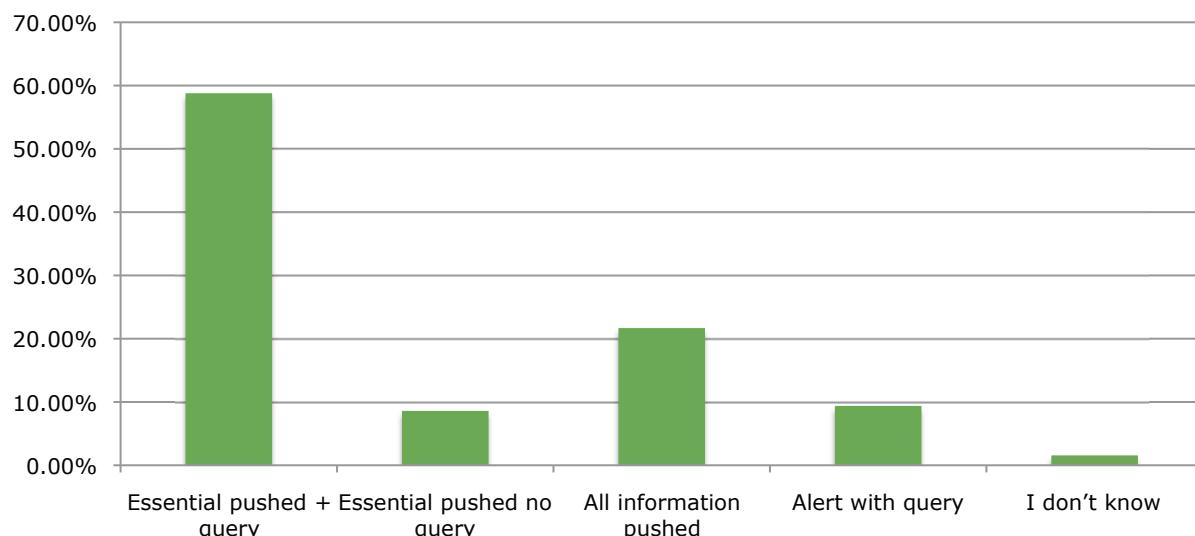


Clinicians were asked, "When receiving information to support a referral request, how would you like to receive/access the information identified above?"

SCENARIO 3: PREFERRED METHODS OF ACCESS TO INFORMATION FROM CONSULTING CLINICIAN

Clinicians were asked how they would like to receive/access information from a consulting clinician. More than half of clinicians surveyed (59 percent) said they would like the essential information to be "pushed" to them from the referring clinician, with the ability to access the rest of the information through a query; 22 percent indicated that they would like all information to be "pushed" to them from the referring clinician; 9 percent would like to receive an alert that indicates that a consulting report has been received, with the ability to access all of the information through a query; and another 9 percent said they would like only the essential information pushed to them and don't need the ability to access the rest of the information through a query. Results from the survey of pediatricians were fairly consistent with the results outlined above, although a greater percentage of pediatricians prefer to have "pushed" to them only the information they view as "essential," with the ability to access the rest of the information through a query.

Figure 12. When receiving a report from a consulting clinician, how would you like to receive/access the information identified above?



Clinicians were asked, "When receiving a report from a consulting clinician, how would you like to receive/access the information identified above?"

Timeliness of information is important. A clear majority of clinicians consider "within 24 hours" to be a reasonable timeframe for the exchange of information when a patient requires follow-up care or is being treated for an urgent problem.

