

Transforming Patient Engagement:

Health IT in the Patient Centered Medical Home

October 2010

*A compendium of resources from
the Patient Engagement task force of
the Patient-Centered Primary
Care Collaborative*



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Acknowledgments

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Dear Colleagues:

The PCPCC is an open forum where health care stakeholders freely communicate and work together to improve the future of the American health system. The PCPCC works with a broad array of stakeholder organizations and individuals who share the belief that the patient centered medical home (PCMH) offers a model for foundational transformation of the way health care is delivered in our nation. Since its inception, the PCPCC has recognized the importance of engaging the consumer as an active partner in his or her health care and health management.

This compendium of consumer engagement resources traces its beginnings back to an earlier PCPCC publication, *Meaningful Connections*. Although that resource focused on the use of health IT to support the patient centered medical home, the productive conversations it spurred about consumer engagement laid the groundwork for creation of a work group within the PCPCC Center for eHealth Information Adoption and Exchange (CeHIA) that emphasizes consumer engagement, the Participatory Engagement Program (PEP).

PEP was formed in 2009 to seek ways to broaden the involvement of patients, families, physicians and other care team members through the use of technology. The team developed a conceptual Framework, included in this compendium, which served as a springboard to identify and develop other resources to help primary care practices improve patient engagement and activation. All contributions to this report were made by volunteers.

The purpose of these resources is to support all stakeholder efforts in improved patient and family engagement. Primary care providers, patients, caregivers, health IT developers, policy makers, employers and the broad spectrum of clinical team members are addressed in these pages. The compendium includes 15 core articles and 23 case examples demonstrating consumer engagement activities from across the nation. We have also included a master resource list of patient engagement organizations as well as tools in the Appendices that practices can use immediately to advance patient engagement.

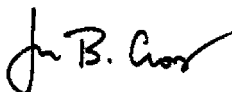
We hope you find these efforts to engage patients and their families in the medical home to be useful and effective in reaching PCPCC goals.

Sincerely,



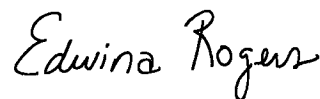
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Foreword

For the better part of the last 20 years, much has been made about getting patients to take better care of themselves. We know it's key to a healthier nation. Many "patient engagement" strategies have been tried, but the country still struggles with unreasonably high rates of chronic conditions and the life-changing complications they cause.

Why is that?

We've tried the same things for years, and it hasn't worked. That's because the health care system is not set up well to support powerful, effective engagement. We can no longer just say we want patient engagement and expect it to happen. Real engagement requires real change in systems, culture and behavior—by both providers and patients. And it must be premised on a new provider mindset, where clinicians cannot continue to assume they know what patients want and need without talking (e.g., engaging) with patients themselves.

It's time for new attempts and new innovations. This guide will help providers do just that.

There is good evidence that better patient engagement isn't just the right thing to do—it also helps providers improve their quality and outcomes of care, and lower costs. Better outcomes and lower costs are the hallmarks of the delivery system reform provisions of the health reform bill passed by Congress in 2010. Looking through the lens of what our future health care system should be like, patient engagement is actually a key way to set providers up for success, not only under the medical home model, but also under future reform initiatives, like value-based purchasing, accountable care organizations and the meaningful use of health information technology.

But for innovations to take hold, we have to know whether these strategies are working for patients and their families. That requires two things:

► First, there is no better measure of patient engagement than assessing individual patients' experiences with their care. We know from research that better patient experience yields better health outcomes, and experience surveys are the best tools we have for assessing the impact of

care for the highest-need, highest-cost patients. As providers implement the strategies contained in this guide, surveying patients will give providers direct feedback on how those strategies are working and whether they're meaningful, so that providers know they're investing their limited time and energy in the strategies mostly likely to yield big dividends.

► Second, providers should involve patients in the design of their medical home itself. That means involving patients, family members and consumer organizations in deciding how the medical home should work or is working. Efforts to create patient and family advisory councils, conduct focus groups and interviews with patients, and other ways to solicit their input into the way the care is delivered will pay the biggest dividends of all. After all, to be patient-centered means not just doing effective engagement of patients in their care, but actually involving them on a routine basis in designing the care process itself.

The bottom line is this: You can't be patient-centered without both patient engagement and patient involvement in the way care is provided. This guide is a great way for providers to get started or to strengthen their existing efforts in both areas.

—**Christine Bechtel**

National Partnership for Women & Families

Overview

A key principle of the patient centered medical home is that it should be patient centered, and it seems clear that more and better patient engagement contributes to achieving this goal. But what exactly is patient engagement, and what can primary care teams do to improve it? We come to grips with both these questions in this resource guide. As a starting point, we should clarify that we're focused here on helping primary care clinicians enhance the health and healing relationships that exist between themselves and their patients. To this end, we examine patient engagement in the process of care delivery, and the Framework for Patient and Family Engagement provides a broad model for thinking about this. We don't suggest that this framework is perfect, only that it's a useful and fairly comprehensive one for primary care teams trying to grapple with these challenges.

In the context of the Framework, we present a dozen papers and two dozen case examples that touch on many facets of patient engagement. The papers include everything from one-on-one strategies for engagement, such as motivational interviewing and shared decision making, to practice structural changes including team-based care and intensive chronic disease management. The case examples represent every type of practice from solo clinicians to large, academic medical centers. Importantly, we believe that many of the suggestions can be implemented, with a little creative thinking, in practices of any size.

A key theme throughout this guide is the importance of health information technology (HIT) as an enabler for engagement with patients and families. The technologies covered here include a wide range, from simple e-mail and DVD tools, through web portals and population management, to virtual consults and a social networking application for diabetes management in young adults. While some fundamentals of effective engagement may not require technology, it's clear that HIT is critical for successful implementation of many of the most promising patient engagement strategies.

This guide is not particularly intended to be read from cover to cover. Our hope is that readers will skim it, looking for topics of interest. Read an article or two, look at a few of the case examples, and find

something you can get excited about doing in your practice. The guide provides enough information to get started, including references to additional source material, and contact information for people who have "done it" already. Any of the ideas in this guide can make a significant improvement in patient engagement. There's no need to do it all; you can't change the world overnight. But you also can't change the world if you never start. So pick something and try it.

—**David Nace**
McKesson Corporation

John Steidl
Thomas Group, Inc.

PCPCC Patient/Family Engagement Framework

PCPCC Patient/Family Engagement Framework	Considerations
<p>1. Foundations for Effective Engagement</p> <ul style="list-style-type: none"> a. Mutual goal and expectation setting b. Mutual progress feedback c. Patient-provider relationship development d. Availability and use of appropriate health care setting (includes selection of primary care provider vs. emergency department, advanced access techniques such as e-mail and Web portals, etc.) 	<p>Engagement starts with the patient's goals. Healing and health maintenance are, by their nature, goal-oriented processes; yet not all patients with a given condition have the same goals. Discussion, clarification and understanding of goals create the foundation for a long-term successful relationship between patient and provider. At the same time, establishing mutual expectations, and a process for reviewing progress against expectations, forms the basis for shared accountability through assessing effectiveness of the joint interventions intended to achieve those goals.</p>
<p>2. Accurate and complete information flow between patient and provider</p> <ul style="list-style-type: none"> a. Medical history and current medication list b. Behavioral risk factors c. Current issues and concerns (including psycho-social) d. Review and communication of care coordination issues 	<p>A good patient history and up-to-date medication information are often taken for granted. However, practices that begin sharing access to electronic medical records with their patients often find that doing so uncovers a variety of simple errors that might otherwise have gone undiscovered. Other areas of opportunity include more effective identification of behavioral risks such as substance abuse and depression, as well as non-medical issues (e.g., family, economic or work stress) that may have a significant impact on the patient's ability to manage health status and treatment regimen.</p>
<p>3. Patient activation for self-management</p> <ul style="list-style-type: none"> a. Patient knowledge of key health targets and actual values (e.g., blood pressure, cholesterol, etc.) b. Healthy lifestyle attributes (eating, drinking, smoking, exercise) c. Adherence to therapeutic regimen (broadly defined) and other chronic disease self-management behaviors d. Patient knowledge of and participation in appropriate wellness and/or disease management programs available in the community or workplace 	<p>There are many dimensions to self-management, and a wide variety of strategies for increasing patient activation to improve it. The most effective are generally based on an understanding that patients can have differing long-term goals and will be starting from different stages of readiness. They include motivational interview techniques to identify goals, determine readiness and identify specific objectives and interventions with which the patient has a reasonable probability of success.</p>
<p>4. Shared decision making</p> <ul style="list-style-type: none"> a. Provider understanding of patient goals and preferences b. Patient knowledge of options, risks and benefits c. Patient participation in decision process 	<p>This is an area where recent research has shown significant opportunities to improve knowledge on both sides. Physicians frequently do not understand patient goals and preferences, and patients are often under-informed about basic facts relative to their condition and treatment options. Creating the conditions for effective shared decision-making requires an interactive process to remedy these critical information gaps.</p>
<p>5. Family engagement and activation</p> <ul style="list-style-type: none"> a. Congruent goal setting b. Family member present at visit for dependent patient c. Family members are active participants in care process for dependent patient d. Family as support network for patient self-management (including non-dependents) 	<p>Family engagement and activation is critical in the case of dependent patients who are not fully able to care for themselves. It can also be important as a support network for any patient with a chronic condition or a desire to effect a behavioral change.</p>

Engaging the Patient with Health IT

Excerpted from “Meaningful Connections: A resource guide for using health IT to support the patient centered medical home”

While health IT holds the promise of improved clinical excellence, it also holds the potential to greatly improve patient-provider communication, patient access to valuable personalized information, and patient collaboration with the clinician in chronic condition self-management. Unfortunately, the current trends in clinical practice and the realities of a financial focus in health IT applications tend to relegate patient-centered applications to the bottom rung of the implementation process. But much is to be learned from practices that are successfully using patient-centered health IT to engage patients, as well as efforts to raise overall awareness of the urgent need for community electronic health information exchange.

“Meaningful Connections: A resource guide for using health IT to support the patient centered medical home,”¹ contains a summary of the research report that offers insight into such health IT tools.² A deeper look into consumer attitudes and opinions about the use of EHRs, as well as tools to effectively communicate the benefits of health IT to consumers, see the InformationSTAT Toolkit available in Appendix C of “Meaningful Connections.”

¹Meaningful Connections, April 2009, Patient Centered Primary Care Collaborative, Washington, D.C. (http://www.pcpcc.net/files/cehia_mc.pdf)

²Seidman, Joshua, and Eytan, Ted. “Helping Patients Plug In: Lessons in the Adoption of Online Consumer Tools.” California HealthCare Foundation, 2008. (<http://www.chcf.org/publications/2008/06/helping-patients-plug-in-lessons-in-the-adoption-of-online-consumer-tools>)

The Changing HIT Landscape: A Primary Care Survivor's Guide

DAVID NACE, MD, AND JOHN STEIDL, M.A.

Overview

Health information technology (health IT) encompasses a wide range of capabilities and functionalities. For our purposes, a working definition of health IT is information technology that is utilized appropriately and in a meaningful way to optimize the quality of patient care, performance measurement, patient education and enhanced communication.¹

In primary care today, the most common form of health IT beyond the traditional practice management system is the basic electronic medical record (EMR), which facilitates the documentation of patient demographics and clinical notes in addition to e-prescribing. Less frequently encountered are electronic health records (EHRs) associated with broader capabilities such as patient registries, multi-function web portals, a patient-centered health record, clinical decision support, and health information exchange capacity allowing for secure communication and information exchange between physicians, hospitals and patients. The distinction between EMRs and EHRs, a definition historically related to a single- practice view versus a community-wide view of a patient record, has been increasingly blurred by the adoption of the singular term EHR in the recent HITECH Act and its associated definition of “Meaningful Use.”² Regardless, health IT is critical to build a fully functioning patient centered medical home.

Although overall use of at least some EHR functionality is on the rise (43.9 percent of physicians in 2009, up from 34.8 percent in 2007), use of “fully functional” EHRs is still quite low (6.3 percent of physicians in 2009, up from 3.8 percent in 2007).³ The barriers are clearly not technical, because adoption rates in other countries are high.⁴ While there have been several examples in the literature describing medical home implementations of HIT using current EHRs available

on the market, to date there have been relatively few descriptions or case studies of comprehensive integrated HIT that fully support the needs of the patient centered medical home.^{5,6,7,9} For a more in-depth discussion of health IT functionality and capability as it relates to support the patient centered medical home model, we refer readers to the PCPCC document entitled “Meaningful Connections.”⁷

Most physicians are probably aware by now that substantial funding, in the form of financial incentives as a result of the HITECH act, is available to support the purchase and “Meaningful Use” of EHRs. To date, however, software vendors are not seeing a stampede of practices beating a path to their doors. This suggests that physicians are carefully assessing their options before committing to invest, which is understandable given the pace of change in health IT today.

Since patient engagement is a critical component of the medical home, and since EHRs have significant potential to support and enable patient engagement, we felt it appropriate to provide some guidance in this resource guide on the selection of an EHR. This article will outline, at a high level, key trends unfolding in EHR technology, and compare attributes of the major classes of EHR solutions available today. There is no single solution that is “best” for every practice. EHR selection represents, to a large extent, a set of trade-offs that must be evaluated in the context of the needs, values and preferences of the selecting practice. Our purpose here is to provide the reader with basic information to make a more informed choice around those trade-offs in order to make the best decision for their practice. Practitioners already using at least some component of an EHR will find features they may want to ask about as upgrades, or consider more fully leveraging if they already have them available within their EHR.

Main Classes of EHR: More Than a Decision to Own vs. Rent

A fundamental distinction among EHR solutions, which drives many other attributes and trade-offs, is the choice between a local client-server solution (“own”) vs. a hosted solution (“rent”). The most basic difference here is whether the application resides on a server in the practice, or is hosted by the software vendor on a server outside the practice. Hosted solutions, although sometimes broadly marketed as Software-as-a-Service (SaaS), can be further distinguished between the traditional Application Service Provider (ASP) model and the more contemporary, cloud-based or “multi-tenant” model. Table 1 (see page 12) provides a comparison of attributes among the local client-server model, the ASP hosted model and the multi-tenant SaaS model.

Packaged EHR vs. Mixed Applications for Meaningful Use

It’s often assumed that the Meaningful Use criteria must be met through a fully packaged EHR solution. However, with the final adoption of requirements for the HITECH financial incentives, the Office of the National Coordinator for HIT has adopted a definition of HIT that includes a wide array of health IT tools and communications technologies that fully support the goals of Meaningful Use. In other words, certified EHR technology may be assembled from either a single solution, or several replaceable and swappable EHR modules. That said, a “best-of-breed” approach is not without challenges. Selecting a base EHR from one vendor, e-prescribing from a second vendor and a registry application from a third vendor can easily result in an office where none of the systems talk to each other. When pursuing this approach, practices will need to choose carefully to match applications with where the hooks for integration have already been built.

Searching for PCMH Friendly Features in an EHR

Recent articles in *Health Affairs* have examined EHRs in the primary care environment, discussing both the challenges and potential improvements that would enable these applications to more effectively support the patient centered medical home.^{6,8} As with any robust industry, features and capabilities of products currently on the market vary widely. Many current EHRs have some of the capabilities needed to support the medical home, even if not in as fully evolved a form as we would hope for.

As the definition of Meaningful Use evolves, and additional market pressure is brought to bear on the industry to support the medical home model, we fully expect that features and capabilities of EHRs and related applications will evolve to meet these needs. Beyond acquiring an EHR that is certified to meet the 2011 criteria for Meaningful Use, practices should investigate criteria for later stages including some of the areas described below, and practices that already run an EHR should be talking to their vendors about planned upgrades in these areas.

The article by Bates and Bitton⁸ highlights seven domains of functionality that will be critical for EHRs to fully support the medical home. These include

- ▶ Clinical Decision Support
- ▶ Registries
- ▶ Team Care
- ▶ Care Transitions
- ▶ Personal Health Records
- ▶ Telehealth
- ▶ Measurement and Performance Reporting

While it’s not our intent to rehash the many excellent thoughts in Bates and Bitton, we would like to offer comments in a few of the domains, and some other areas, based on our own experience.

Clinical Decision Support

The most prevalent forms of decision support available in today’s EHRs include alerts and reminders. Alerts provide warnings, for example about potential adverse drug reactions from two medications being prescribed. Reminders typically flag preventive screening exams and other routine tests that are coming up or overdue. Other clinical decision tools supporting diagnosis and treatment decisions tend to be less common and less well developed in current EHRs. For a more comprehensive discussion of clinical decision support and the medical home please refer to the recent review published by the PCPCC.⁹

Registries

Population health management is a key foundation of advanced primary care and the medical home, although it’s also an area in which many practitioners have limited training. Given the size and variation within a typical primary care panel, effective population management is probably not possible without IT support in the form of a patient registry (also sometimes referred to as disease registry). Registries can vary in complexity from basic clinical documentation as a requirement for reimbursement to more systematic efforts to collect data on many types

of conditions, treatment interventions, risk factors and clinical events in a defined population. Although many EHRs in the market do have some registry functionality, it's historically neither as powerful nor user friendly as the best legacy stand-alone applications. Because this is an area with so much potential, we expect to see rapid improvement in the registry functionality of current EHRs, and prospective EHR buyers should compare carefully.

Team Care

Team-based care is another critical foundation of advanced primary care and the medical home. Unfortunately, most traditional solutions were designed for the world of single users that gave rise to the distinction between EMR and EHR. However, the need for real-time communication and concurrent team member work flow in a medical home require such basic functions as simultaneous access for multiple care-team members, which can be problematic in some EHRs—particularly client-server solutions. In addition, the ability to have specific role-based permissions within the system, manage individual workflow requirements and track assignments and responsibilities among multiple team members is not a function of traditional EHRs. As with the other domains, the world is evolving rapidly and practices will want to compare team care functionality carefully.

Patient Portals

When looking at EHRs, patient portal functionality is not high on the list for many practices. In our experience, however, patient portals can be an excellent marketing tool for any practice, are required in regard to supporting the requirements for Meaningful Use and seem to be critical in engaging patients in a patient-centric care model. Typical patient portals provide a wide range of functionality, including the ability to request appointments, send e-mail, access a personal health record and view lab results. Other functions, including virtual office visits and advanced telehealth applications, are less widespread. In addition, practices will want to consider how these patient engagement functions interact with the other capabilities of the EHR. For example, one may need to consider whether personal health record updates, medication and problem lists, electronic communications, lab results or other communications documented are made available to the patient and/or provider in near or real time. In terms of patient engagement, it should be noted that many medical home practices have found engaging the patient through portals, and providing access for patient and practice to the same health

record and care plan, to be a significant path to achieving improved health and outcomes. This becomes all the more powerful when the patient record provides a community-wide view of patient care and information.

Measurement

Although it may be tempting to focus only on the measurement and reporting requirements for Meaningful Use, we encourage practices to look for the capability to quickly and easily create customized measurement dashboards with a wide variety of clinical, process and business metrics. Priorities often change, and different staff will need to focus on different issues over time. A powerful and flexible set of performance measurement and graphical presentation tools can be a tremendous benefit in the continuous improvement atmosphere that characterizes the medical home.

“User Friendly” is Both Critical and Personal

While not uniquely important to the medical home, user friendliness is nevertheless a critical attribute for an EHR. EHRs can not only result in change to the general workflow in a practice, they also change who does some of the tasks, and require people to do some of those tasks differently. There is no question that some EHRs are more efficient at certain tasks than others. In some cases, this results from a trade-off between power/features and ease-of-use. In other cases, it may be purely a design issue. Either way, it's important to carefully evaluate your candidate EHRs to determine not only whether they have the features you consider most important, but how they deploy those features, and how the application will require you and your practice to work. In developing your requirements and evaluation criteria, be sure to seek input and advice from experienced EHR users, particularly those with detailed knowledge of the applications you are considering.

A Note in Regard to HIT and Primary Care Transformation

It is important to recognize that the adoption and use of HIT will not necessarily drive transformational change in a clinical practice, or even by itself improve clinical outcomes. Adopting HIT without also considering and redesigning practice workflow, process and team relationships has been shown to potentially result in some negative outcomes.⁹ On the other hand, HIT can provide powerful foundational support to enable the workflow and process changes that ultimately foster a stronger team, improved patient

Attribute	Client-Server	ASP Hosted	Multi-Tenant, SaaS
Location of application and data	On dedicated servers that are owned by and reside within the practice. This can lead to increased requirements for local maintenance, support and technical expertise.	On dedicated servers that are owned by the hosting company, and located outside the practice. This can lead to concerns about ownership of the actual data, which are resolved through appropriate contract language.	On shared servers that are owned by the hosting company, and located outside the practice. This can lead to concerns about ownership of the actual data, which are resolved through appropriate contract language.
Up-front costs	Can be significant, since start-up requires the purchase of both server and software. In addition, PCs in some form for individual practitioners will also be required.	Typically much less since there is no purchase of server or software involved. However, PCs in some form will still be required for individual practitioners and a reliable Internet connection must be obtained.	Typically much less since there is no purchase of server or software involved. However, PCs in some form will still be required for individual practitioners and a reliable Internet connection must be obtained.
Start-up time	Generally longer, although some vendors have made efforts to streamline their installation and start-up processes. Length and difficulty of start-up depends on the skill of the supporting IT personnel.	Generally faster than local client-server solutions; however, ASP may still require significant configuration of the dedicated servers.	Rapid installation with primary focus on adoption and training towards “comfortable use” rather than technical deployment.
Time to “comfortable use”	Tends to depend on individual vendor support and practice factors that are not directly related to the type of application chosen.	Tends to depend on individual vendor support and practice factors that are not directly related to the type of application chosen.	Tends to depend on individual vendor support and practice factors that are not directly related to the type of application chosen.
IT expertise required	Some internal expertise or contract support is required on an ongoing basis since everything resides in the practice.	Minimal since the vendor is maintaining the servers and software.	Minimal since the vendor is maintaining the servers and software.

Table 1. *Attributes of Local Client-Server vs. Hosted Solutions*

relationships and dramatically improved health care experiences and outcomes. It should be recognized that many EHRs on the market have historically been developed to support a traditional fee-for-service, visit-driven reimbursement model, primarily facilitating documentation to support a billing function in that environment. Anchoring the EHR in a traditional visit-based care delivery and documentation model limits the potential of the medical home to generate paradigm shifting care delivery and outcomes. In addition, the holistic “total needs” approach of a

patient centered medical home requires interoperability and information exchange within the context of an overall medical neighborhood, wherein comprehensive longitudinal health information is necessary for sustained, non-episodic “total care” delivery and management. In order to avoid the legacy of silo-based EHR that only contains a partial view of the patient’s care in regard to a single practitioner, the medical home requires the ability to fully support a patient-centered, 360-degree view of the patient’s health across the health care community.

Attribute	Client-Server	ASP Hosted	Multi-Tenant, SaaS
License model	Up-front purchase and ongoing maintenance of a software package, sometimes with modular options.	Monthly fee for those functions and features that are used.	Monthly fee for those functions and features that are used.
Accessibility	May or may not be accessible via the Internet depending on the individual application.	Applications accessible either via a web browser or other virtual software application.	Web-native applications designed from the ground up to be Internet accessible.
Data sharing across practices (e.g., primary care with specialists)	Typically more challenging from a technical perspective. Not generally possible across vendor platforms. Also keep in mind that there are many other challenges to data sharing once the technical issues are overcome (privacy, process, etc.).	Slightly easier technically, but still not generally possible across different vendor platforms. Also keep in mind that there are many other challenges to data sharing once the technical issues are overcome (privacy, process, etc.).	Significantly easier since one connection can be leveraged across all users. Also keep in mind that there are many other challenges to data sharing once the technical issues are overcome (privacy, process, etc.).
Customizability	Typically high, although varies by vendor and requires knowledge and resources.	Varies, but often less than client-server solutions.	Typically allows for configuration of the solution to the practice but limits specific customization.
Software updates	Major updates usually must be purchased and installed. More flexibility, but also more effort and cost for the practice.	Typically handled by the vendor, but new releases may be delayed based on vendor capacity. Less cost and hassle for the practice, but also limited flexibility on timing of updates.	As new releases are available they are instantly and automatically available to all users. Less cost and hassle for the practice, but also limited flexibility on timing of updates.
Networking across multiple locations within a single practice	Generally more difficult and dependent on the individual application.	Generally easier but still highly dependent on the individual application.	Native connectivity already exists as all users leverage a single platform.
Internet requirements	None when used within the office	Broadband connection	Broadband connection

Final Thoughts

With the combination of financial incentives for health IT adoption and penalties for the lack thereof, we believe it's only a matter of time before at least basic EHR functionality is nearly universal among U.S. primary care providers. However, basic functionality will not meet all the requirements of advanced primary care in a medical home environment, and may not even meet the key requirements for Meaningful Use, depending on how those are

ultimately defined for 2013 and 2015. Physicians and other health care professionals will need to stay on top of trends in more advanced EHR features, and develop an implementation roadmap to bring those features and functions on line in their practices. Whether shopping for a new EHR today, or managing the upgrade path with an existing vendor, the pace of change in the market suggests the need for careful thought and evaluation, with a clear timeline to meet the phased requirements for Meaningful Use as they are rolled out.

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By Katherine Browne, Deborah Roseman, Dale Shaller, and Susan Edgman-Levitan

ANALYSIS & COMMENTARY

Measuring Patient Experience As A Strategy For Improving Primary Care

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ABSTRACT Patients value the interpersonal aspects of their health care experiences. However, faced with multiple resource demands, primary care practices may question the value of collecting and acting upon survey data that measure patients' experiences of care. The Consumer Assessment of Healthcare Providers and Systems (CAHPS) suite of surveys and quality improvement tools supports the systematic collection of data on patient experience. Collecting and reporting CAHPS data can improve patients' experiences, along with producing tangible benefits to primary care practices and the health care system. We also argue that the use of patient experience information can be an important strategy for transforming practices as well as to drive overall system transformation.

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New models of organizing, delivering, and paying for primary care seek to improve the quality of care provided to patients and the experiences of clinicians. Meanwhile, research has shown that patients place much value on effective communication with their providers, the responsiveness of clinicians and staff to their needs, and an overall sense of being treated with care and respect.¹⁻⁴

In recent years, much progress has been made in the science of measuring important aspects of the patient care experience, most notably through the development and use of the Consumer Assessment of Healthcare Providers and Systems (CAHPS) suite of patient experience survey tools.⁵⁻¹¹ However, faced with multiple priorities and resource demands, health systems and providers may question the clinical and business value of collecting, analyzing, and acting upon data on patients' experiences of care.

Despite these concerns, available tools and quality improvement strategies bolster the feasibility and benefit of measuring and improving patients' experiences of care, both for the intrinsic value conferred to patients and for the resulting enhanced work environment for clinicians

and staff alike. The use of patient experience information can be an important strategy to use in driving system transformation. Such transformation will result when consumers use the information to choose their providers, when employers and purchasers use it for payment and benefit design, and when physicians and practice administrators act on the data to improve office systems and care.

What Is Patient Experience?

Patient experience is a measure of patient-centeredness, one of six health care quality aims proposed by the Institute of Medicine (IOM).¹² While "patient satisfaction" surveys obtain ratings of satisfaction with care, patient experience surveys elicit reports from patients on what they did or did not experience in their interactions with providers and the health care system. Systematically measuring patient experience differs from user-generated reviews posted on Web sites such as Yelp and Angie's List, because scientifically based sampling methods enable a broader and more representative assessment of all patients in a practice and thereby provide more valid, credible data.

How Do We Measure Patient Experience?

A key way to measure whether care is patient-centered is by surveying people who have had contact with the health care system. For example, the CAHPS Clinician and Group Survey provides a nationally standardized, validated tool to measure patients' experiences in primary care practices.

This survey asks patients to assess their experiences in areas that research has shown patients value, including ease of scheduling appointments, availability of information, communication with clinicians, responsiveness of clinic staff, and coordination between care providers. Supplemental question sets can be added to the core survey to assess how the provider engages a patient as a whole person and in decision making, disease management, and health promotion. Other CAHPS surveys are used to assess patients' experiences with hospitals, health plans, dialysis centers, nursing homes, and home health agencies.

Why Is It Important To Measure Patient Experience?

There is inherent value to patient-centered care, and patients place a high priority on these factors. Good patient experience also has a well-documented, positive relationship to other aspects of health care quality, including patients' engagement with and adherence to providers' instructions, and clinical processes and outcomes. This clinical case is paired with a solid business case, linking patient experience to financial performance, malpractice risk, patient loyalty, and employee satisfaction.

Measuring patients' experiences is also a critical step toward understanding and improving the quality of care. The information can reveal system problems, such as delays in returning test results and gaps in coordination and communication that have major quality and efficiency implications. Although collecting the information is essential, using the information for improvement is the goal.

Research has consistently demonstrated that patient experience correlates with clinical processes of care for prevention and disease management and with better health outcomes.¹³⁻¹⁷ For example, patients hospitalized for acute myocardial infarction (AMI) who reported more problems with care had poorer outcomes both one month and twelve months after discharge, although these effects were mediated for patients with subsequently positive outpatient care experiences.¹⁸

Furthermore, patient experience has a strong

relationship to patients' adherence to medication and other care regimens.¹⁹⁻²² Particularly in the case of chronic conditions, health care providers cannot achieve positive health outcomes without commitment and action from patients. Patient experience is also positively correlated with key financial indicators, including patient loyalty and retention, reduced medical malpractice risk, and increased employee satisfaction. Indeed, a 1992 study found that patients' perceptions of quality explained nearly 30 percent of the variation in hospital financial performance.²³

For instance, the mean voluntary disenrollment rate among Medicare managed care enrollees is four times higher for plans in the lowest 10 percent of overall CAHPS Health Plan survey ratings than for those in the highest 10 percent.²⁴ At the provider level, patients who reported the poorest-quality relationships with their physicians are three times more likely to voluntarily leave the physician's practice than patients with the highest-quality relationships.²⁵

The quality of the provider-patient relationship as evident in good patient experience scores correlates with lower medical malpractice risk.²⁶⁻²⁸ Although average patient experience scores can mask variations within a provider's scores, the minimum score a provider receives correlates with the likelihood of being implicated in a medical malpractice suit. Each drop in minimum overall score along a five-step scale of "very good" to "very poor" corresponds to a 21.7 percent increase in the likelihood of being named in a suit.²⁹ Forty-six percent of malpractice risk is attributed to physician-specific characteristics, including patient experience.²⁹

Efforts to improve patient experience also result in greater employee satisfaction, reducing turnover. Improving patients' experiences requires improving work processes and systems that enable clinicians and staff to provide effective care. A focused endeavor to improve patients' experiences at one hospital also resulted in a 4.7 percent reduction in employee turnover.³⁰ Similarly, nurse satisfaction is strongly positively correlated with patients' intent to return to or to recommend the hospital.³¹

Recommendations For Improving Primary Care

The clinical and business cases for measuring patient experience suggest the need for greater professional and policy support for collection and use of patient experience data. The following recommendations are offered as a starting point to guide the actions of physician practices, health systems, consumers, purchasers, and pol-

Data will have more credibility with consumers, physicians, and payers if a broad, representative patient population is included.

icy makers in using patient experience to improve primary care.

USE A STANDARDIZED, VALIDATED SURVEY INSTRUMENT Measuring patient experience is no longer uncharted territory. The CAHPS Clinician and Group Survey tools have been extensively validated, have been endorsed by the National Quality Forum, and are readily available at no charge in the public domain. As noted above, the tools can be tailored with supplemental question sets to gather a wide variety of additional information.

A number of organizations assessing patient satisfaction with proprietary surveys have successfully made the transition from those surveys to the CAHPS instruments to measure patient experience. Others have incorporated CAHPS core questions into their existing tools as a strategy for moving toward standardization while retaining legacy questions useful for measuring trends.

CAPTURE INFORMATION FOR ALL TYPES OF PATIENTS To date, efforts have focused on Medicare and the commercially insured population, excluding the experience of Medicaid and uninsured patients. Data will have more credibility with consumers, physicians, and payers if a broad, representative patient population is included.

PROVIDE DATA AT THE PROVIDER AND PRACTICE-SITE LEVELS Individual provider-level data are most useful for quality improvement because they allow the practice to identify systemic problems as well as problems unique to a few individual clinicians. Although some elements of patient experience are most relevant at the provider level, matters such as coordination of care and access to information and appointments can affect an entire practice. Providing consumers with easy access to this information empowers them to evaluate and communicate with providers on dimensions that matter to them.

ANALYZE DATA BY PATIENT DEMOGRAPHICS

Some studies demonstrate variations in reported patient experience by race, ethnicity, education, health status, and other patient characteristics. Analysis and reporting of data by these characteristics can help practices better understand and treat specific patient populations, such as the chronically ill or disadvantaged.³²⁻³⁶

USE THE DATA TO IDENTIFY SYSTEM ISSUES The communication and integration dimensions of patient experience are those most often correlated with clinical measures.^{37,13} Patients' reports of interactions with the health care system can reveal system problems that affect quality and efficiency along with patient experience.

Identifying these problems offers considerable opportunity for improvement. One study found that the practice site accounts for at least 60 percent of explainable variation in patient-reported quality.³⁸ Subsequent research revealed that the practice site accounts for 45-81 percent of the variation in organizational features of care (such as appointment access and clinical team integration), while the provider accounts for 61-84 percent of interaction quality (such as communication and trust).³⁹

IMPROVE THE QUALITY OF PATIENT CARE Tools exist to help address identified system issues, such as clinician-patient communication and establishing systems to remind patients to get needed tests, to deliver test results in a timely manner, to return patients' phone calls faster, or to make getting appointments easier. One such tool kit is the CAHPS Improvement Guide, developed from early experience with CAHPS implementation.⁴⁰

ESTABLISH PROVIDER PAYMENT INCENTIVES Payers and plans should include patient experience data in any payment incentive structure for physicians. Medical groups could also provide incentives for improvement by using patient experience in any internal bonus or compensation structure. Further, the possible inclusion of the CAHPS Clinician and Group Survey as a condition of medical home certification, as well as the comparative data, will be important to evaluating this increasingly prominent model.

INCORPORATE CAHPS INTO MEDICAL PRACTICE STANDARDS National Committee for Quality Assurance (NCQA) Physician Practice Connections recognition requires practices to implement a survey of patients' experiences of care, and the American Board of Medical Specialties has endorsed including the core CAHPS communication items in its revision of Maintenance of Certification requirements for each of its twenty-four member boards.⁴¹ Other medical boards and state licensing agencies could reinforce the CAHPS expectation by adopting similar provisions.

CONTINUE TO SUPPORT REGIONAL IMPLEMENTATION California, Massachusetts, and Minnesota now publicly report patient experience data for a sizable proportion of primary care practices, as do the metropolitan areas of Denver, Kansas City, and Memphis. These regional approaches, often led by multistakeholder alliances, vary in financing and implementation models, with each alliance harnessing its respective political and material assets. Private and public entities can continue to support regional approaches, in the absence of a requirement by the Centers for Medicare and Medicaid Services (CMS).

DEVELOP AND TEST NEW TECHNOLOGIES Widespread implementation of CAHPS will likely require new survey methods that are less costly and burdensome than traditional mail and telephone modes. Innovative use of Web-based tools, interactive voice recognition, and wireless technologies hold promise for reducing the cost and improving the ease and turnaround time of acquiring and using survey data. Experiments that test the validity and reliability of new data collection methods should be supported.

The Future

Ever since the IOM's 2001 *Crossing the Quality Chasm* report proposed patient-centeredness as one of six aims for the U.S. health system, patient-centered care has gained footing within the landscape of health care reform. Although patient experience information is systematically collected and reported in pockets of the country, the vast majority of consumers and providers do not have access to this information.

In its absence, consumers rely on user-review Web sites such as Yelp and Angie's List, and on organizations such as Zagat that are known for rating other industries. The ease and viral nature of the technology age ensure that patient experience information will be widely available, but the form and rigor of the information remain in question.

Although there is value in both systematic and user-driven content, the dearth of evidence-based, standardized, and representative patient experience data threatens the accuracy and utility of the information. As patient-centeredness becomes entrenched in the quality landscape, and more institutions and communities begin to measure, report, and leverage patient experience data for improvement, momentum and related focus are likely to grow in the coming years. ■

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Motivational Interviewing and the Patient Centered Medical Home:

A Strategic Approach to Self-Management Support in Primary Care

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What is Motivational Interviewing?

Motivational Interviewing (MI) is an evidence-based and widely disseminated psychosocial intervention with applications in the fields of addictions, health behaviors and other domains. A recent review of the National Institutes of Health Computer Database on Clinical Trials indicated 212 current research projects, including 114 clinical trials, were utilizing or directly investigating the effectiveness of MI (Glynn and Moyers 2010). In the United States, 47 states encourage the use of MI as a preferred treatment for substance abuse, and eight states mandate the use of an empirically based treatment such as MI. “This widespread dissemination has led to a proliferation of MI adaptations as well as a burgeoning industry in training, continuing education, and certification of MI practitioners.” (Glynn and Moyers 2010)

Miller and Rollnick have, most recently, defined MI as a “person-centered counseling method for addressing the common problem of ambivalence about behavior change.” (Unpublished keynote address, Second International Conference on Motivational Interviewing, Stockholm 2010) Four general guidelines of MI for the medical practitioner can be summarized by the acronym RULE: **r**esist the righting reflex, **u**nderstand the patient, **l**isten to the patient and build self-**e**fficacy. (Rollnick S 2008) To “*resist the righting reflex*,” the clinician actively suppresses the reigning medical paradigm to tell patients what to do in an authoritarian manner, in contrast to helping patients express their own internal motivations for behavior change. Practitioners *understand* patients through the use of open questions about unhealthy behavior, e.g., asking “what is good and what is not so good” about a specific behavior. The clinician who can *listen* to the

patient can more easily express accurate empathy, and build trust and a working alliance for change. Lastly, the practitioner helps build a patient’s sense of *self-efficacy*, through communicating support and confidence in the patient’s inherent ability to change.

The underlying approach of MI practice must always communicate a sense of collaboration, evocation and respect for autonomy, or what is called the “Spirit of Motivational Interviewing.” Collaboration suggests that practitioners and patients should be equal in any discussion about change; evocation means that ideas for changing unhealthy behaviors should come from the patient and not be directed by the clinician; and autonomy indicates that professionals must respect and communicate acceptance of the right of patients to change or not to change. Measures of the “spirit” of MI, by itself, have been shown to predict subsequent adaptive behavior change in patients with persistent unhealthy behaviors. (Miller and Rose 2009)

MI challenges traditional intervention methods by suggesting that many patients already know what is best for them. MI suggests that professionals work collaboratively with their patients to make decisions about specific strategies for change, while acknowledging freedom of choice for patients. A menu of choices is one venue for offering recommendations while maintaining the patient’s freedom of choice. (Rollnick, Butler, et al. 2010)

MI has been shown to have particular strengths for addressing problems of persistent unhealthy behaviors, especially with patients who are angry or resistant to change (Hettema, Steele, et al. 2005). While MI was originally developed as a treatment modality

for alcohol and substance abuse, a growing evidence base supports its increasing utilization in specialized medical settings, such as emergency rooms, trauma centers and obesity-treatment programs, as well as broad applications in primary care (Anstiss 2009). Four meta-analyses record efficacy across wide spectrums of behaviors, ranging from substance abuse to mental illness, criminal behavior, medication non-adherence, smoking cessation, sedentary lifestyle and others. (Lundahl 2009)

This documented efficacy makes MI relevant to emerging models of the patient centered medical home and health systems interested in improving outcomes for medical patients, especially those with chronic illness complicated by persistent unhealthy behaviors.