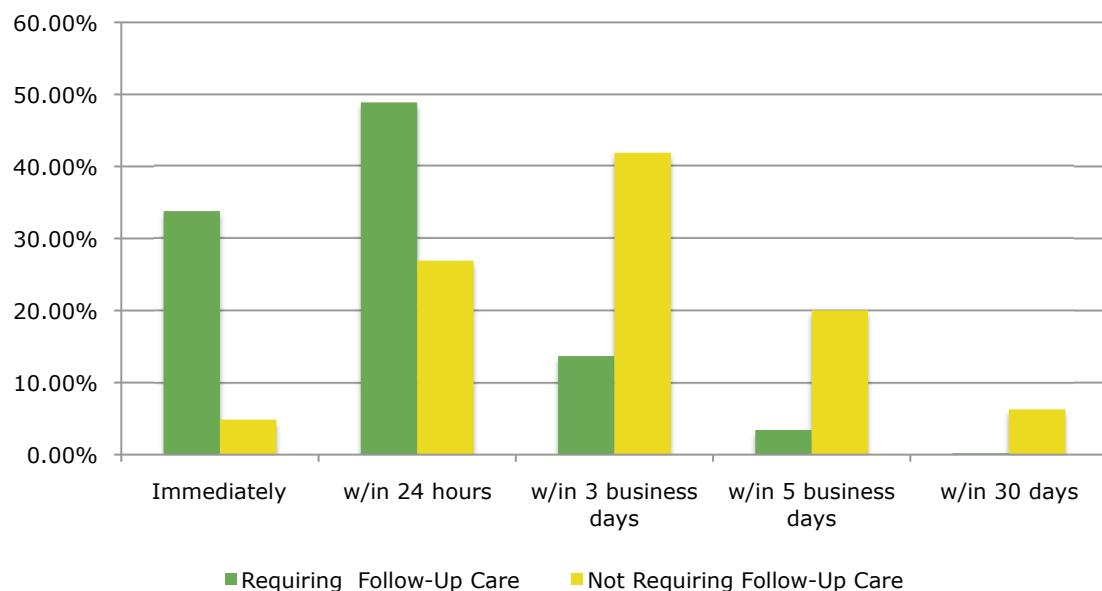
Across all three scenarios, more than 80 percent of clinicians surveyed consider "immediately" or "within 24 hours" to be reasonable timeframes for the exchange of information when a patient requires follow-up care or is being treated for an urgent problem. More than 70 percent feel that three business days or less is a reasonable timeframe if the problem is non-urgent and/or no follow-up care is necessary.

A summary of clinician views on what they would consider a reasonable timeframe for information to be exchanged in each of the three care transition scenarios is provided below.

SCENARIO 1: TIMELINESS OF INFORMATION UPON HOSPITAL DISCHARGE

Clinicians want information about their discharged patients in a timely manner, particularly when a patient requires outpatient follow-up care. Thirty four percent of clinicians indicate that they want this information immediately, while 49 percent indicate that they want this information within 24 hours of discharge. If follow-up care is not required, 32 percent said they want discharge information within 24 hours of discharge, and 42 percent say they want it within three business days or less (Figure 13).

Figure 13. What is a Reasonable Timeframe for Receiving Information After a Patient Under Your Care is Discharged?