What is Self-Management and Self-Management Support (SMS)?

Landmark studies by the Institute of Medicine (IOM) on the safety and effectiveness of the U.S. health care system documented unacceptable levels of errors, including lethal errors (IOM 1999) and remarkably poor outcomes, in general, for patients with chronic illness. (IOM 2001) In addition to the IOM, virtually all foundations and government agencies focusing on improving quality and outcomes in health care (e.g., Commonwealth Fund, Robert Wood Johnson Foundation, MacArthur Foundation, Patient-Centered Primary Care Collaborative, Agency for Healthcare Research and Quality, Health Resources Services Administration, etc.) emphasize the importance of multifaceted structural changes including: mandatory use of electronic medical records, electronic prescribing, chronic disease registries, population-based measures of care, improved care coordination, improved decision support at the point of care, focus on patient-centered care and shared decision-making and, most important for the purposes of this chapter, patient self-management support.

“Self-management support” is one of the six core components of the Chronic Care Model (Wagner, Davis, et al. 1999) and one of the nine essential elements of the NCQA model of the Patient-Centered Medical Home. Of interest, obtaining even the most basic level of certification as a NCQA “Medical Home” requires a “must pass” score on self-management support. (Kuzel and Skoch 2009)

Barlow defines self-management as “the individual’s ability to manage the symptoms, treatment, physical and social consequences and lifestyle changes

inherent in living with a chronic condition.” (Barlow, Wright, et al. 2002) The IOM defines “self-management support” as the “the systematic provision of education and supportive interventions by the health care system to increase patients’ skills and confidence in managing their health problems, including regular assessment of progress and problems, goal setting, and problem-solving support.” (IOM 2001)

How does an organization support patient self-management throughout a health care system? This goal can be achieved through different conceptual approaches and implementation strategies. Health literacy and educational interventions, as well as broadly conceived and diverse provider-, patient- and peer-training programs have been utilized. Most aim to increase patient activation or build patient self-efficacy through goal-setting and problem-solving strategies. The evidence-based “5 A’s” model (**A**ssess, **A**dvice, **A**gree, **A**ssist, **A**rrange) (MC Fiore 2000), developed for smoking cessation and promoted by both the American Cancer Society and National Cancer Institute, has been expanded for use across all behavioral interventions in medicine. (Whitlock, Polen et al. 2004) It has also become a leading conceptual model for self-management support in the chronic care model, disease management models and the relatively new model of the patient centered medical home. Unfortunately, a common problem with efforts to apply the 5A’s model has been its relative complexity for pragmatic integration into routine care across a health system.

MI as a Powerful Form of Self-Management Support

MI and SMS are quite similar in basic conceptual approaches and share overlapping as well as complementary strengths. Because of this similarity, however, practitioners, educators and health planners often fail to differentiate between the two. Failure to make this distinction can lead to lack of clarity and some confusion in quality improvement efforts and health system transformation.

Although SMS and MI are related, they are not the same. Both are patient-centered and collaborative, in order to facilitate active goal-setting and problem-solving.

SMS is appropriate for all patients, especially all patients with chronic illnesses. MI, on the other hand, is “not for everyone.” (Miller and Rollnick 2009) SMS is broadly motivational in nature, especially as it helps patients adopt healthier behaviors, but SMS is

not explicit MI. MI encompasses a rather specific and highly specialized set of behavior-change strategies shown to be most effective for patients with resistant and problematic behaviors. (Hettema, Steele, et al. 2005)

MI is best conceptualized as a powerful form of SMS, which can be effectively utilized by health care providers and health care systems for patients who are refractory to more simple and more direct forms of SMS.

A health care system that can match provider skills to the ecology of their patients can build a population-based approach to self-management support (including MI) that includes prediction of needs and application of strategies to match resources with evolving demands.

How Can Health Care Systems Develop Competencies in MI?

Learning to become proficient in MI is complex and time-consuming. Introductory two to three day workshops typically help practitioners develop the “spirit of MI,” but are not sufficient for building competencies in the formal techniques and skills of MI. (Miller and Rose 2009) Proficiency generally requires several intensive workshops as well as longitudinal individual feedback on cases and practice of skills. The intensity and time commitment required to learn MI makes it difficult for most health systems to train their providers to high levels of proficiency and “take MI to scale.”

These pragmatic limitations have led to considerable efforts being devoted to developing practitioner skills in “brief MI,” or “adaptations of MI.” Outcome studies to date indicate that more focused and limited training of physicians (e.g., one day of training plus individual supervision and feedback) may itself be effective for developing physicians’ skills to improve targeted persistent unhealthy behaviors, e.g., adolescent obesity. (Resnicow, Davis, et al. 2006)

Brief Action Planning (B.A.P.): A Self-Management Support Tool for Chronic Illness, Primary Care and the Medical Home

One adaptation of MI for primary care has been the development and dissemination of Brief Action Planning (B.A.P.) (previously known as UB-PAP, or “ultra-brief personal action planning”). Originally developed by the lead author as a self-management support and motivational tool for the HRSA/IHI Health Disparities Collaboratives (www.healthdisparities.net),

B.A.P. was published by the American Medical Association in its 2008 “Tipsheet for Physician Self-Management Support” (American Medical Association 2008). It has been disseminated by programs of the CDC and HRSA, and used in the Improvement in Patient Care program of the Indian Health Service. Workshops or courses in B.A.P. have been accepted for recent scientific programs of the Society of General Internal Medicine, the American Psychiatric Association and the MINT (Motivational Interviewing Network of Trainers) Forum. Early evidence supporting its efficacy was presented at the First International Conference on Motivational Interviewing and the Institute of Psychiatric Services. (Cole S 2008; Cole S 2009)

The tool is organized around three core questions and four supporting skills (cf. Appendix), all of which are grounded in the scientific literature of self-management support, stage of change theory, MI and theoretical communication and psychotherapy research. Its basic application has high face validity and is generally well accepted by most practitioners because of its simplicity and practicality. The B.A.P. Checklist can be used as a pencil and paper tool or incorporated into the template of an EMR. It is relatively easy to teach and use by practitioners working with patients for whom advanced MI skills may not be necessary and who are relatively ready to make action plans for health. To be maximally effective, however, B.A.P. should always be utilized in a patient-centered manner, aligned with the “spirit” of MI.

Basic B.A.P. is appropriate as a self-management support tool for patients who are relatively ready to set goals and resolve barriers to health. B.A.P. looks more like formal MI, however, for those patients who are more ambivalent about or struggle with persistent unhealthy behavior. For these patients, advanced skills are integrated in a stepped-care manner into the basic B.A.P. template. The ability to use B.A.P. in this manner typically requires focused web-based or workshop learning of 13 additional higher-order communication skills. The 20 core skills supporting the use of stepped-care Brief Action Planning across all patients at all levels of readiness constitute an approach to MI called Comprehensive Motivational Interventions (www.ComprehensiveMI.com).

Summary

MI represents an important and powerful set of behavioral interventions designed to support patient self-management. The dedication and time required to develop proficiency in formal MI, however, will lead most health systems to look for pragmatic adaptations or brief forms of MI for general use by medical teams and individual practitioners.

In this chapter, the authors present one such model, Brief Action Planning, which has high face validity and is relatively easy to teach and learn. While use of this tool can be readily integrated into paper-based medical record keeping, its highly structured and algorithmic approach makes it ideal for integration into electronic medical record systems.

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Brief Action Planning (B.A.P.)
A Self-Management Support Tool for Chronic Illness Care, Health and Wellness Coaching

The B.A.P. Checklist©

B.A.P.™ is structured around 3 core questions:

1. ___ Elicit person's preferences/desires for behavior change

*"Is there anything you would like to do for your health in the next week or two?"**

- ___ What?
- ___ Where?
- ___ When?
- ___ How often?
- ___ Elicit commitment statement

"Just to make sure we understand each other, would you please tell me back what you've decided to do?"

___*Some persons need or request ideas for change. Clinicians can offer a behavioral menu:
"If you would like, I can share some ideas that might help you feel better..."

2. ___ Evaluate confidence

"I wonder how confident you feel about carrying out your plan. Considering a scale of 0 to 10, where '0' means you are not at all confident and '10' means you are very confident, about how confident do you feel?"

___ If the confidence level is <7, problem solve overcoming barriers or adjusting plan:
"5 is great. A lot higher than 0. I wonder if there is any way we might modify the plan to get you to a level of 7 or more? Maybe we could make the goal a little easier, or you could ask for help from a friend or family member, or even think of something else that might help you feel more confident?"

3. ___ Arrange follow-up (or accountability)

"Sounds like a plan that's going to work for you. When would you like to check in with me to review how you're doing with your plan?"

The Nine Core Principles of B.A.P.

1. Question one should be routinely integrated into chronic care, preventive, coaching and therapeutic visits.
2. Offer a behavioral menu when needed or requested.
3. Action planning should be individual-centered, i.e. what the person wants, not what he/she is told to do.¹
4. Action planning should be 'SMART' (specific, measurable, achievable, relevant, and timed).
5. After the plan has been formulated, the clinician/coach should elicit a final "commitment statement."
6. Confidence levels should be evaluated and problem-solving utilized for confidence levels less than 7.
7. Action planning should include arranging follow-up or other accountability.
8. Action planning should be collaborative.²
9. Action planning should respect the right of the individual to change or not to change.³

¹ This principle demonstrates alignment of B.A.P. with the "Spirit" of Motivational Interviewing: Evocation
Miller WR, Rollnick S. *Motivational Interviewing: Preparing People for Change*, NY, Guilford Press, 2002.

² Spirit of Motivational Interviewing: Collaboration

³ Spirit of Motivational Interviewing: Support Autonomy

The BAP Checklist was published in Schwartzberg J et al, Physician resource guide to patient self-management support.

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The B.A.P. Checklist is the core self-management support tool of Comprehensive Motivational Interventions (CMI)™



www.ComprehensiveMI.com

Shared Decision Making— A Key Element of Patient-Centered Care

NANCY E. COCHRAN, MD

Patient-centered care, defined by the Institute of Medicine as “care that is respectful of and responsive to individual patient preferences, needs and values,”¹ is a key foundation of high quality health care. Shared decision making (SDM) involves decisions that are shared by doctors and patients, informed by the best evidence available about the options and weighted according to the specific needs, preferences and values of the patient. This process is recommended in preference-sensitive care, defined as care in which there is more than one reasonable treatment or screening option although the risks and benefits of these options may vary significantly. Unlike in effective care, where benefits clearly outweigh harms and the clinician’s goal is to promote adherence, in preference-sensitive care there is no single treatment or screening option that is right for every patient. The right choice instead depends on understanding the unique circumstances, values and attitudes of that individual in order to help them arrive at the choice that matches his or her needs and preferences.

Preference-sensitive decisions are common and may occur in the realms of screening, surgical decisions or care of chronic health conditions. A good example of a preference-sensitive screening decision is the case of prostate cancer screening using the PSA (prostate specific antigen) blood test. The American Cancer Society, the USPSTF and the American Urologic Association, among others, recommend using SDM because of the lack of evidence supporting the effectiveness of prostate cancer screening. The 2009 European randomized controlled trial (RCT) done by Schroder et al. found that the risk of death from prostate cancer is very low, and that more than 1,000 men need to be screened and 48 patients with prostate cancer treated in order to prevent one death after nine years of follow-up.² The two treatment options, radical prostatectomy or external beam radiation therapy, cause significant morbidity including impotence and urinary incontinence for all those who are

treated, regardless of the benefit they may derive. The 2009 US RCT by Andreoli et al.³ found, after seven years’ follow-up, a similarly low death rate from prostate cancer and absolutely no difference in mortality rates in those men who were screened vs. unscreened.

Clinicians feel that they are already doing effective shared decision making, but the evidence documents poor communication, major gaps in patient knowledge after screening and lack of attention to patients’ preferences.⁴⁻⁶ The USPSTF recommends that “clinicians should discuss possible benefits, harms, gaps in evidence, patient risk profile and personal preferences”⁷ in doing PSA screening. In the Decisions Study,⁴ focused on PSA screening, 73 percent of clinicians simply recommended PSA testing to their patients, rather than educating them and eliciting their values as recommended by evidence-based guidelines. When clinicians did attempt to educate their patients, 71 percent only discussed the arguments in favor of screening, whereas only one in three discussed the arguments against screening. Only 55 percent of men were asked their preference regarding screening and less than half could correctly answer any of the three questions which experts felt were critical to understand in order to make an informed decision.⁴

In a Veterans Administration study focused on colorectal cancer (CR Ca) screening,⁵ physicians’ communication behaviors were even worse. The USPSTF recommends SDM with patients in order to help them choose an appropriate strategy. In this study patient preferences regarding screening options were elicited in less than one in five patients. The pros and cons of the different screening modalities were discussed in 18 percent and patient understanding was assessed in only 6 percent. Interestingly, when patient understanding was assessed, 100 percent of patients completed screening, but when it was not, only 35

percent of patients carried through with their screening intention. The authors concluded that a lack of informed decision-making was the norm in their study.

An excellent example of a treatment decision in which more than one equivalent option exists is the choice of treatment for women with early stage breast cancer. Multiple studies have shown that there is no significant difference in survival among women treated with mastectomy versus breast conserving surgery (BCS) plus radiation therapy.⁸⁻¹² However, women's attitudes differ greatly in deciding what form of treatment they choose. Some women feel very strongly about saving their breast, some want to avoid radiation at all costs and some want to do everything possible to reduce the likelihood of recurrence.¹¹ In the traditional paternalistic model, the surgeon made a recommendation about one treatment option without educating the patient about the risks and benefits of each option or eliciting her values. Applying the shared decision-making model, the woman would be fully informed about the risks and benefits of the two options and asked her values and attitudes. If she values saving her breast, or wants to avoid mastectomy, studies demonstrate she is more likely to choose lumpectomy and radiation.¹¹ If, on the other hand, she wants to do everything possible to reduce the likelihood of recurrence, she is more likely to choose a mastectomy. High decision quality is defined by adequately informing a woman about the pros and cons of her treatment options, enabling her to make a choice that is consistent with her values and personal attitudes. In the absence of high decision quality, patients are more likely to suffer psychological discomfort related to the challenges of making a difficult decision and are less satisfied with care.⁸

Decisions regarding a wide range of health care issues *should* vary depending on the individual patient's attitudes, life circumstances and preferences. For example, treatment options for hip or knee osteoarthritis, herniated disc and spinal stenosis are all preference-based decisions. Focusing on severe knee osteoarthritis illustrates this point clearly. Patients with different values, if fully informed and engaged in the decision process, will choose very different treatment options. One patient, who is interested in maintaining an active lifestyle without the need to take medications on a regular basis, may be very interested in having a knee replacement to ameliorate their symptoms. Another patient, with identical symptoms, who is risk averse or less active, may choose narcotics or further physical therapy, and be totally unwilling to consider a knee replacement. If a patient is not fully

informed of the risks and benefits of each treatment option, and his or her preferences are not elicited, s/he may feel forced to make a decision that is contrary to his or her wishes. Physicians often assume that if a patient disagrees with a recommendation, he or she will speak up but patients often need to be asked their opinion. A patient who is fully informed and engaged by the clinician in the decision-making process will be better able to make the decision that is right for them.

Tools and Clinician Communication Skills and Behaviors Needed for Effective SDM

Decision aids (DAs) are multimedia (usually 20-45 minutes in length) or written tools, used in preference-sensitive care, which are designed to communicate unbiased, up to date evidence about options in an understandable manner to patients. DAs are designed as an adjunct to and not a replacement for clinician counseling. They include structured guidance and exercises to assist in decision-making. DAs often include balanced videotaped testimonies of former patients discussing how they chose the option they did. Over 55 trials of DAs addressing 23 different screening or treatment decisions have consistently demonstrated that they provide patients with greater knowledge, more accurate risk perceptions and

Impact on patients of 55 trials of DAs¹⁵ addressing 23 different screening/treatment options has resulted in:

- ▶ Greater knowledge
- ▶ Greater participation in decision making
- ▶ More confidence in testing decisions
- ▶ More accurate risk perceptions
- ▶ Fewer people remaining undecided
- ▶ Fewer patients choosing major surgery
- ▶ Decreased interest/screening behavior among patients in routine care settings
- ▶ No change in interest/screening behavior among patients seeking testing
- ▶ Greater comfort with decisions
- ▶ Fewer patients choosing most aggressive surgical option
- ▶ Increased interest in watchful waiting as a treatment option if diagnosed with prostate cancer

greater comfort with their decisions. They also lead to greater participation in decision-making, and leave fewer patients undecided.¹³⁻¹⁵

The systematic use of DAs has been integrated into two specialty settings at Dartmouth Hitchcock Medical Center (DHMC), a leader in the field. In the DHMC Breast Center, SDM and the use of DAs has been the standard of care since 2005. Patients with early stage breast cancer are mailed a DA about treatment options prior to their initial visit with the breast surgeon. The surgeons were initially reluctant to send their new patients a DA prior to the first appointment because of a desire to provide all the counseling themselves. However, they soon enthusiastically embraced this approach as the standard of care. They discovered that they were able to provide more in-depth counseling to an informed patient who had already reflected on her values prior to the visit, making the interaction more efficient, improving decision quality and patient satisfaction (Dr. Dale Collins—personal communication). In the DHMC Spine Center, several of the clinicians recommend the DA prior to a new patient’s first visit for herniated disc or spinal stenosis. If the post-DA questionnaire filled out by the patient suggests significant psychological distress regarding possible surgery, a social work referral is automatically triggered to offer the patient additional counseling and assess the need for support.

DAs are only an adjunct to clinician counseling and the key communication skills required to do effective shared decision making are listed in table 1.⁶

1. Discussion of the patient’s role in decision making
2. Discussion of the clinical issue or nature of the decision
3. Discussion of the alternatives
4. Discussion of the pros and cons of the alternatives
5. Discussion of uncertainties associated with the decision
6. Assessment of the patient’s understanding
7. Exploration of patient preference

Table 1. Elements of Shared Decision Making—adapted from Braddock, CH et al. “Informed Decision Making in Outpatient Practice: Time to Get Back to the Basics.” JAMA. 1999;282:2313-23206

Understanding a patient’s values, preferences and life circumstances is essential to assist a patient to make a decision consistent with his or her attitudes and needs. The videotaped testimonies of former patients discussing how they reached their decision help a patient clarify his or her own attitudes and preferences. In counseling done after a patient has seen a decision aid, clinicians should routinely elicit patient values by asking a question such as, “What is most important to you in making this decision?” Physicians contend that they know *without* asking what a patient’s preferences are but research in end of life care and surgical decisions does not support this contention. A 2001 study by Coppola et al. has demonstrated that primary care physicians are not accurate in predicting elderly patients’ life-sustaining treatment preferences.¹⁶ Without directly asking about personal attitudes and preferences it is impossible for anyone, including clinicians, to understand another’s views. In facing major surgery, decision aids have been shown in multiple studies to help patients clarify their preferences.¹³⁻¹⁵ The use of DAs ultimately leads to more conservative therapeutic choices by patients, with 21 percent to 42 percent reductions in selection of the most invasive treatment option and an overall relative risk for choosing the most invasive option of 0.74.¹⁵

Another set of essential skills required for effective SDM is the provision of risk and benefit information to patients in clear, easily understood language. Quantitative risks are rarely discussed with patients but expressing risk in qualitative terms such as “infection is rare” or “it is unlikely you will have serious side effects” often leads to confusion and unrealistically high expectations. Patients often overestimate benefit and underestimate risk when they are not presented with numerical data.^{17,18} Medical research is difficult to translate transparently, especially when working with patients challenged by health literacy, and the skills of communicating risks and benefits have not traditionally been taught in medical school. Younger and better-educated patients desire more information and a greater role in decision making and are more satisfied and adherent when they receive this.¹⁹

Table 2 summarizes the risk communication skills which clinicians need to master to enhance patient understanding.²⁰ Natural frequencies, which state a risk relative to a specified reference class, are better understood by patients than percentages.^{18,20} For example, in discussing complications of radical prostatectomy, explaining that “30-50 men out of 100 men like you will have problems with incontinence” is better understood than stating “30-50 percent” will develop this symptom.