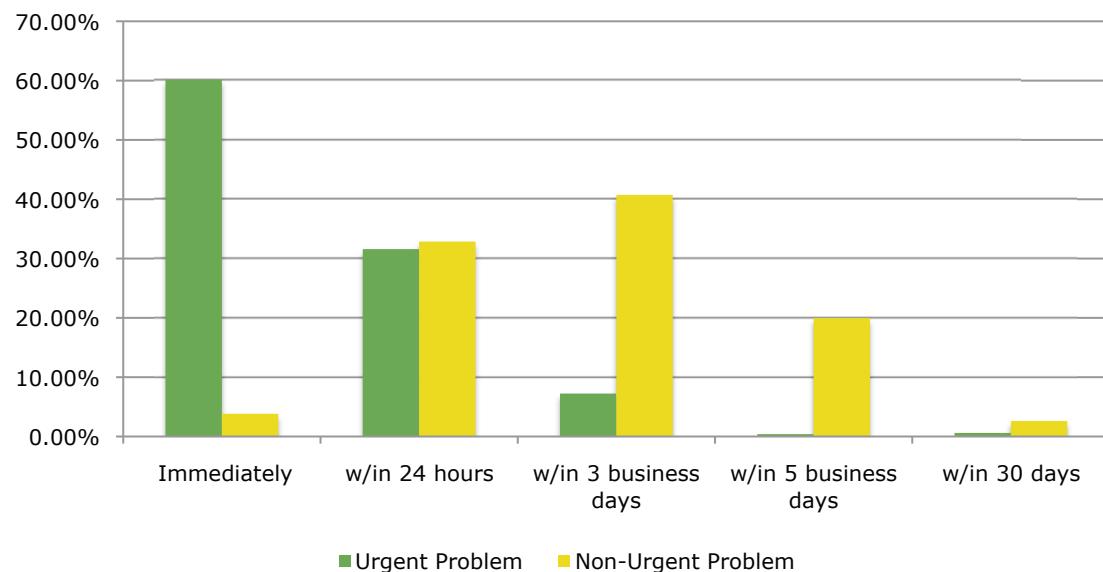
Clinicians were asked what they consider a reasonable timeframe for information to be exchanged when a hospital is sending information upon discharge to a clinician for an existing patient that (1) requires follow-up care and (2) does not require follow-up care.

Results from the survey of pediatricians are fairly consistent with the results outlined above.

SCENARIO 2: TIMELINESS OF INFORMATION FOR REFERRAL REQUEST

Once a clinician receives a referral request, he or she wants information about the patient in a timely manner. Sixty percent of clinicians surveyed indicate that, when a patient is referred to them for an urgent problem, they want the patient information immediately; while 32 percent indicate they want the information within 24 hours of the referral request. If the patient's problem is non-urgent, 37 percent of respondents say they want information within 24 hours while 41 percent say they want the information within three business days or less (Figure 14).

Figure 14. Timeframe for Receiving Information After a Referral Request Has Been Sent



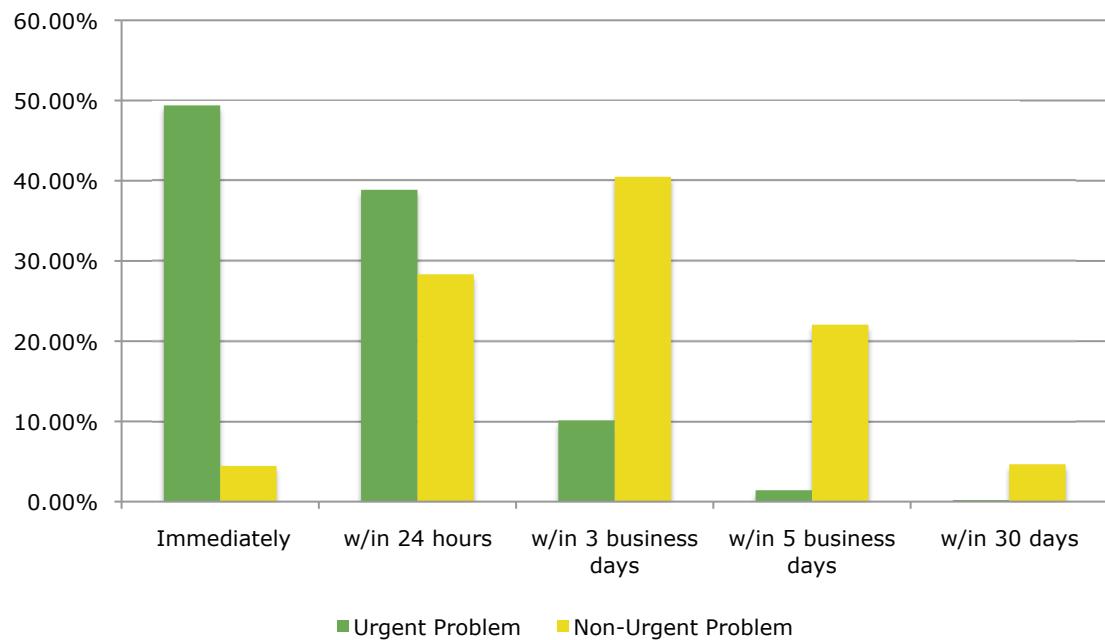
Clinicians were asked what they consider a reasonable timeframe for information to be exchanged when a clinician is referring a patient to a consulting clinician for (1) an urgent problem or (2) non-urgent problem.