Transparent Risk Communication	Confusing or Biased Risk Communication
Natural frequencies	Percentages
Absolute risks	Relative risks
Graphics, pictures	Lots of statistical data
Balanced framing	Gain/loss framing

Table 2. *Helping Patients Understand Risk Information (adapted 17, 18, 20-22)*

Presenting the risk of a low prevalence event as a relative risk (RR) can overestimate treatment benefit, and expressions that magnify benefit are more compelling to both clinicians and patients. Absolute risks (AR) are a more accurate way to convey the magnitude of a risk and result in patients making more rational decisions.²² For example, in discussing the benefit of mammography to a 50-year old woman, it is more accurate to state “having a mammography every year reduces the risk of dying from breast cancer by about 1 in 1,000, from about 5 in 1,000 to about 4 in 1,000,” rather than “having a mammogram every year reduces the risk of dying of breast cancer by 20 percent.” Medical journals typically use RR to report benefits, making the argument for screening appear more compelling, while using absolute risks in discussing harms. For example, the USPSTF Guide uses RR to describe benefits of sigmoidoscopy, and AR to describe the harms. This approach inflates the benefits and minimizes the harms^{20,21} and may be unconsciously or intentionally manipulative.

Patients and physicians are all affected by the way health information is expressed or “framed.” For example, patients and physicians are more likely to choose surgery over radiation therapy for lung cancer patients when the same outcome is framed as probability of **surviving** (gain frame) vs. the probability of **dying** (loss frame).²³ To communicate without bias, it is necessary to do balanced framing, and discuss results in both positive and negative terms. For example, “If we look at 100 people like you who do not get regular screening for colon cancer, three will die of colon cancer and 97 will not.” Although this approach is cumbersome to do for all risks and benefits, it is important to use balanced framing for the major message or the issue of greatest concern to the patient.

Graphics, pictures and visual metaphors are better understood by patients with low health literacy.^{20,24}

Since fostering clear understanding is critical to effective counseling, the clinician needs to check in with the patient to verify that what s/he explained was understood. Decision aids have incorporated all of these risk communication guidelines in their presentation; now we need to train medical students, residents and clinicians to discuss risks and benefits more effectively.

Decision coaches, usually nurses or other allied health personnel, are a useful adjunct to clinician counseling.²⁴ Their role includes assessing a patient’s values, knowledge, decisional conflict and support and then providing decision support tailored to a patient’s needs.²⁴ The Ottawa Personal Decision Guide (<http://decisionaid.ohri.ca/decguide.html>) was developed as a tool that can be used by patients alone or in conjunction with a decision coach. This tool guides a patient through the five steps of making a medical decision: clarifying the decision to be made, identifying one’s role in decision making, assessing one’s decision-making needs, weighing the options and planning next steps. Decision coaches are especially helpful when a patient experiences decisional conflict, a state characterized by uncertainty in identifying the best course of action when two or more different clinically reasonable medical options have competing benefits and harms.²⁴ Although providers often assume that decisional conflict is the result of lack of knowledge about different options, it can have multiple origins. Other causes include unclear values, lack of support, social pressure, unrealistic expectations, lack of self-confidence to make a decision or lack of other resources. Decision coaches can spend the time necessary to tease out the causes and help support and guide a patient through a difficult decision.

Implementing Shared Decision Making in the Medical Home

Implementing SDM involves substantially more than the simple distribution of decision aids to patients. Clinical processes, as outlined in Figure 1, include the need to train and educate staff and clinicians, build and maintain a library of effective, up to date decision aids and distribute DAs in an efficient manner to eligible patients. Multiple distribution approaches exist including mailing a DA before a visit, handing the DA out during or after a visit or using a systematic distribution model such as providing a DA to all eligible patients in a patient registry. Expecting a busy clinician to prescribe a DA at the end of the visit (post-visit model) has resulted in low uptake (personal experience, unpublished data) because of the

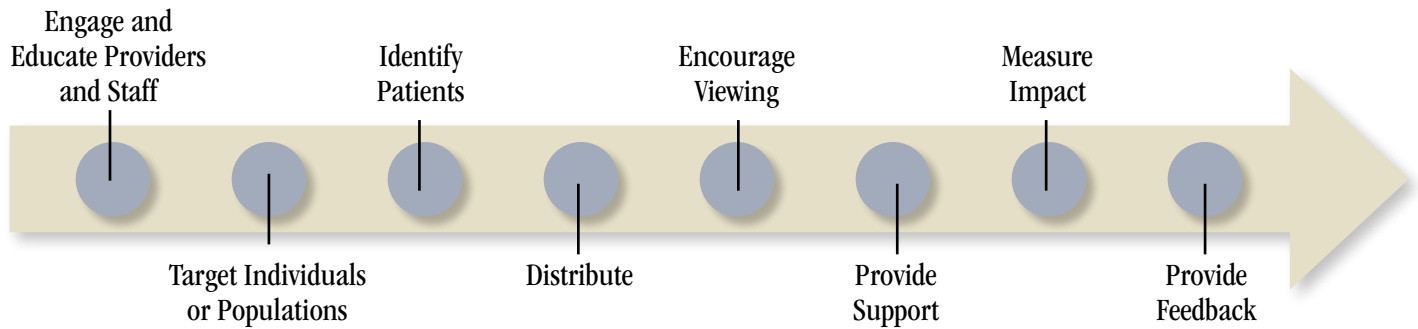


Figure 1

complexity, time constraints and multiple competing demands in the primary care visit. Even the well-intended clinician often forgets the simple step required to prescribe a DA since they have not been trained using this approach. Distribution to all patients in a registry, and mailing the DA with a letter signed by their PCP recommending it before the next visit results in a higher viewing rate (personal experience, unpublished data). This pre-visit approach is feasible with multiple chronic conditions such as CHF, NIDDM, depression or chronic pain. Screening DAs focused on colorectal, prostate or breast cancer screening can also be mailed pre-visit to all patients turning 50. Clinicians are then provided with a computerized feedback report, available before the visit, which includes information about the patient’s knowledge, values and overall treatment preferences. Having the feedback report in advance allows clinicians to address knowledge gaps, help clarify values and help the patient make a screening or treatment option consistent with their values.^{8,unpub data} As a result, the counseling is more efficient, can go to a deeper level and decision quality is improved.¹⁵

There are a great many excellent quality DAs useful in a primary care setting which makes it unrealistic for clinicians to watch and learn the contents of all of them. It is important to provide PCPs with a brief summary of a DA, accessible at the point of care in paper and electronic versions. These summary tools must be simple enough to obviate the need for advance study, and can enable a provider to answer questions a patient may have regarding quantitative data contained in the DA with which the clinician is not familiar. For example, PCPs are unlikely to know the infection rate post knee replacement or the longevity after a prosthetic knee is implanted, and these tools will provide those answers in a format that is easy to communicate.

In the patient centered medical home, other potential benefits of SDM are to reduce the rate of unnecessary referrals to specialists and improve a patient’s preparation for a specialty visit. For example, when a patient is referred to orthopedics for a knee or hip replacement, the referral can trigger the automatic mailing of a DA which the patient is encouraged to watch before the appointment. After a patient learns about the risks and benefits of the treatment options, including surgery, he or she may decide that surgery is not an option he or she is willing to consider. The appointment can then be cancelled in advance, thereby reducing demand on scarce surgical resources (DHMC and WRJVAH unpublished data). If the patient does want to follow through with the appointment, the orthopedist’s counseling can take place more efficiently, since information about risks and benefits of surgery and post surgery rehabilitation has already been covered by the DA.

Recent health care reform legislation, in Section 936, addresses the need to facilitate SDM between patients and caregivers that “provides patients... with information about trade-offs among treatment options, and facilitates the incorporation of patient preferences and values into the medical plan.” The legislation then outlines the need to identify standards, develop, certify and test high quality DAs. It goes on to stipulate that clinical providers need to be educated on their use. CPT codes exist to reimburse providers for counseling patients about decision making ranging from medical decisions of low (99203, 99213), moderate (99204, 99214) and high (99205, 99215) complexity.²⁶

Little data exists to assess the economic impact of SDM using decision aids. In one UK trial, mean total costs and quality adjusted life years were greater for groups of patients who had seen a DA with or without

follow-up nurse coaching.²⁷ In two other trials of DAs for BPH and hormonal treatments for menopause, the process would have been cost-neutral if the DAs had been available on the Internet.²⁷ Patient DAs reduce the overuse of surgical treatments by 25 percent¹³ which suggests that more widespread uptake of this approach may help reduce overall health spending. As the country shifts away from payment systems that reward utilization and towards those that reward informed patient choice, SDM will become the standard of care, engaging and educating patients more fully, improving decision quality and preventing the overuse of care not chosen by informed patients.

Getting Started with SDM

Primary care practices wishing to experiment with the tools and techniques of shared decision making should consider a targeted initial foray using a structured implementation approach. Key steps include:

1. Select a site “champion” who is motivated to lead the effort and become the first practice expert in shared decision making. This person will need to:
 - a. Review and develop familiarity with current literature;
 - b. Explore and evaluate tools such as condition-specific decision aids and the Ottawa Personal Decision Guide; and
 - c. Lead the process design efforts necessary to incorporate shared decision making into clinical practice.
2. Review and propose options for one or two candidate diagnoses or procedures to start with. Good candidates would be PSA or colorectal cancer screening, or knee or hip joint replacement.
3. Design the detailed processes outlined in Figure 1 above. This includes how patients will be identified, how decision aids will be used, and what specific support will be provided to the patients by clinicians or other staff during and between office visits.
4. Define how the practice will be reimbursed for the counseling through appropriate CPT coding.
5. Determine what success looks like and how to measure it. Good goals include increasing patient knowledge, incorporating patient values in the decision process, improving patient comfort with

the decision making process and tracking any changes in ultimate decisions made by patients. All of these can be measured through a patient survey.

6. Consider contacting other practices with experience in SDM to take advantage of their prior learning. Plan to educate all your clinicians in the communication skills required to do effective shared decision making.

After a targeted initial success with shared decision making focused on one or two diagnoses or screening tests, practices can expand the tools and methods to other conditions and procedures.

Additional resources to learn more about SDM include:

1. Foundation for Informed Patient Choice (<http://www.informedmedicaldecisions.org/>)
2. Ottawa Hospital Research Institute (<http://decisionaid.ohri.ca/about.html>). A tutorial which reviews the use of the Ottawa Decision Support guide can be accessed online at: <https://decisionaid.ohri.ca/ODST/>.
3. <http://decisionaid.ohri.ca/index.html> A complete list of DAs in development or completed is found in the Cochrane Inventory.

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A Team Approach to Chronic Disease Management

ROBERT LYON, MD

Why change our present system of chronic disease management?

It is well-studied that physician effort alone is inadequate to achieve consistently high performance in standard of care measures for many chronic diseases. Standard of care guidelines for chronic diseases and preventive care are achieved approximately 50 to 60 percent of the time. Teams are a proven critical component in improving the focus on patient care and the quality of chronic disease management, and are a major element in the principles of the patient centered medical home (PCMH).

A key element of the patient centered medical home is the distribution of work to non-physician team members to achieve high quality outcomes. Not only does this improve outcomes but it frees up physician time to be spent on things requiring a medical degree. “Best Practice” offices use a systematic approach with well-defined staff roles to achieve superior results. The team approach should be built on core “systems” principles.¹ Under the team approach, care must be

1. Continuous, not episodic
2. Proactive, not reactive
3. Planned, not sporadic
4. Patient centered, not provider centered
5. Population based as well as patient based

¹Centers for Disease Control and Prevention. *Team Care: Comprehensive Lifetime Management for Diabetes*. Atlanta, Georgia: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 2001.

The National Committee for Quality Assurance (NCQA), an organization that recognizes practices as PCMHs, actually asks for proof of a team-based approach to chronic illness management. They require non-physician staff to manage preventive services, help develop individualized patient care plans and do ongoing case management and follow-up of patients with chronic conditions.

Team composition

Team composition will vary according to the condition or process involved, patient needs, organization constraints and skill sets needed to meet the goals of the team. As a general rule, anyone who has a role in the process should be on the team. A purely clinical team may only include a physician and varying levels of nursing, while a more process-oriented team (e.g., follow-up of test results) may require several people from the admin team, medical records, etc.

Team member guidelines

- ▶ The main principle determining the role of team members is that **everyone should be working at their highest level of training.**
- ▶ Each team member must have clear roles and defined expectations.
- ▶ Team members need to be given the time and tools to achieve their goals.
- ▶ All team members’ voices should be heard and opinions respected.

Team meetings

In order for a “culture” of teamwork to exist, teams must have dedicated meeting times. It is essential that some “protected time” be allocated. If certain

people are unable to make the meetings or if it is squeezed in between other more important issues it will be obvious to all staff that this is not a priority and will result in an unsuccessful outcome.

As a result of team meetings, participants will obtain ownership of the process, are able to take more initiative because of a greater understanding of the team's goals, have an increased sense of camaraderie and mutual respect and can communicate more clearly with patients. The following are examples of the meetings that should be made when beginning a chronic disease management program.

1. Chronic disease management education—When you begin a new initiative, education of the entire staff is crucial to create the proper environment, to understand the language of the chronic care model and to clearly define the goal of the project. Additional nursing and physician education on motivational interviewing techniques, stages of change theory, goal setting and action plan development, and patient self-management support is beneficial. If you do not have people able to provide this type of education, there are very good videos available at a number of sites including www.chcf.org.

2. Meet regularly as a clinical staff (every two months at least), give out the latest disease registry data, assess overall progress as a clinic and then break down into teams to address barriers to success and make Quality Improvement (QI) recommendations. Recognition and small prizes may be given to the teams who made the most significant progress with their patients in the prior two months.

3. Individualized care plan management meetings—Utilizing the team, technology, registries and EHR capabilities is great to meet necessary testing and referral guidelines for patients with chronic diseases. However, we all know that true changes in patient-centered outcomes require behavioral change which does not happen through registries, but through one-on-one engagement of patients to assist them in taking responsibility for their health and making good choices. To truly be a PCMH and achieve NCQA recognition, we needed to fulfill this goal of patient engagement and develop “patient-specific” management plans.

RNs may be best suited to fill this role but other medical staff could be trained to do this successfully. This role could be decentralized to all nursing

staff or centralized to a particular person with the passion and skills for this type of work. This health educator's role is to assist physicians in managing our highest risk patients with issues like diabetes, coronary artery disease, congestive heart failure, asthma or other chronic conditions which have a significant behavioral component to them.

To do this well, it is essential for physicians to meet with the health educator for care management plan development, but there is often no structured time available to make this consistent. After much debate at our office, we decided to take 30 minutes of a physician's patient schedule on a rotating basis (once every two to three months) to meet with the health educator. The physician prepares for this meeting by bringing about five high risk patients who are in need of care management; they discuss with the RN what areas need to be addressed and a care plan is developed. The RN then contacts the patient and communicates progress and changes to the physician. The fear was this would cut into productivity, but actually it did not, since the engagement of the patients resulted in more frequent visits and follow-up, and visits by patients who were not coming in at all.

How to start the process of team development for chronic diseases

1. Get a commitment from the organization's leaders to support the process. Having a plan to move toward a team-based chronic care model is a crucial step to be a PCMH. A selling point is, this designation may well prove financially beneficial in the near future as “care management” fees will likely increase to offices recognized as PCMHs. The team approach is necessary to achieve NCQA recognition, which will likely be one of the objective measures to determine increased reimbursement (care management fees) in the PCMH model with some payers.

2. Seek a champion in the physician, nursing and administrative groups to act as motivators and thought leaders.

3. Include the entire staff in a meeting explaining the fundamentals of the PCMH in chronic disease and the necessity of a team-based approach to care.

4. Determine what the best team structure will be for your office. Smaller decentralized teams work

best for most things, but if you are a larger group you may want to centralize some things, such as a nurse health educator.

5. Start with one small, doable project that requires working a registry of patients. It should include outcomes that can be measured in a short, definable time period (weeks to months). Examples could be pneumovax for patients with diabetes, mammograms, diabetic foot exams, etc. You might want to begin with one team initially and work out the process issues before disseminating to the entire group.

6. Plan regular, short meetings initially to assess progress and make frequent changes to the process as needed, using the Plan Do Study Act model.

7. Consider adding other projects after success is obtained and team functioning has been optimized.

Practical tools used to assist in this process

1. Standing orders—Use for everything that does not require direct physician input. This gives autonomy and a sense of ownership for staff in the PCMH process. Examples include lab ordering, immunizations, diabetic foot exams, referrals (mammography, colon cancer screening, diabetic eye exams) and appointments per a predetermined guideline.

2. Registries—Registries are ESSENTIAL. If you do not know who your patients are, you cannot proactively manage them. The highest risk patients are the ones you rarely see. For example, every medical assistant at our office has a binder with registries. This includes diabetes, mammography, colon cancer screening and immunizations. This is a list of patients who are behind on screening. Whenever there is down time (yes, occasionally there is) they are to work on contacting patients to schedule needed tests. This has had very good buy-in and increased rates of screening by an average of 20 percent. Our RN coordinator oversees this process. We recommend distributing new registries at least every two months to maintain momentum, to allow teams to see progress and to do rapid QI changes if results are not improving as expected. Below are some links to registry development:

3. <http://www.chcf.org/topics/chronicdisease/index.cfm?itemID=102741>

<http://www.aafp.org/online/en/home/practicemgt/quality/qitools/qiresearch.html>

4. Chronic disease and preventive care templates—Having one place for physicians and team members to look for up-to-date information is important. We have one template in our EHR with all preventive services (immunizations, cancer screenings and labs) which includes date ordered, date completed, recommended intervals for screening and whether a patient has refused. This is often completed by nursing and admin staff. We combined diabetes, coronary artery disease and hypertension in one chronic disease template due to overlap in these conditions and for ease of use in completing the NCQA application. This template also includes forms for goal setting, action plans, evidence-based guidelines and patient education materials. Our health educator can use this as a main resource for management plans.

5. Incentives—We distribute all data on diabetes indicators, mammography, colon cancer screening and immunization by individual physician and team. Everyone sees peer and team data and results are compared to accepted national benchmarks. This spurs healthy competition among the physicians and staff. Fun rewards such as lunches or gift cards are given out to those with the greatest improvement.

6. Utilizing existing community resources—Team members should be educated in community resources for items like disease management group meetings, exercise facilities, resources for free services (e.g., mammograms), inexpensive pharmaceuticals, mental health services, etc.

7. Patient stratification by risk—So as to not overload the teams, particularly at the onset, concentrating team resources on the highest risk patients may be needed. For example, begin working with diabetes patients with an HgA1c over 9, or blood pressure of >160/100, or no mammogram in the last three years.

Example of a team approach to a chronic disease

We can use a Diabetes Care Team as an example of how to develop member roles and how they may function. A Diabetes Care Team may consist of a medical assistant, an RN and a physician.

Well-defined team members' roles could be as follows:

- 1. Medical Assistant (MA)**—Through the use of Guidelines and Standing Orders, MAs should order all necessary labs, give immunizations, schedule appointments and make referrals (e.g., screening eye exams) without needing physician input.
- 2. RN**—Physicians communicate to RNs through an EHR workflow to follow-up with patients in areas such as blood sugar monitoring, medication management, behavioral goal setting, action plan follow up, coordination of care, etc. RNs also communicate information directly to physicians through the EHR workflow process.
- 3. MD**—Sets the agenda and prioritizes patient issues. Acts as a problem solver with clinical or complex issues which need physician input. Instructs team members on priorities and goals.

How might this team function?

All team members get a diabetes registry with a list of all the physicians' patients and all necessary data (i.e., HgA1c, lipids, microalbumin, blood pressures, vaccinations, etc.). All parameters which are not current are highlighted and the MA will contact the patient to get them done. Needed appointments will be made and necessary testing completed prior to the visit. Physicians review the registry for accuracy (error in diagnosis, no longer a patient, deceased, etc.). The physician may then choose some higher risk or uncontrolled patients to discuss with the RN for a care management plan. The number of patients chosen will depend on the resources and time available and new patients would rotate onto the management list as others are removed when no longer needing close support. The RN will follow up with the patient, complete the care plan and communicate with the physician as needed.

Smaller practices might not have the luxury of RNs for interim care and more advanced case management. However, MAs can get more training in patient self-management education and gather necessary information to assist with physician-directed follow-up.

Concerns you may have at the beginning of this process include

- 1. Will these changes actually result in improved patient care?* Studies have shown significant improvements in frequency of testing, diabetes and lipid control, immunization rates and meeting preventive service screening guidelines.
- 2. Will staff be overwhelmed with the workload and change in job description?* We have had excellent "buy-in" from our staff and improved work satisfaction as a result of feeling like a vital part of the team in improving patient care. It was necessary to redistribute workloads among staff to make this happen.
- 3. Physicians won't like a "shared" approach to caring for their patients.* Most physicians appreciate the additional resources available to assure adherence to guidelines and the follow-up of management plans which they and the patients have agreed to.
- 4. Will productivity suffer with added meetings and duties?* Proactively engaging patients actually results in increased visits as patients become more involved in taking responsibility for their health. Visits are also more efficient as necessary data is available in real time due to the use of standing orders to better pre-plan visits, and because many preventive services have already been ordered.
- 5. Will patients like this proactive approach?* Some patients will not respond to this team approach. However, many are very impressed with the attention they receive and become more active participants in improving their health.

High performing clinical teams are a tremendous resource in improving outcomes in our patients with chronic diseases. They are an essential element in many aspects of the PCMH and a requirement for NCQA recognition. It instills a sense of accomplishment and ownership in staff members that they are a vital part of the patient care team. This culture shift along with skill development helps staff to engage patients in self-management principles and to help them take better control of their health.

By getting organizational support, clearly defining team roles, making time for regular meetings, and using registries and other appropriate tools to actively engage your patients, your office can improve the outcomes of your patients with chronic diseases.

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Improving Care Coordination between Patients and Providers in the Patient Centered Medical Home

ASAF BITTON, MD, MPH

Definition

Care coordination is a complex series of interrelated tasks that physicians carry out to optimize care. It has been defined as the “deliberate integration of patient care activities between two or more participants involved in a patient’s care to facilitate the appropriate delivery of health services.”¹ Spurred by an aging population with numerous chronic conditions, coordinating care through a complicated health system is becoming a key quality target for patients, providers and administrators alike. Furthermore, provider care options are numerous; a typical Medicare beneficiary saw a median of two primary care physicians (PCPs) and five specialists annually between 2000 and 2002.² Thus, it is no surprise that improved care coordination through teams of interlinked providers is a key focus of the patient centered medical home (PCMH) model.

Given the current status of multiple overlapping providers caring for complex patients, care coordination historically has been conceptualized as processes that occurred only between providers to optimize care. However, in reality it has two interlinked domains: coordination among providers, and coordination between providers and their patients.³ Coordination among providers can be defined and measured as that which occurs between PCPs and specialists, emergency departments and hospital physicians.³ It involves transfer of key health information and transition states between different care settings. Most studies of care coordination quality have occurred in the provider domain and show care to be poorly organized, fragmented and duplicative.^{4,5}

Problem

The focus of this essay is on the more underappreciated side of care coordination—that which occurs

between providers and patients. The continued fragmentation of U.S. health care combined with the increased complexity of care options leads to high levels of patient confusion around their care. A meta-analysis of doctor-patient communication studies found that 50 percent of patients leave an office visit not understanding what they were told by their physician.⁶ Another study that asked patients with diabetes to restate their physician instructions after a visit found only 53 percent could do so correctly.⁷ A recent survey of patients utilizing regular outpatient care found that 24 percent reported leaving visits with important questions unanswered, 18 percent received conflicting information from multiple providers and 41 percent of those on prescription medication stated that the physician did not review the medications or their side effects.⁸ Finally, a staggering 75 percent of physicians do not routinely provide patients with results of normal diagnostic tests, and 33 percent do not provide abnormal results.⁹

This poor communication leads to worse outcomes by missing opportunities to engage patients in improving and participating in their own care. A study of 124 physicians who had 1,000 audio-taped visits found that patients participated in medical decisions in only nine percent of visits.¹⁰ Shared decision making and active patient participation has been associated with better overall care coordination, medication adherence, positive health behaviors and chronic disease outcomes.^{11,12} Thus, the health and economic costs of inadequate coordination and decision-making in this area are real.

Barriers to Effective Care Coordination

A wide range of factors leads to the current system-wide failure in primary care coordination between patients and their physicians. On one level, lack of population-wide basic and health literacy certainly

plays a role in decreased patient understanding and treatment adherence. However, the overly stressed and dysfunctional current U.S. primary care system greatly contributes to the situation. The lack of effective physician communication is driven by time pressures, lack of PCPs and poor structures of care delivery. With large panel sizes caused by an existing fee-for-service system that rewards quantity of care over quality, PCPs struggle to deliver high quality, complex care in 15-minute visits. Estimates are that a PCP would need 7.4 hours per day to provide all recommended preventive services to a typical panel, and 10.6 hours per day to provide high quality long-term care.^{13,14} Farber et al. found that a typical geriatrician spent seven minutes doing inter-visit care coordination for each patient seen after 30-minute visits. With no reimbursement for this care coordination, it is not difficult to understand how misaligned care structures and incentives drive poor outcomes.¹⁵ Finally, lack of interoperable computerized records within integrated systems of care promote the information gap that leads to test results being lost, not reviewed, duplicated and not shared with patients.³

Care Coordination, HIT and PCMH

Team-based care is a cornerstone of the PMCH model. In particular, teams of providers in a PCMH clinic working together on a common EHR platform can help a patient to identify and engage in their own key health concerns through a number of ways.¹⁶ First, the provider team can effectively document within the EHR the patient's medical history, current medications and major concerns so that the providers and the patient share a common understanding of the situation. Second, through the use of registries (applications that define and track patients with a specific chronic disease status), the team can facilitate improved disease management through regular reminders and other “nudges” to help patients carry out necessary preventive care and disease self-care management. Third, EHRs linked to personal health records (PHRs) can further facilitate patient investment and involvement in their care management by increasing health information transmission, reminders and regular interaction with the care team via e-mail and other electronic means.

A number of important barriers to effective patient-provider care coordination exist within current EHR configurations for PCMH.¹⁶ Many commercial systems do not have sufficient registry and PHR capacities. Furthermore, providers often ignore clinical decision

support reminders due to “alert fatigue” from an overabundance of trivial alerts. Finally, whether patients are ready to fully engage in the use of PHRs remains an open question as the first generation of PHRs in general is unable to deliver upon the theoretical promise of EHRs. Further, without overt planning on how to reach disadvantaged communities of patients (low literacy, poor or primary language other than English), PHRs in their current formulation have the potential to exacerbate the “digital divide” and potentially worsen health disparities.

PDSA Cycles: An Important Quality Improvement Tool

The challenging task of transforming current systems of primary care toward a patient-centered, team-based, HIT-enabled approach requires the use of change management tools. Plan, Do, Study, Act (PDSA) cycles have emerged as an important tool for quality improvement and change management in the health care setting.¹⁷

The PDSA model is organized around three key principles and their accompanying questions: 1) Aim—what are we trying to accomplish? 2) Measurement—how will we know that a change is an improvement? 3) Results—what changes can we make that will result in improvement?¹⁸ After the three questions are asked, further refinement can facilitate the planning process, as summarized by the acronym FOCUS.¹⁹ The team is encouraged to **F**ind a process in need of improvement, **O**rganize a team that knows the process, **C**larify the current knowledge of the process, **U**nderstand the process variation and **S**elect a process for improvement.¹⁹ Engaging multiple organizational stakeholders in the PDSA process is critical to its success at the planning stage and beyond.

The PDSA model posits that the key way to make sustained quality improvement is to conduct small sequential local tests in an organized way, test the results formally and quickly act upon these results. During the study process, clinical leaders and project analysts compare the observed data to predicted results, most often using a time series design.¹⁸ The entire range of stakeholders must act on the knowledge gained to continue improvement efforts with another PDSA improvement cycle. Successful changes can be solidified by establishing systems to support them, expanding to other parts of the system and identifying further areas of improvement.¹⁹ Given the magnitude and scope of the transformation needs required by the PCMH model, PDSA cycles represent a way of chopping down these tasks into

smaller operational chunks that can be successfully implemented and evaluated in a step-wise manner.

Application of PDSA Cycles to Care Coordination in the PCMH

PDSA cycles can be applied to the problems of inadequate patient knowledge and self-management to promote better outpatient chronic disease management in the PCMH model. For example, PCPs practicing alone often do not have adequate time in each 15-minute visit to cover all of a diabetes patient's care needs, let alone clarify complicated treatment regimens, reinforce health promoting behaviors and carry out recommended preventive tasks. Annual foot exams for diabetic patients are an important part of preventing diabetic foot ulcers, a potentially morbid and serious diabetes complication.

An example of a PDSA intervention in this clinical area would test the use of medical assistants in expanded ways to ensure better diabetic foot care. Currently, many medical assistants (MAs) are underutilized in the clinical setting.²⁰ The PCMH model forwards the notion that each member of the care team practice "at the top of their license." Thus, up-training MAs to help PCPs carry out key disease management tasks, as opposed to relying on the PCP alone, is a critical aspect of PCMH. An important enabling factor in improving processes of care is linking the actions of the MA and PCP together with the patient through the use of an EHR, ideally structured with a personal health record for the patient to have access to outside the clinic setting.

In the diabetic foot care example, after achieving staff buy-in, MAs could be trained by the PCP about the importance of an annual health provider foot exam in diabetic patients and how to document and track this in the EHR and accompanying registry. A first PDSA cycle would be constructed around an intervention to ensure more regular, documented, diabetic foot exams. MAs would be trained to ask each diabetic patient (identified through the EHR) if they have had diabetes during the vital sign measurement, document the results and instruct diabetes patients to take off their shoes in the exam room while waiting for the physician. Beyond the sight of bare feet in the room, reminders embedded within the EHR would flash to alert the provider that it is time for an annual foot exam. Documentation of the exam (in quick, pre-structured text form) would then feed back to the registry in coded fields. Process measurement of this task as a quality metric could help clinical leaders see if the intervention worked. If successful, the next PDSA

cycle could add a short scripted advice promoting regular self-foot checks, and eventually progress to other diabetes preventive care co-management functions in a stepwise manner.

Previous Research on PDSA in Chronic Care

A small body of research suggests that PCMH clinics are beginning to utilize the PDSA cycle to improve chronic care using physician-MA teams,²¹ and Wagner et al. cite frequent PDSA cycles as an important part of implementing the chronic care model.²² A recent review found that MAs can be successfully trained for new quality improvement roles in many outpatient settings.^{20,23} One urban community health center (CHC) used rapid PDSAs to improve care for their diabetic patients, finding that numerous small interventions over a two-year period reduced mean Hemoglobin A1c from 10.5 percent to 8.6 percent.²³ A North Carolina study described five years of experience with PDSA cycles for chronic asthma care, finding that successful pilots required local champions, excellent team communication and clinic leadership support.²⁴ Finally, the NIH qualitatively reviewed quality improvement interventions for chronic diabetes care.¹⁹ The review rated PDSA positively, highlighting numerous case studies of successful interventions and encouraging future research in this area.¹⁹

Summary

Care coordination between patients and teams of providers is a cornerstone of the patient centered medical home model. Utilizing information technology embedded in EHRs, PHRs and registries can help patients to become more informed, engaged and activated in their health care. PDSA cycles are one way of breaking down the Herculean task of transforming current models of primary care into the PCMH, by focusing on accomplishing doable tasks, measuring the results and learning from the change process to improve results the next time. A small but growing literature supports this mechanism of changing care to improve the way care is delivered and the outcomes for patients and staff alike.

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Community Health Teams and Patient Engagement

LISA DULSKY WATKINS, MD

Background

In a true public-private partnership, the state of Vermont has established an innovative program called the Vermont Blueprint for Health. The Blueprint is guiding a comprehensive and statewide process of transformation designed to reduce the health and economic impact of the most common chronic conditions and focus on their prevention. It was launched by Gov. Jim Douglas in 2003 in response to the alarming increase in the incidence of preventable chronic disease, and has evolved into the comprehensive program in implementation today. Vermont's strong commitment is demonstrated in the Blueprint's 2006 statutory codification and state tax-funded annual budget. Legislation in subsequent years outlined its integration, established a patient centered medical home-based pilot timeline and strengthened the involvement of private insurance carriers. Act 128, passed in the 2010 legislative session, calls for both statewide implementation by October 2013 and for all insurers to participate fully in the payment for the innovations that characterize this cutting edge work. It has been and remains a collaborative project with design and implementation contributions from state government (executive and legislative branches as well as the Department of Health, Vermont Medicaid and regulatory agencies), commercial and public insurers, hospitals, providers, professional societies, allied health professionals, business groups and many others.

Blueprint Overview

The Blueprint is helping primary care providers operate their practices as patient centered medical homes (PCMHs), offering well-coordinated care supported by local multidisciplinary teams, expanded use of health information technology, assisting the development of a statewide health information exchange network, and financial reform that sustains these processes and aligns fiscal incentives with health care goals.

The varied and demanding activities of a fully functional PCMH can be difficult to implement in small isolated practices that don't have the patient volume or resources to support the required staff roles. Current payment strategies generally do not support multi-disciplinary team-based care. Health care and supportive services are often fragmented and incomplete, particularly for patients with complex conditions. Clinical research (including controlled clinical trials) supports the general principle that routine access to non-physician care support personnel can lead to improved health status and a reduction in avoidable acute care for patients with common chronic diseases. For many people this level of support is needed in order to overcome social, economic, psychological and behavioral barriers, and to adhere to long-term guideline-based management plans.

The Community Health Team Model

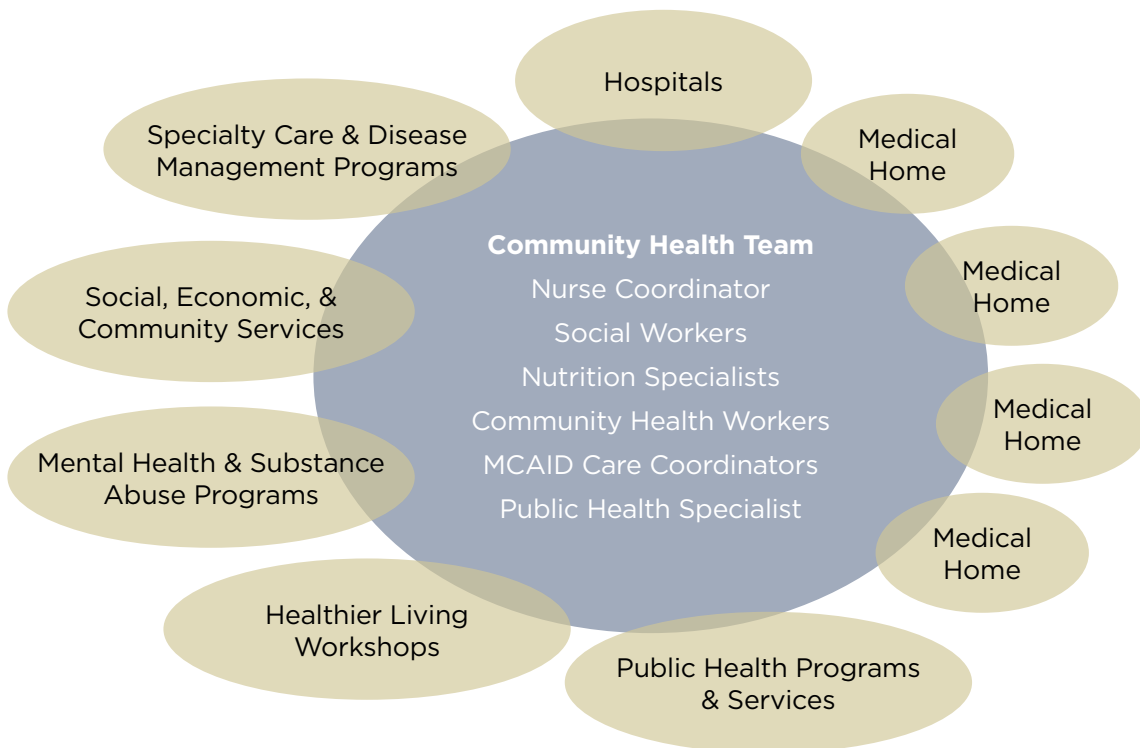
The Vermont model includes a novel population- and community-oriented approach to provide multi-disciplinary support for groups of advanced primary care practices and their patients. The cornerstone of the program is the Community Health Team (CHT), a shared local core resource readily available to patients without financial barriers. The CHT is flexible in terms of staffing, design, scheduling and site of operation. Its services are free to all patients and practices (no eligibility requirements), and is financed in a shared manner by Vermont's major commercial and public payers. The new investment in the core CHT (five full time equivalent staff positions per 20,000 patients) has an important impact which is difficult to quantify but qualitatively impressive. See the following for a sample CHT organizational diagram.

As has already been observed in Vermont's pilot communities, successful transitions from community support services to the primary care setting occur. Community-based providers of ancillary services frequently identify individuals and families at risk

and refer to the CHT. These local and personal “handoffs” allow these individuals to enter into the PCMH while meeting non-medical needs. By creating these linkages with the wide spectrum of often isolated health and human services, investment in the core CHT helps to leverage a much larger functional community health team consisting of other professionals in the area that support the integrated efforts of the team, such as dietitians, pharmacists, exercise physiologists, diabetes and asthma educators, tobacco cessation counselors and trained peer mentors. Examples include applying for insurance, securing housing and transportation, seeking economic assistance, assistance in purchasing and managing medication, accessing physical activity resources and nutritional counseling, and enrolling in self-management programs.