Results from the survey of pediatricians are fairly consistent with the results outlined above.

SCENARIO 3: TIMELINESS OF RECEIPT OF INFORMATION FROM A CONSULTING CLINICIAN

Once a clinician receives a referral, he or she wants information about the patient from the consulting clinician as soon as the visit is performed—particularly if the referral was for an urgent problem. Forty-nine percent of clinicians who refer patients to specialists for an urgent problem want to receive information from the consulting physician immediately; while 39 percent want it within 24 hours. For non-urgent needs, 33 percent indicate they want the consulting physician's report within 24 hours, and 40 percent want it within three business days or less (Figure 15).

Figure 15. Timeframe for Receiving a Consultation Report



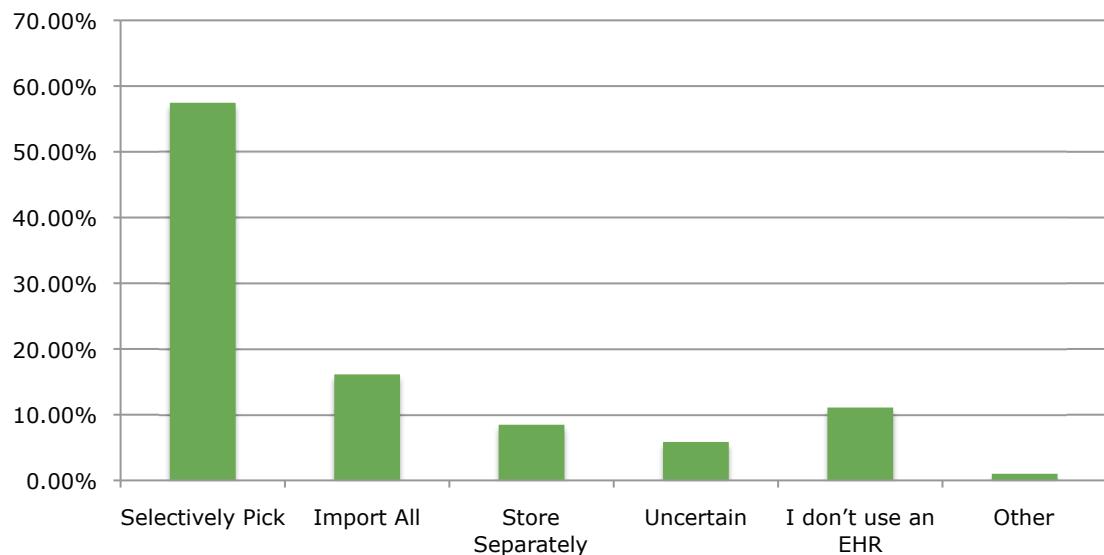
Clinicians were asked what they consider a reasonable timeframe for information to be exchanged, when a consulting clinician is sending information to a referring clinician for a patient that has been referred for (1) an urgent problem or (2) non-urgent problem.

Results from the survey of pediatricians are fairly consistent with the results outlined above.

When updating the electronic health record with information received from an external source, clinicians prefer to be able to selectively pick and choose the information they want integrated.

When asked how they want to update their EHRs (if they currently use them) with information received from an external source, 57 percent of clinicians surveyed said they prefer to selectively “pick and choose” the external information they want to integrate into their own EHR (Figure 16), rather than import all the information (16 percent). Results from the survey of pediatricians are fairly consistent with these results.

Figure 16. When you are updating your EHR with the information you receive from an external source, which approach would you prefer?