The CHT uses the web-based central registry for population management by pulling reports,

conducting outreach and facilitating follow-up and assessments for targeted populations. Registry visit planners, or the equivalent display in an EMR, are used to embed self-management into individual care, and to create reports and population management based on key self-management indicators. CHT members meet regularly with providers and staff from the PCP associations to identify targeted populations and opportunities for improvement, plan care coordination strategies and ensure a team-based approach across independent practices and organizations. CHT members maintain a presence in the PCMHs, allowing for instantaneous or same day access when a patient or family presents with urgent needs. They can make home visits or accompany patients to medical or other appointments. Capacity is being fostered in each community for self-management support such as goal setting, action planning, problem solving and motivational interviewing. Multiple self-management modalities



- ▶ A foundation of medical homes and community health teams that can support coordinated care and linkages with a broad range of services
- ▶ Multi Insurer Payment Reform that supports a foundation of medical homes and community health teams
- ▶ A health information infrastructure that includes EMRs, hospital data sources, a health information exchange network, and a centralized registry
- ▶ An evaluation infrastructure that uses routinely collected data to support services, guide quality improvement, and determine program impact

Health IT Framework
Evaluation Framework

are hardwired into the Vermont model across the spectrum of PCMHs, CHTs and community support settings. Emphasis is placed on enhanced self-management including setting and tracking progress on patient-centered self-management goals related to healthy behaviors and management of chronic disease. Registry visit planners (paper or electronic, depending on the practice's preference), or the equivalent display in an EMR, are used to embed self-management into individual care, and to create reports and population management based on key metrics. The teams meet regularly to review strategies and make plans for improved coordination of care. CHTs facilitate communication among professionals and the PCMH in a systematic way to achieve coordinated care, often using the IT infrastructure to consistently document patients' clinical plans and self-management action steps. The utilization and activities of the CHTs are being documented and measured as part of the overall Blueprint evaluation.

Primary Care Practitioner Experience

"The CHT has provided resources that allow me to help my patients take control of their own health and lifestyle choices and to make positive changes to improve how they feel today and to reduce their chances for premature illness in the future. The CHT has also provided my patients with psychosocial support that a solo private practice cannot afford to provide patients, including finding resources for counseling, obtaining health insurance for the uninsured and providing needed medications for patients without insurance. The medical home pilot has helped my practice to focus on quality issues in medical practice work processes, find areas that need improvement, and implement changes. It has also given me tools, like DocSite, that help me manage chronic conditions for a panel of patients, and improve medical care across the entire panel of patients." (MD in an independent solo practice, Burlington, VT)

"Having access to the CHT removes the fear of asking a patient the simple open ended question 'so how are things?' If the patient breaks into tears, or admits that things at home are chaotic (that they cannot afford their medications, or cannot get to appointments due to lack of transportation or child care), I do not feel that I need to solve all of their social woes then and there by myself. I have a whole team to help. I can have them see Betsy, our behavioral health provider (counselor) within the week, or have Erica, our chronic care coordinator nurse come right in and help sort out which resources they need. It truly expands my ability to care for patients by helping to tear/take/break

down social barriers that interfere with medical care." (MD in a Federally Qualified Health Center, St. Johnsbury, VT)

"The CHT has greatly impacted my patient care. The CHT wraps around my patients to help patients maneuver through the maze of available services and support in the community. It also provides the needed 'nudge' and follow-up to help patients move in a more healthful direction. Motivation of patients is the needed piece in moving forward in healthy changes—CHT does this. Lifestyle changes are the most difficult piece of the puzzle in chronic care. CHT works on this." (MD in a rural health center, Lyndonville, VT)

Summary

The ongoing program evaluation has six major components: analysis of clinical data from direct chart review; EMR extraction and registry extraction; qualitative assessment of patient experience; qualitative assessment of provider and practice experience; utilization and cost ascertainment using a financial impact model; and multi-payer claims database and multivariate analysis of public health databases. Early investigation reveals high satisfaction levels, modest improvement in clinical outcomes such as HgA1c levels and decreased utilization of costly services such as emergency room visits and in-patient hospitalizations. Formal release of the results of our evaluation is forthcoming in the near future.

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Integrated Mental Health Care

JÜRGEN UNÜTZER, MD, M.P.H., M.A.

This brief overview will summarize the case for providing behavioral health services in primary care, review core components of evidence-based integrated mental health programs and conclude with lessons from regional and national efforts to implement such programs.

The case for behavioral health services in primary care

Behavioral health problems such as depression, anxiety, alcohol or substance abuse are among the most common and disabling health conditions worldwide. They often co-occur with chronic medical diseases and can substantially worsen associated health outcomes.¹ When behavioral health problems are not effectively treated, they can impair self-care and adherence to medical and mental health treatments, and they are associated with increased mortality and increased overall health care costs.

National surveys have consistently demonstrated that more Americans receive mental health care from primary care providers than from mental health specialists.^{2,3} Most patients would prefer an integrated approach in which primary care and mental health providers work together to address medical and behavioral health needs. In reality, however, we have a fragmented system in which medical, mental health, substance abuse and social services are delivered in geographically and organizationally separate “silos” with little to no effective collaboration. In a recent national survey, two-thirds of primary care providers reported they could not get effective mental health services for their patients.⁴

Improving the treatment of behavioral health problems in primary care

Efforts to improve the treatment of common mental disorders in primary care have focused on screening for common mental disorders, education of primary care providers, development of treatment guidelines and referral to mental health specialty care. Although well intended, these efforts have by and large not

been effective in reducing the substantial burden of mental disorders.⁵ Another approach to improve care for patients with behavioral health problems is to co-locate mental health specialists into primary care clinics. Having a mental health professional available to see patients in primary care can improve access to mental health services but there is little evidence that co-location of a behavioral health provider in primary care by itself is sufficient to improve patient outcomes at a population level.⁶

In recent years, a number of conceptual models have been put forth to help guide the integration of medical and mental health services. These include the “Four Quadrant Model” of care⁷ and recent work on the patient centered medical home.⁸ Other useful summaries of approaches to integrate mental health and primary care have been published by the Milbank Memorial Fund,⁹ the Hogg Foundation for Mental Health¹⁰ and the Integrated Behavioral Health Project funded by the California Endowment.¹¹

At this point, the most robust research evidence comes from studies of “collaborative care” programs for common mental disorders such as depression^{12,13} and anxiety disorders,¹⁴ and from studies of screening and brief intervention programs for at-risk drinking in primary care.¹⁵ In such programs, primary care providers are part of a “collaborative care team” that includes behavioral health staff such as nurses, clinical social workers or psychologists who can support medication management prescribed by PCPs and provide brief, evidence-based psychosocial treatments and a psychiatric consultant who can advise on the care of patients who are not improving as expected.¹²

In the largest trial of collaborative care to date, the IMPACT study, 1,801 primary care patients with depression and chronic medical disorders from 18 primary care clinics in five states were randomly assigned to a collaborative stepped-care program or to care as usual. The program added two new team members to primary care, a depression care manager and a consulting psychiatrist. It also introduced two important clinical processes, systematic tracking of

clinical outcomes and stepped care in which treatments are systematically adjusted with consultation from a psychiatrist if patients are not improving as expected. IMPACT participants were more than twice as likely as those in usual care to experience a substantial improvement in their depression over 12 months.¹⁶ They also had less physical pain, better social and physical functioning and better overall quality of life than patients in care as usual (<http://impact-uw.org>). This collaborative care approach was preferred by patients and primary care providers¹⁷ and the IMPACT program was found to produce substantial long-term costs savings compared to care as usual.¹⁸ More recent studies have demonstrated the effectiveness of the IMPACT program in depressed adolescents,¹⁹ depressed cancer patients²⁰ and diabetics²¹ including low-income Spanish-speaking patients.²² The collaborative care approach tested in IMPACT has been recommended as an evidence-based practice by SAMSHA, the President's New Freedom Commission on Mental Health and a number of national organizations including the National Business Group on Health.

Implementing Effective Integrated Care Programs

Although there is some variation in the components of effective integrated care programs, most of them build on a few core clinical principles. These include the strategies of “measurement-based care,”²³ “stepped care,”²⁴ and “treating to target.” Systematic measurement of clinical outcomes using brief patient-rating scales, such as the nine-item Patient Health Questionnaire (PHQ-9) for depression,²⁵ helps clinicians keep track of whether patients are improving as expected or if treatment needs to be adjusted. Psychiatric consultation, a limited resource in most settings, can then be focused on patients who are not improving as expected. Such systematic “treatment to target” can overcome the “clinical inertia” that is often responsible for ineffective treatments of common mental disorders in primary care.²⁶ Effective programs also include the core components of chronic illness care as proposed by Wagner and colleagues.²⁷

In recent years, several national initiatives have supported the implementation of integrated care approaches, including programs supported by the MacArthur Foundation (<http://www.depression-primarycare.org>), HRSA (<http://www.hrsa.gov/mentalhealth>), the Hogg Foundation for Mental Health (<http://hogg.utexas.edu>), the California Endowment (<http://www.ibhp.org/>) and the John A. Hartford Foundation (<http://impact-uw.org>). Large scale implementations of evidence-based programs such

as IMPACT include efforts by national health plans such as Kaiser Permanente²⁸ or the DIAMOND program in Minnesota, in which the Institute for Clinical Systems Improvement (ICSI) works with eight health plans, 25 medical groups and over 80 primary care clinics to implement collaborative care for depression.²⁹ In the state of Washington, the Mental Health Integration Program (<http://integratedcare-nw.org>) includes more than 100 community health centers and over 30 community mental health centers that work together to provide integrated care for safety net clients with medical and behavioral health needs.

Below are some of the lessons from such large-scale implementation efforts:

- ▶ Fragmented financing streams are an important barrier to integrating mental health and primary care services,³⁰ but financial integration does not guarantee clinical integration. Effective financial, operational and clinical integration are needed.
- ▶ Simply co-locating a mental health provider into a primary care setting may improve access to behavioral health care but it does not guarantee improved health outcomes for the large population of primary care patients with mental health needs.
- ▶ Effective treatment requires a move from episodic acute care in which we provide the equivalent of “behavioral health urgent care” to patients presenting for care to a population-based approach in which all patients with behavioral health needs are systematically tracked until the problem is resolved. A “registry” or clinical tracking system can help identify patients who are “falling through the cracks” and support effective stepped care.³¹
- ▶ Initial treatments (be they pharmacologic or psychosocial) are rarely sufficient to achieve desired health outcomes. Systematic outcome tracking, treatment adjustment and consultation for patients who are not improving can help achieve the desired health outcomes.
- ▶ Effective collaboration in primary care requires mental health providers to be flexible. This includes regular communication with patients' PCPs, the willingness to be interrupted during therapy sessions, the use of the telephone to reach patients who cannot make clinic appointments and the use of brief, evidence-based therapies such as motivational interviewing, behavioral activation, problem solving or brief cognitive behavioral

therapy that can be provided in the context of a busy primary care practice.

▶ Training providers in integrated care is important but not sufficient. Effective implementation requires ongoing support from clinical champions in primary care and behavioral health, financial support, operational support and a clear set of shared and measurable goals and objectives.

▶ There are many ways to implement effective integrated care for behavioral health problems in primary care. Few organizations can take an evidence-based program described in the medical literature “from the shelf” and implement it without adaptations to their local setting. Treatment manuals used in research studies have to be translated into job descriptions and clear operational manuals that help busy clinicians implement the program in their unique settings.

▶ Attention to core principles, such as measurement-based care and careful tracking of desired outcomes at the patient and clinic level, can help make sure that integrated care programs live up to their promise as they are implemented in diverse real world settings.

While the full-scale implementation of evidence-based collaborative care programs may be challenging for small- to moderate-sized primary care practices under current health care financing mechanisms,³⁰ relatively simple changes can help practices improve care and gain important experience on the way to becoming a fully integrated patient-centered health care home. Such changes include:

▶ Routine use of brief, structured rating scales for common mental disorders, such as the PHQ-9 for depression,²⁵ to help with case finding, but more importantly to determine if patients started on treatment are improving as expected.

▶ Incorporation of such behavioral health rating scales into paper or electronic health records, creating a “registry” function that allows PCPs and clinic managers to identify patients who are “falling through the cracks” or not improving as expected.

▶ Stepped care and “treatment to target” in which treatments (medications, psychosocial treatments or referrals to mental health) are actively changed and adjusted until the desired health outcomes are achieved.

▶ Incorporation of evidence-based motivational interviewing strategies into patient encounters to help patients engage in and adhere to effective treatment for behavioral health problems.

▶ Training office-based personnel to help perform core support functions of behavioral health care managers such as proactive outreach and tracking of treatment adherence, medication side effects, referrals (if appropriate) and treatment effectiveness.

▶ Development of relationships and shared workflows with behavioral health providers that are not simply referrals but include active dialogue and collaboration between the PCP and the behavioral health provider to ensure patients achieve the desired clinical outcomes.

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Comprehensive Medication Management: An Avenue to Patient Engagement

MONA M. CHITRE, PHARMD, CGP, AND LINDA M. STRAND, PHARMD, PHD

An Introduction to the Opportunity

The goal of health care practitioners is to see positive outcomes in our patients. This is most often accomplished when effective, sustained relationships are created between patients, their physicians and other members of the health care team. One of the greatest challenges of the health care team is to ensure the effective and safe use of medications. Each year more than 3.5 billion prescriptions are written in the U.S.¹ and four out of five patients who visit a physician leave with at least one prescription.² These prescriptions, along with nonprescription medication use, cause drug therapy problems in patients that cost the U.S. \$200 billion annually.³ This is a staggering number and it exceeds the amount of money spent on the medications themselves. Comprehensive medication management services were developed and are delivered to address this significant economic and clinical problem.

A Synopsis of the Solution

Comprehensive medication management is defined as the standard of care that ensures each patient's medications (all medications, regardless of the source) are individually assessed to determine each medication is appropriate, effective, safe and able to

be taken as intended.⁴ Comprehensive medication management includes the identification of drug therapy problems, the creation of an individualized care plan that establishes personalized goals of therapy and individualized interventions that result in achieving the intended goals of therapy with appropriate follow-up to determine actual patient outcomes. Comprehensive medication management is most important for patients diagnosed with chronic illnesses who are being treated with multiple medications for an extended period of time. In order to produce positive outcomes in these patients it is necessary for the medical home team, consisting of physicians, nurses and pharmacists, to provide comprehensive medication management which ensures each patient's medications are appropriate, effective, safe and able to be taken as intended.

The most significant contribution of medication management is to ensure alignment of patient and provider around goals, expectations and decision making relative to medication therapy. This allows both parties to engage with each other and communicate about the medications more easily. The practitioner begins the process by helping the patient to reveal his/her medication experience including his/her beliefs, preferences, concerns, expectations and understanding about the medications. The provider can then apply this information to personalize and individualize the care plan for the patient. This level of involvement and participation by the patient positively impacts the way medications are used.

This is especially true in Medicare patients with multiple illnesses who see an average of 13 different physicians and have 50 different prescriptions filled

¹Sommers, John. *Prescription Drug Expenditures in the 10 Largest States for Persons Under Age 65*. 2007. Agency for Healthcare Research and Quality. [http://www.meps.ahrq.gov/mepsweb/data_stats/Pub_Prodresults_Details.jsp?pt=Statistical percent2&id=844](http://www.meps.ahrq.gov/mepsweb/data_stats/Pub_Prodresults_Details.jsp?pt=Statistical%20percent2&id=844).

²*The Chain pharmacy industry profile*. National Association of Chain Drug Stores, 2001.

³Ernst, FR, Grizzle AJ. "Drug-related morbidity and mortality: Updating the cost-of-illness model." *J Am Pharm Assoc* 2001;41(2):192-199.

⁴PCPCC Resource Document. The Patient-Centered Medical Home (PCMH): Integrating Comprehensive Medication Management to Optimize Patient Outcomes. www.pcpcc.net.

each year.⁵ It is these Medicare participants who account for 76 percent of all hospital admissions, 88 percent of all prescriptions filled and who are 100 times more likely to have a preventable hospitalization than someone with no chronic conditions. Therefore it is exceedingly important that we create a system whereby the patient is empowered to seek counsel and become involved in their own medical care.

The Impact of Comprehensive Medication Management Services

Comprehensive medication management has consistently been shown to improve patient outcomes. A study conducted by Minnesota Medicaid in 2007 indicated 77 percent of patients with diabetes reached the A1C benchmark when they received medication management. In addition, 36 percent of patients with diabetes met all the performance-based benchmark standards compared to the state average of six percent. Overall, goals of therapy were achieved by 87 percent of participants following their medication therapy management (MTM) encounters, compared to 76 percent prior to MTM.⁶ Many other examples have demonstrated the validity of medication management. In the Diabetes 10 City Challenge, medication management services allowed for decreases in A1C, LDL, SBP and DBP.⁷ These values are themselves inspiring; however, in addition, comprehensive medication management allowed for an employer savings of about \$918 per employee in total health care costs, and a 50 percent reduction in absenteeism. Nearly 100 percent (97.5 percent) of patients reported being satisfied or very satisfied with their diabetes care after this program was instituted. This program clearly demonstrates that when the health care practitioners and the patient fully participate, better outcomes are achieved and health care dollars can be saved.

⁵Testimony of Gerard F. Anderson, Ph.D., Johns Hopkins Bloomberg School of Public Health, Health Policy and Management, before the Senate Special committee on Aging. "The Future of Medicare: Recognizing the Need for Chronic Care Coordination." Serial No. 110-7, pp 19-20 (May 9, 2007)

⁶Isetts, BJ. Evaluating Effectiveness of the Minnesota Medication Therapy Management Care Program, Final Report, December 14, 2007.

⁷Fera T, Bluml BM, Ellis WM. Diabetes ten city challenge: final economic and clinical results. *J Am Pharm Assoc* (2003). 2009 May-Jun;49(3):383-91. <http://www.ncbi.nlm.nih.gov/pubmed/19357068>

How Comprehensive Medication Management Services Are Delivered

Delivering comprehensive medication management services requires a qualified practitioner who is focused on the medication-related needs of the patient. The resource document prepared for the Patient-Centered Primary Care Collaborative, titled *The Patient-Centered Medical Home (PCMH): Integrating Comprehensive Medication Management to Optimize Patient Outcomes*,⁸ provides a detailed description of the process involved. The steps are summarized here.

The first step is to conduct an **initial assessment** for each patient in order to identify the patient's medication experience, and to identify drug therapy problems. This first step is where appropriateness, effectiveness, safety and compliance can be fully elucidated. These four categories of drug therapy problems have to be evaluated in order, since it is unethical to increase compliance in a patient before being assured that the patient's medications are appropriate, effective and safe to be taken by the specific patient. This is an active and orderly review process. The data indicate that when problems of inappropriate, ineffective and unsafe drug therapy are identified and resolved, patients are much more compliant (up to 90 percent) with their medications.⁹

This initial assessment will reveal the patient's beliefs, concerns, understanding and expectation about his/her medications. The patient's medication experience will help the patient care provider to know how patients make their decisions about whether to fill the prescription, to take the prescription or how long to take the medication. It is therefore crucial that health care practitioners develop a trusting relationship with the patient so patients can be confident the prescribed medication is beneficial and will positively impact their health. A study conducted by the Boston Consulting Group asked patients why they were not taking the prescribed medications either at all or not correctly. Thirty percent of patients in this study stated they took the medication less often than prescribed, 26 percent stated they delayed filling a medication and 18 percent failed to ever fill the

⁸PCPCC Resource Document. *The Patient-Centered Medical Home (PCMH): Integrating Comprehensive Medication Management to Optimize Patient Outcomes*. www.pcpcc.net.

⁹Cipolle JR, Strand LM Morley PC. *Pharmaceutical care practice: The clinician's guide*. McGraw-Hill. 2004.

prescription. Comprehensive medication management services can change these statistics.

The second step is to **create a care plan** with personalized goals of therapy and individualized interventions to resolve drug therapy problems. For comprehensive medication management to be effective the patient has to be engaged in the process so that long-term compliance with their prescribed medications benefits them. By creating a team approach where health care practitioners are actively involved in patient care and compliance, both the health care providers and the patient can feel more empowered and see they are progressing toward the best possible outcomes.

The final step of comprehensive medication management is to **follow up** with the patient. It is during this step the actual patient outcomes are determined. These outcomes should be compared to the individualized goals. It is also important to determine whether any new medication-related problems have developed which might interfere with the safe and effective use of the medication. Follow-up evaluations should be coordinated with the medical team so patients get the most coordinated care.

This is a simplified representation of the steps to achieve comprehensive MTM; however, the ultimate goal is to create a service whereby the patient feels that he/she has a personal connection to the health care team and is willing to ask questions, and be an equal partner in his/her health.

Integrating Comprehensive Medication Management Services into a Medical Home Practice—Regardless of Size

All patients have a right to receive appropriate, effective, safe and convenient drug therapy, regardless of how or where medical services are delivered. The medical home is an environment where this is more likely to happen because of the coordinated, comprehensive, patient centered efforts put forward. Many medical home practices are now including a practitioner, frequently a specially trained pharmacist, who is capable of delivering this level of care. When the medical home practice is not large enough to support a full time practitioner with these qualifications, it is now possible to enlist these services “off site.” This can happen in a number of ways. Many pharmacists who are qualified to deliver this service are offering their services on a referral basis to a number of different medical home practices. These pharmacists are able to be “on site” for a limited

number of days per week, as few as one day per week. Or, the practitioners are able to take appointments for patients from multiple medical home practices. There are also a number of call centers making their services available telephonically to patients anywhere in the country.

Although all patients have the right to appropriate, effective, safe and convenient drug therapy, it is not economically possible or logistically feasible to offer this service to everyone from the beginning. Therefore, those who have this service available usually start with patients who are taking multiple and complex therapies (patients taking more than six medications and have more than four chronic medical conditions) or patients who are not meeting their goals of therapy or patients who have special needs related to medication-taking behaviors.

Importance of Technology in Delivering Comprehensive Medication Management Services

Coordinating the care of patients who have an average of six to eight co-morbidities and who are taking an average of 12-14 different medications is impossible to manage manually. And although the literature is buzzing with talk of electronic health records (EHRs) and the like, there is little discussion about technology to support the delivery of comprehensive medication management services. A list of the patient’s medications is not adequate to provide a comprehensive service. Instead, a quality service requires the ability to identify drug therapy problems, develop care plans, evaluate actual outcomes, report the impact of the service on clinical, economic and behavioral changes, track interventions and changes longitudinally and provide patient-specific information and follow-up information.

Care must be taken that EHRs do not limit the service that can be provided. Qualified practitioners must define key functionality requirements to meet the drug-related needs of patients. This is critical to delivering a quality service that adds real value to the care of a patient.

Implications of a Comprehensive Medication Management Service

Comprehensive medication management has consistently been shown to improve patient clinical outcomes, reduce morbidity and mortality while also lowering total health care costs. Comprehensive medication management services can empower the patient and provide the patient with an outlet for

their questions, concerns, preferences, wants and needs related to his/her medications. Patients may also feel as though they are better educated about their care plan and will use this increased confidence to be more persistent and adherent to their regimens. Effective medication management also provides the physician/clinician with more time to diagnose and effectively manage patient problems and formulate treatment goals.

Physicians can feel reassured that their patient has a better understanding of his/her medication regimen and that the patient is more likely to be compliant. With a more informed patient, coupled with therapeutic recommendations from a medication manager, the physician/clinician can be effective in moving a patient toward clinical goals of therapy and achieving performance outcomes. Health care practitioners, health plans and employers/payers will also benefit as medication management has been conclusively linked with a decrease in overall health care costs.

Finally, pharmacists who are prepared to deliver medication management services are able to contribute measurable value directly to the care of patients. Pharmacists who provide comprehensive medication management services have the ability to educate patients, discover potential interactions and side effects while recommending drug therapy regimen changes to physicians/clinicians so clinical goals can be more easily achieved. Only with a fully integrated health care team and the provision of comprehensive medication management services can a patient be fully prepared and willing to comply with medication regimens that are appropriate, effective and safe. This will assure the health care provider and the patient progress is being made toward the desired clinical goals.

Physicians wishing to explore medication therapy management in more detail can find additional information and resources at <http://www.pcpcc.net/content/pcpcc-medication-management-taskforce-resources>.

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Implementing a Medical Home for Patients with Complex Chronic Disease

RUSHIKA FERNANDOPULLE, MD, M.P.P.

Advocates for the patient centered medical home (PCMH) have perhaps, not surprisingly, found it difficult to convince payers to increase the money going into primary care despite the promise of better experience and outcomes. In tight economic times, with over a decade of premiums rising faster than wages and inflation, payers are very reluctant to do anything that may raise health insurance premiums in the short run, no matter how promising the long-term savings due to improved health may be.

Another approach, which has been used by Medicare in several of its demonstration projects, is to start by targeting the medical home interventions on the sickest, most costly patients. In any population there is a subset of approximately 10 to 20 percent of patients with multiple chronic conditions who are already costing four times that of the average patient, and comprise 60 percent or more of the total spending for the population. These patients are the ones served most poorly by the current fragmented, reactive health care system; because they are already costing so much money, practices can justify the upfront spending of medical home infrastructure in exchange for first year savings in downstream spending (i.e., hospital, ER and testing/procedure costs). In some ways, what this does is take the infrastructure currently provided by the commercial disease management companies (through cold calls from a random nurse in a distant call center), and in-sourcing it into the doctor's office where it belongs.

For the past three years we have been working with Boeing and three large medical groups in the Seattle area—the Everett Clinic, Virginia Mason and Valley Health System—to implement just such a model. We worked with Regence Blue Cross, Boeing's health plan, to select a list of target patients with high predicted costs and multiple chronic conditions. Each site then recruited the eligible patients, who were already seeing their doctors, into the program. The program,

which Boeing dubbed the Intensive Outpatient Care Program (IOCP), consisted of several elements of the medical home model including the following:

- ▶ A shared care plan for each patient
- ▶ A personal RN health coach who works in the doctor's office to help educate patients and work on self-management
- ▶ 24/7 access to the doctor and/or health coach by e-mail and phone
- ▶ Group visits and educational sessions
- ▶ Proactive follow-up by the health coach
- ▶ Tighter coordination of care with specialists and the hospital
- ▶ Integrated and better access to mental health services
- ▶ Frequent feedback on performance including experience, quality and utilization data
- ▶ Time set aside for improving processes

In addition to the usual fee-for-service visit-based payments, the practices received a monthly case rate per patient in the program (on average roughly doubling what they were receiving from the visit-based payments); they also received help with training tools, and data.

The results after the first year were quite stunning. Not surprisingly, patients liked the care better, and chronic care outcomes (such as A1c for diabetics or blood pressure for people with hypertension) all improved. Patients reported feeling better and being more functional, with fewer absences or unproductive days

due to illness. In terms of utilization, while costs for visits, drugs and testing rose, ER visits and hospital admissions fell sharply compared to a set of matched control patients, and net spending (taking into account the additional case rate) dropped by 20 percent.

Although the sample size was too small to show statistical significance (the p value for those who pay attention to such things was 0.11, meaning that there is an 11 percent chance that the net savings were a fluke, and an 89 percent chance it would happen again were we to repeat this project), several other groups—such as Geisinger Health System in Pennsylvania, Massachusetts General Hospital in Boston and Johns Hopkins in Baltimore—have implemented similar models with their sickest patients and showed similar improvements in outcomes and net drops in spending.

All these pilots, however, were done in the context of large medical groups with sophisticated management structures, IT and support systems. Despite the desire of some that all care be delivered in such settings, it remains the fact that over 75 percent of primary care visits are in medical groups with four or fewer physicians. As an internist who ran his own two-doctor practice, I firmly believe small practices provide many personal benefits to both the doctor and the patient that large ones simply cannot. The challenge is to provide small practices with the infrastructure they need to provide this sort of medical home care as well or better than the large integrated groups. I believe there are three main components to this infrastructure.

The first is payment redesign, whereby, as in our Boeing pilot, the doctors receive a per-month payment for each high-cost patient in addition to the usual fee-for-service billing. In addition, the doctor should share in any savings generated by the program, contingent on good performance on quality and experience measures.

The second part is people: Every successful model to date has had a health coach in the doctor's office to help patients with self-management (as in our Boeing pilot). The health coach meets with patients in the doctor's office, communicates with them by phone and e-mail, runs groups and can make home visits as needed.

The third component is a technology platform that allows the health coach to access relevant clinical data, prioritize their work and communicate with both patients and the physician. This is not simply

an electronic health record, but also a registry and customer relationship manager.

While there are some practices trying to implement one or two of these components, I believe that to be successful we need all three in place. Working together, they would allow a primary care doctor to install a medical home into their practice for their sickest patients, improving the health of their patients and saving money for their payers. It would offload many routine tasks to their health coaches, leaving physicians more time for things that truly require their expertise, and could provide for a substantial boost in income based on success.

We and a few others are now building and testing this sort of model in small practices. If small practices are to remain viable in the upcoming era of cost pressures and accountability, they will need to evolve in this direction. If we are successful at documenting better outcomes and lower overall costs for these sickest patients, then we will be in a much better position to spread the medical home concept to all our patients.

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Health Care Transitions for Youth with Disabilities and Chronic Health Conditions

PETER SIMON, MD, DEBORAH GARNEAU, M.A., AND DEBORAH GOLDING

Health affects all aspects of life—school, community and job success are all associated with health. The increasing number of youth with disabilities and chronic health conditions surviving into adulthood has necessitated a shift in the approach to educational, health, employment and independent living services. The emphasis has shifted toward ensuring inclusion and full participation of individuals with disabilities and chronic health conditions in education, meaningful employment and community living.¹ To achieve these goals as adults, youth with disabilities and chronic health conditions may require support and services to help them transition in all aspects of their adult lives and especially health care. Providing this support implies effective engagement with both patients and their families.

In this paper, we briefly discuss the barriers to transition, several strategies for overcoming these barriers, examples of initiatives underway that leverage these strategies and steps that both pediatric and adult primary care providers can undertake to more effectively engage with and support their patients in this transition.

Barriers to Transition

The literature has cited several key barriers to health care transition planning, including the following important issues:

Lack of adequate insurance coverage: The promise of health care reform in addressing this traditionally significant barrier is great. Youth with disabilities and chronic health conditions will have access to their parents' health insurance through age 26, will not

¹ Healthy and Ready to Work Website. www.hrtw.org, accessed June, 2006.

be denied based on pre-existing conditions and should have access to additional options in insurance coverage.

Lack of availability of qualified adult providers: Families and pediatricians express difficulty finding adult primary care providers with adequate experience or depth of knowledge of childhood onset conditions,² due in part to the limited training that adult health care providers receive on these conditions.³

Differences in services between pediatric and adult settings: Many youth and their families view the system of services in adult-oriented settings to be insufficient and fragmented.

Absence of referral networks: Pediatricians often do not know which adult primary care and specialty providers are qualified to provide the services the youth needs.

Lack of institutional support for providers: Physicians report that, typically, time spent on transition training and planning is not reimbursed.

Role of Physician

In 2002, the American Academy of Pediatrics (AAP), the American Academy of Family Physicians (AAFP) and the American College of Physicians–American Society of Internal Medicine issued a consensus statement focusing on the responsibilities of physicians in transition planning for youth with

²Reiss, J., Gibson, R. "Health care transition: Destination unknown." *Pediatrics*. 2002; 110(6): 1307-1314.

³American Academy of Pediatrics. "Transition of care provided for adolescents with special health care needs." *Pediatrics*. 1996; 98(6): 1203-1206.

disabilities and chronic health conditions.⁴ The statement emphasized that physicians must play a key role in helping youth transition to adult health care. Ideally, transition planning should be a team effort between youth, the youth's family and the youth's health care providers, including the pediatrician, the adult primary care provider and specialists. Often, the transition of care for the youth requires coordination amongst several providers (primary care and specialty care). The pediatrician is a good focal point of coordination because he or she often has a close, long-standing relationship with the patient, and therefore is the most familiar with the patient, the patient's history and abilities, the complexities of the patient's condition, and the patient's and family's priorities.

The consensus statement presented the following initial goals for providers. Providers should

1. Understand the rationale for transition from pediatric to adult health care.
2. Have the knowledge and skills to facilitate that process.
3. Know if, how and when transfer of care is indicated.

Strategies that Work

There are several recommended actions that should be taken to facilitate successful health care transitions for youth with disabilities and chronic health conditions.

Employ successful models of **patient centered medical homes** that include a family-centered, culturally competent approach to health care for youth with disabilities and chronic health conditions, along with a high-quality relationship among the youth, family and provider.

Adequate **health insurance** should be available to all youth with disabilities and chronic health conditions that allows for comprehensive coverage and pre-existing conditions.

⁴American Academy of Pediatrics, American Academy of Family Physicians, American College of Physicians-American Society of Internal Medicine. "A consensus statement on health care transitions for young adults with special health care needs." *Pediatrics*. 2002; 110(6): 1304-1306.

Training of pediatric and adult providers is required to develop competencies in transition planning.

Youth with disabilities and chronic health conditions and their families require **education** about the importance of health care transition, and **empowered** to participate in the transition process. **An activated patient is the foundation for a successful transition.**

Transition teams are beneficial to address the complex, individualized and multi-faceted process of a transition plan.

Transition planning should occur **early in adolescence** for most patients to allow for change and adjustment.

Youth and families should be encouraged to develop and maintain a portable, accessible and up-to-date **medical summary**.

Sample Initiatives

► Several state Title V programs support the use of Parent Consultants in program design, quality measurement, long-range planning and systems development. In Rhode Island, the Parent Consultant program has employed parents with personal experience as consumers of maternal and child health programs to advise program development and overall policy for over 20 years. This program addresses the isolation and lack of information often associated with a non-activated patient.

► Pediatric Practice Enhancement Project (PPEP): The Rhode Island Department of Health, Office of Special Health Care Needs supports parents of children with special health care needs and individuals with disabilities in over 35 primary and specialty care practices to enhance the medical home. Since its inception, PPEP has assured high-quality, culturally effective, family-centered, community-based services in a cost-effective manner (health care costs were 39 percent lower for PPEP participants compared to pre-PPEP and 27 percent lower compared to CSHCN in standard care). PPEP elevates the effectiveness of family-centered care, and empowers youth to be actively engaged in their health care.

► The Adolescent Leadership Council (TALC) of Hasbro Children's Hospital is a group of teens and college student mentors living with chronic medical illnesses who support each other through the transition process. Monthly discussions and activities focus on topics such as friends, families

and transitions, and how they relate to chronic illnesses such as asthma, diabetes, inflammatory bowel disease, cancer, sickle cell disease, and many others. In addition to the teen/mentor group, TALC has a concordant parent council comprised of parents of TALC teens.

► Technical assistance for adult medicine practices in Rhode Island to partner with families and youth. PPEP models were expanded to adult health care practices through employing adults with disabilities (Peer Assisted Health Initiative in Rhode Island). There are currently 11 participating sites. Many states embrace initiatives that provide peer-to-peer support through community health workers, peer navigators, health coaches, promoters, etc.

Primary Care Call to Action

There are a number of things that any primary care practice (pediatric or adult) can do to more effectively engage with patients and family in support of the pediatric-to-adult care transition:

► Use basic population management techniques to identify patients likely to need special support. For practices with small numbers of patients with such needs, this might be done manually; however, practices investigating (or already using) registries will likely find a software-based registry to be more effective and powerful.

► Designate a transition coordinator within the practice, provide appropriate training and define clear responsibilities to support the youth transitioning as well as the receiving practice. Provide quality care by linking patients to community-based resources to support care plans (NCQA recommended standard) through investigating local and regional resources available to support transitions.

► Solicit input from patients and their families in relation to medical, educational, vocational, employment intentions.

► Youth and families should be encouraged to develop and maintain a portable, accessible and up-to-date medical summary.

► Address and plan for issues of consent and communications.

Following is a list of additional resources that support pediatric-to-adult transitions:

Rhode Island

Provider, Youth and Family Resources available on RI DOH Adolescent Healthcare Transition web page: <http://www.health.ri.gov/family/specialneeds/transition/index.php>

Rhode Island Parent Information Network Workshop Catalog

Teens and Health Care Transition: A team sport http://ripin.org/pdfs/2010_springsummerworkshop_catalog.pdf

The Adolescent Leadership Council (TALC) of Hasbro Children's Hospital
ACT NOW
<http://www.hasbro-brown-talc.org/index.htm>

National

KASA—Kids as Self-Advocates
<http://fvkasa.org/resources/health.php>

Healthy Ready to Work Resource Center
<http://hrtw.org/>

Florida

<http://hctransitions.ichp.ufl.edu/>

Wisconsin

<http://www.waisman.wisc.edu/wrc/pub.html>

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Deborah Garneau is chief of the Office of Special Health Care Needs at the Rhode Island Department of Health. In this position she is responsible for the supervision, management, and leadership of the office's three program areas including pediatric specialty services, disability and health and family support and empowerment. The office manages over \$1.1 million in community performance-based contracts, the scope of which include medical home enhancement, youth medical transition, emergency preparedness for people with disabilities, service delivery system development, establishment of linkages between primary and specialty care, provision of parent support, health promotion for people with disabilities, resource development for parents and professionals and comprehensive surveillance and building of quality, performance-based systems of care. Garneau served as a mental health clinician and administrator with at-risk children and their families prior to state service.

Deborah Golding, M.A., is the adolescent healthcare transition coordinator for Rhode Island Parent Information Network and has worked extensively on all aspects of adolescent transition through the Rhode Island Department of Health. She has raised three children with special health care needs.

The Employer's Role in Employee Health Engagement

KENT MCKINNEY, MPH, MBA, AND BRUCE SHERMAN, MD, FCCP, FACOEM

Employers, who represent the ultimate payer for health care on behalf of their employees, have depended for years on insurance companies and pharmacy benefit management groups to build cost-effective delivery networks and to manage scarce resources. In the face of rising health care premiums, employers are taking a more active role in health care purchasing decisions. Regardless of which form employer-sponsored health care takes in the future, it is prudent that all health care stakeholders understand the employer's dilemma of providing comprehensive care for employees at an affordable price. Employer-sponsored health plans account for more than 50 percent of health care expenditures in the U.S. and as long as employers continue to purchase health insurance, their influence in health care purchasing decisions can only be expected to increase. In this paper we discuss key health strategies being explored by employers, and the role primary care providers can play in supporting those strategies.

Background

As a result of the continuing escalation of health care expenditures, employers are adopting innovative approaches to manage this increasing component of business operations cost. With cost-shifting to employees now recognized as having a negative influence on health care utilization and clinical outcomes, and health plan provider discounts effectively maximized, employers are now considering other options. Recognition of the need for employee engagement to achieve desired health outcomes has prompted employers to incorporate specific health care utilization, or demand-side strategies, into their health management approach, including employee incentives and value-based insurance design (VBID).