Clinicians were asked, "When they are updating their EHR with the information they receive from an external source, which would they prefer?"

Survey Methodology

The survey was developed by the American College of Physicians and Doctors Helping Doctors Transform Health Care using an iterative process in which consensus was reached by several groups of physicians with expertise in health IT and care transitions. These groups were presented with at least three iterations of the survey. Feedback was received through group meetings, one-on-one phone conversations with participants, and by email. Input was also sought from other health IT stakeholders including EHR vendors.

The survey was fielded via a number of different mechanisms including:

- AmericanEHR Partners Research Panel opt-in list made up of 3,435 individuals.
- AmericanEHR Partners newsletter and announcement lists (an additional 3,689 individuals).
- American College of Surgeons weekly newsletter “NewsScope” which included approximately 36,000 ACS members.
- Association of Medical Directors of Information Systems (AMDIS) via a listserv, which included more than 2,000 members.
- American Academy of Pediatrics email list for the American Academy of Pediatrics’ Council on Clinical Information Technology, which included approximately 250 recipients.

As such, the results presented represent a convenience sample.

The sample shows a bias toward individuals who were using an EHR (75 percent) at the time of the survey compared with 55 percent nationally as determined by the National Center for Health Statistics (NCHS) in “Physician Adoption of Electronic Health Record Systems: United States, 2011.”⁶

Given the nature of the AmericanEHR Partners research panel, where the majority of participants join as part of a survey on EHR satisfaction and the nature of AMDIS membership, it is not surprising that there is a bias toward individuals who have already adopted EHRs.

The other characteristics of the respondents generally match that of data released by NCHS (for 2009 data⁷, the most recent data available as of September 2012) with only a slight oversampling of individuals in larger practice. Given these differences, we caution against the extrapolation of the results to US physicians as a whole.

Results were collected between June 6 and August 21, 2012, for all mechanisms except those related to the American Academy of Pediatrics. Results for the American Academy of Pediatrics-fielded survey were collected between September 5 and September 18, 2012.

Responses were received from 725 individuals and 198 of these responses were excluded.
Responses were excluded for the following reasons:

- Lack of completeness
- Non U.S. residents
- Non Clinicians (EHR vendors and advertisers)

Endnotes

¹ Pham H.H., O'Malley A.S., Bach P.B., et al. (2009). Primary Care Physicians' Links To Other Physicians Through Medicare Patients: The Scope Of Care Coordination. *Annals of Internal Medicine*. 150(4):236-242.

² American Society of Clinical Oncology. Derived from a health information technology survey fielded in February 2011. The survey was sent to 10,551 email addresses; 388 responses were received.

³ American Society of Clinical Oncology. Derived from a health information technology survey fielded in February 2011. The survey was sent to 10,551 email addresses; 388 responses were received.

⁴ Center for Disease Control and Prevention. (2010) Number, Rate, And Average Length Of Stay For Discharges From Short-Stay Hospitals, By Age, Region, And Sex: United States, 2010. Available at: http://www.cdc.gov/nchs/data/nhds/1general/2010gen1_agesexalos.pdf.

⁵ Barnett M.L., Song Z., Landon B.E. (2012) Trends in Physician Referrals in the United States, 1999-2009. *Archives of Internal Medicine*. January 23. Available at: <http://archinte.jamanetwork.com/article.aspx?articleid=1108675>.

⁶ Jamoom, E., Beatty, P., Bercovitz, A., Woodwell, D., Palso, K. and Rechtsteiner, E. (2012) *Physician adoption of electronic health record systems: United States, 2011. NCHS data brief, no. 98*. Hyattsville, MD: National Center for Health Statistics.

⁷ National Center for Health Statistics. (2009). *National ambulatory medical care survey: 2009 summary tables*. Hyattsville, MD: National Center for Health Statistics.
http://www.cdc.gov/nchs/data/ahcd/namcs_summary/2009_namcs_web_tables.pdf



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