However, U.S. employers are facing a strong headwind—a widespread lack of accountability for personal

health. The U.S. health care system has traditionally been a reactive one, with individuals accessing care largely only when symptomatic. Health care outcomes and costs will only improve when individuals feel empowered to take responsibility for their own health. As a first step, engagement of individuals in self-care and healthy lifestyles may seem fairly intuitive, but finding ways to meaningfully achieve this goal has proved difficult.

Demand Side Strategies

In an effort to overcome the patient engagement hurdle, employers have adopted demand-side strategies to encourage employee engagement in personal health. These can be categorized into two specific areas, patient incentives and VBID.

Patient Incentives

Employers have used monetary or other incentives to effectively increase employee participation and engagement rates in health-related programs. For example, in a recent study, a 10 percent employee discount on health care insurance contributions demonstrated approximately a 90 percent participation rate in programs that require employees to complete a blood screen, health risk assessment (HRA) and preventive medical screens.¹ With increasing recognition that participation-based incentives have had less than the desired effect on outcomes, many employers are now transitioning to outcomes-based incentives to achieve the desired health and lifestyle objectives. The recent health care legislation has provided for an increase in the proportion of health care premium that can be included in these incentive programs from the current 20 percent to 30 percent or as much as 50 percent in the coming years.

¹ David Nunes, personal communication.

Value-Based Insurance Design

VBID is a benefit design concept that increases the use of higher-value health care services by decreasing patient-related costs for those services. Similarly, the strategy decreases the use of low value services as defined by evidence-based guidelines, by increasing financial barriers. VBID is most often applied to preventive care services and specific chronic disease states, such as diabetes or heart disease. Alternatively, with a more comprehensive approach, VBID can be adopted as a customized employer-specific benefit strategy based on the employer's unique risk profile and health care utilization patterns. As another demand side strategy, VBID serves to entice beneficiaries to use high-value, cost-effective services that will positively impact not only costs, but health outcomes.

VBID has been successfully incorporated by some employers to improve utilization of primary care services. Both IBM and the Mayo Clinic have waived employee co-pays for primary care clinician visits, eliminating all out-of-pocket employee costs for these services. While preliminary data is promising, this approach sets the stage for primary care clinicians to adopt a more comprehensive role in health management, particularly in the setting of the PCMH.

Supply Side Strategies

Employers have also begun to take a more active role in health care delivery, or supply side strategies, to improve patient engagement and clinical outcomes. Pay-for-performance clinician incentives have been utilized with some benefit, largely in support of chronic condition management. With the emerging recognition of the value of PCMH, employers are now more fully appreciating the importance of primary care provider involvement in improving health care quality and clinical outcomes, and reducing overall health care costs. A confluence of factors, including broader adoption of PCMH and the growing use of health information systems (HIT), has set the stage for more effective partnerships between employers and the PCP community to enhance employee engagement in health care.

Performance-based incentives reward patient outcomes, and foster alignment and teamwork among stakeholders within the health care delivery system. As the health care system transforms from a fee-for-service model toward a more outcomes-based approach, increasing focus on pay-for-performance can be anticipated. Because of the central role of the primary care physician, these

clinicians are in perhaps the best position to manage individual patient outcomes.

Employers are increasingly recognizing the value of PCMH as a means to improve health care quality and outcomes, and reduce health care costs. Employer-provided care management fees as well as outcomes-based payments are included in many of the payment models currently in use, and appear to represent effective supply side incentives. Reported financial and clinical benefits from PCMH pilot programs have been significant.² With outcomes and critical mass moving in the right direction, employers may wish to further enhance their involvement in this primary care-based approach to patient management. Additional employer resources can be found at the Patient-Centered Primary Care Collaborative web site in the Center for Employer Engagement, at www.pcpcc.net/center-employer-engagement.

The Primary Care Physician's Role

As health care practitioners, PCPs represent arguably the most important agents to help patients become more engaged managers of their own health and wellbeing. At a high level, access to and use of primary care services is associated with improved health care quality and lower health care costs, along with fewer hospitalizations and lower mortality. While there are many factors that impact patient engagement, it is clear that patients who are "connected" with their physician are significantly more compliant with recommended treatment and also more likely to achieve desired treatment goals.³ Recognition of this critical role provided by PCPs can only help to enhance employer interest in supporting payment reform for primary care services.

Regardless of the myriad reasons why patient engagement and empowerment remains elusive, its sequela cannot be ignored. It is well documented that poor patient engagement is a leading contributor to poor patient self-management and, therefore, less than desirable outcomes—in addition to continued health care inflation. Therefore, patient empowerment for self-management through effective engagement strategies represents an essential strategic component to help mitigate rising health care costs.

² Fields D, Leshen E, Patel K. "Driving quality gains and cost savings through medical homes." *Health Aff.* 2010;29(5):819-826.

³ Atlas SJ, Grant RW, Ferris TG, Chang Y, Barry MJ. "Patient-physician connectedness and quality of primary care." *Ann Intern Med.* 2009 Mar 3;150(5):325-35.

Physician Integration into Existing Employer Health Management Strategies

At present, employers are involved in the health care marketplace primarily through their interactions with health plans and third-party administrators through contracts to pay for medical treatment provided by physicians, hospitals and health management organizations. For a number of reasons, employers have been slow to work directly with community physicians, in large part due to the prominent network development and contracting role provided by health plans. Yet this is beginning to change. One very promising aspect of future health delivery scenarios includes a stronger link between employers and PCPs. Based on initial experience with PCMH, it seems reasonable to assume at a minimum that employers will want to reward PCPs for positive clinical outcomes. With renewed interest in employer-provided worksite health care, there are clearly opportunities for PCP involvement in worksite health care service delivery. Additionally, given the low success rates for health plan-provided disease management, more active PCP involvement in this area represents another promising opportunity. Furthermore, as employers adopt more comprehensive health management strategies, they will likely benefit from PCP clinical expertise to sharpen their strategic focus. In this role, PCPs can help employers understand their medical and pharmacy claims data, and identify meaningful areas of opportunity.

Primary Care Physicians—A Call to Action

The current interest in PCMH affords PCPs a remarkable opportunity to become more directly involved with employers as they work to contain rising health care costs. Rather than wait for employers to recognize the value that PCPs can provide in terms of favorable clinical outcomes, patient engagement and improved health care costs, PCPs can adopt a proactive role to emphasize their value. While most employers may intuitively understand how primary care can promote patient engagement and responsibility for self-management of health issues, a broad knowledge gap remains with respect to their understanding of the cost containment benefit that PCMH can provide. PCPs may not want to wait for employer calls for local PCMH program development; instead, they may want to take the initiative by developing their own PCMH offering. Parallel development of a shared health information technology system such as a patient registry is one feature that could potentially facilitate patient management and tracking of clinical quality and cost outcomes.

At the care delivery level, as employers strive for a more integrated approach to health management programming, PCPs can present themselves as an effective integrator, by becoming more knowledgeable about employer health benefit offerings and referring appropriately to these services. PCPs can also initiate worksite health programs or support existing ones. PCPs should recognize that, although employers are not health experts, they do understand the relationship between health, absence and productivity. If PCPs can partner with employers under the PCMH concept to conduct on-site educational programs as well as make their offices open for employees to come before or after work, a more effective alignment of patient, employer and PCP interests will result.

In conclusion, while no simple solution exists to address health care issues in the US, an ***integrated, primary care-based approach*** to preventive health and patient engagement strategies as embodied by PCMH offers the best approach to controlling health care costs. Employers in increasing numbers are becoming more proactive in their approach to controlling health care expenditures, and patient engagement is increasing in importance as a strategic component. Through their acknowledgement of the importance of primary care practitioners in this process and their support of PCMH use, employers can simultaneously better manage their medical cost inflation and support payment reform for PCPs. PCPs are encouraged to recognize the growing opportunity to partner with employers to develop strategies to improve patient engagement and treatment outcomes. This collaborative approach creates a win-win for all stakeholders as a new culture of health care, not sickness care, begins to take root.

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Kent McKinney serves as the president and CEO of WellGuidant Health Services, Inc., a Maryland-based population health management company. Kent formed this company with the belief that he can provide customers with a more personalized experience, while at the same time demonstrating, through biometric data, where clients can apply their resources to improve employee health. Understanding the key link between patient engagement and positive health outcomes, WellGuidant focuses a significant amount of time and resources towards driving member behavior and engagement.

Meaningful Use and Patient Engagement

SYLVER QUEVEDO, MD, M.P.H., AND ANTHONY GOLD

Background on Meaningful Use

The HITECH portion of the 2009 stimulus bill, the American Recovery and Reinvestment Act (ARRA), provides tens of billions of dollars in health IT funding to create a national health information infrastructure and incentives for practices to implement an EHR and related health care IT functionality. However, in order to claim the incentives, it will not be sufficient just to implement an EHR. Physicians and practices will also need to show that the EHR is being “meaningfully used” to improve patient care and outcomes. This is welcome news to the clinician because the mandate to use health IT in the medical care process only makes sense if it meaningfully improves the care process and health outcomes. This article seeks to

- ▶ Define the concept of Meaningful Use within the framework of HITECH funding opportunities.
- ▶ Outline some of the benefits of Meaningful Use to primary care providers, over and above the HITECH incentives.
- ▶ Link Meaningful Use to the broader goal of patient engagement.
- ▶ Provide a high-level roadmap for primary care practices to get started in thinking about implementation of an EHR and achieving Meaningful Use.

A national consensus has emerged that “the nation’s approach to delivering health care is inefficient, ineffective, and unsustainable.” (Grundy et al, *Health Affairs*, May 2010) Debate about remedies continues while cost escalations call for urgent action. Newly empowered consumers are seeking greater value in health care, improved access and greater participation in the care process. And potentially disruptive technology continues to appear at ever-increasing rates.

Within all of this, one of the few areas of wide agreement is that the way that information is managed in

health care is archaic. The consensus, that this needed to change and that a health IT infrastructure was a necessary prerequisite for national health reform, led to the HITECH provisions of the American Recovery and Reinvestment Act (ARRA) of 2009. The ARRA (HITECH) therefore can be seen as a forerunner to the Patient Protection and Affordable Care Act of 2010. As such it was derived from several major policy themes central to health care reform. “The purpose of health information technology is to support health reform, and it is part of that larger puzzle. It is not a stand-alone goal or an end in itself.” (Buntin, Jain, Blumenthal. *Health Affairs*, June 2010 p. 1214) These health care reform goals are

- ▶ Improving the quality, safety, efficiency of health care and reducing health disparities
- ▶ Engaging patients and families in their health care
- ▶ Improving care coordination
- ▶ Improving population and public health
- ▶ Ensuring adequate privacy and security protections for personal health information

PARTICIPATORY HEALTH

The future of patient engagement and Meaningful Use

“Health care delivery in the United States has been further hampered by a limited amount of digital health data and the exchange it facilitates among providers, patients, and caregivers. The lack of data liquidity often hinders people, providers and payers alike from understanding what works and what does not, and from delivering optimal care at the right time.”

—Jane Sarasohn-Kahn

Relevance of Meaningful Use to Primary Care Physicians

By demonstrating “meaningful use” of health care IT, physicians are eligible for substantial amounts of stimulus money. In effect, the federal government is offering to cover much of the cost for practices to implement EHRs. However, those stimulus payments to physicians are “front-end loaded” and as such, the earlier those providers adopt these technologies and begin to show meaningful use, the larger the financial benefit can be to them. Up to \$44,000 in Medicare incentives over five years is available to each physician (primary care and specialty physicians) who begins early on to demonstrate meaningful use. Additional state Medicaid stimulus money (spread over six years) is also available to eligible providers (although physicians will not be able to collect under both).

Furthermore, the criteria by which Meaningful Use is measured will be implemented over three stages, and will get progressively more demanding over time. Stage 1 (2011) will focus on simple data capture, data sharing and paper-based quality reporting. Additional rounds of refinement to the eligibility requirements are planned for 2013 and 2015, and move quickly to electronic reporting on quality improvements, more advanced clinical process flow, patient engagement and the demonstration of improved outcomes. This will raise the bar higher such that practices that haven’t yet started down the road could find it more difficult to get underway. The initial focus of most practices, therefore, should be on installing the EHR foundation that will be a key enabler of the more advanced meaningful use functionalities required in Stages 2 and 3.

Aside from the monetary incentive for acquiring HIT and demonstrating meaningful use, the practical benefits of an electronic patient record include capabilities that enable enhanced clinical decision support, information exchange, care coordination, population management, workflow automation, enhanced patient communication and measurement for continuous practice improvement. These benefits contribute to improved clinical outcomes, enhanced practice financial vitality and increased patient/staff satisfaction. The Department of Veterans Affairs estimates the value of their HIT investments stands at over \$3 billion in cumulative benefits, net of investment costs.

HIT has many potential benefits for individual practices and practitioners. These are summarized in the following lists.

Health IT Value Tenets

Health IT Can Drive Improvements In:

- ▶ Patient Safety
- ▶ Quality of Care
- ▶ Patient Access and Satisfaction
- ▶ Productivity of Physician & Staff
- ▶ Satisfaction of Physician & Staff
- ▶ Cost Optimization through Enhanced Efficiencies
- ▶ Revenue Enhancement
- ▶ Workflow and Care Process

Health IT Elements that Add Value

by Improving Care Processes and Outcomes

- ▶ Electronic Health Record
- ▶ Decision Support (practice guidelines, allergy and drug interaction alerts)
- ▶ Computerized Physician Order Entry (CPOE)
- ▶ Secure Messaging
- ▶ eRX
- ▶ eScheduling
- ▶ eLabs
- ▶ Tracking and Alerts (eLabs 2.0)
- ▶ Support for Patient Self-Care and Self-Management of Chronic Illness
- ▶ Patient Reminders
- ▶ Population and Disease Registries

Meaningful Use and Patient Engagement

Health IT can and will improve the safety and effectiveness of health care delivery through reduction in some medical errors, quicker and more accurate retrieval of medical care information and more effective organization and use of critical data. However, the vast majority of health outcomes are

Summary of Stage 1 Meaningful Use Objectives and Metrics for Patient Engagement and the Related Policy Priority of Care Coordination

All Core objectives must be met while providers have some flexibility in meeting the Menu objectives.

CORE SET	
Engage Patients and Their Families in Their Health Care	
Stage 1 Objectives	Stage 1 Measurements
<ul style="list-style-type: none"> • Provide patients with timely electronic access to their health information (including lab results, problem lists, medication allergies) upon request. • Provide clinical summaries for patients for each office visit. 	<ul style="list-style-type: none"> • More than 50% of all patients who request an electronic copy of their health information are provided it within 3 business days. • Clinical summaries provided to patients for more than 50% of all office visits within 3 business days.
Improve Care Coordination	
Stage 1 Objectives	Stage 1 Measurements
<ul style="list-style-type: none"> • Capability to exchange key clinical information (problem list, medication list, medication allergies, diagnostic test results) among providers of care and patient authorized entities electronically. 	<ul style="list-style-type: none"> • Performed at least one test of certified EHR technology's capacity to exchange key clinical information.
MENU SET	
Engage Patients and Their Families in Their Health Care	
Stage 1 Objectives	Stage 1 Measurements
<ul style="list-style-type: none"> • Provide patients with timely electronic access to their health information (including lab results, problem lists, medication allergies) within four business days of the information being available. • Use certified EHR technology to identify and provide patient-specific resources. 	<ul style="list-style-type: none"> • More than 10% of all patients are provided timely access to their health information. • More than 10% of all patients are provided patient-specific education resources.
Improve Care Coordination	
Stage 1 Objectives	Stage 1 Measurements
<ul style="list-style-type: none"> • Perform medication reconciliation when receiving a patient from another care setting or provider. • Provide a summary of care record when transitioning a patient to another care setting or provider. 	<ul style="list-style-type: none"> • Perform medication reconciliation for more than 50% of transitions of care. • Provide a summary of care record for more than 50% of transitions of care.

Case Study: Group Health Cooperative

BENEFITS OF HIT:

- 58%** Eligible patients who enrolled (200,000+)
- 33%** Patient encounters through secure messaging
- 10%** Patients reviewing medical test results
- 10%** Patients ordering prescription refills
- 94%** Patients who were “satisfied” or “very satisfied” with their access to online HIT
- 50+% Usage** by patients with serious chronic condition

Costs were recouped in the first year

From “Patient Experience Should Be Part of Meaningful-Use Criteria. James D. Ralston, Katie Coleman, Robert J. Reid, Matthew R. Handley, and Eric B. Larson. *Health Affairs*, 29, no. 4 (2010): 607-613 April 2010.

critically dependent not only on provider behaviors and data management but also on patient behaviors. This is particularly well studied in the area of chronic illness where patients are the principal managers of their conditions. For example, a patient with diabetes or chronic congestive heart failure spends only a small fraction of his time managing his condition under the direct supervision of a physician or medical professional. Most of the time patients are making decisions about managing their disease on their own without any professional involvement. He or she is also alone choosing (consciously or unconsciously) behaviors that are health promoting, neutral or damaging.

Patients who are informed about their conditions and motivated to carry out the necessary behaviors to manage and improve those conditions are effective partners with their physicians and care providers in their own care. And such patients, those who are informed, activated and engaged as active partners in their own care, have better health outcomes. The IOM calls this partnership an “ongoing, continuous, and healing relationship” with their physician or care provider. In addition, a patient’s beliefs and prefer-

ences can be important determinants in the choices made regarding care and management. These can only be known and understood when there is effective trust and communication between patient and provider. It is all of these considerations taken together that create effective patient engagement in their own care. For HIT to be “meaningfully used” to improve health outcomes it must include and lead to the ongoing engagement of patients as active participants—i.e., partners in their own health care. The Commonwealth Fund identified patient engagement as an essential ingredient of any “high performance health system” and defined it thus: “The responsibility for achieving high performance care should not lie exclusively with providers, but rather should be shared with patients. Patients should have easy access to information that helps them become active and engaged partners in their own care and in maintaining their health.” (Commonwealth Fund Commission on a High Performance Health System, November 2007)

Meaningful Use Criteria for Patient Engagement

There are three clearly defined stages for achieving meaningful use with specific criteria attached to each. (Blumenthal *NEJM* July 13, 2010)

Stage 1—Data Capture and Sharing (electronic data retrieval and storage, patient registries, real time sharing and review of data)

Stage 2—Advanced Clinical Processes (e.g., Personal Health Records and patient portals to access information and support)

Stage 3—Improved Outcomes (Self-management of chronic illness, patient engagement in primary and secondary prevention)

Given typical implementation timelines, practices that have not yet installed any form of electronic record will need to move fairly quickly into the investigation and selection process in order to meet the 2011 criteria.

Getting Started on the Path to Meaningful Use

Even with well-established workflow processes and existing back-office systems already in place, jumping into the EHR world is unfortunately not simply a matter of purchasing the necessary hardware and software, wiring it up and turning it on. It requires attention to several areas of practice organization and management.

▶ Develop a clear, shared understanding of why the practice is going down this HIT/EHR path (benefits, vision of future state, etc.). As part of this, establish a clear understanding of how the Meaningful Use criteria will be met through the use of the EHR.

▶ Clearly understand the upfront costs (i.e., licensing, installation, hardware, etc.) as well as the on-going costs (maintenance fees, software upgrades, training, hosting fees, etc.) for the health IT product(s) being installed.

▶ Build a realistic understanding of the work involved in a successful EHR implementation, including elements such as

- Length of time necessary for implementation
- Temporary adjustments to normal office schedules due to staff involvement
- Practice management redesign, including staff training, workflow automation, etc.
- Typical sources of physician and staff concern regarding EHRs and proven ways to address them

▶ Develop a clear process for issue escalation, both internal to the practice and external with the health IT vendor(s). Ideally, fold into the vendor contracts upfront exactly how issues will be handled.

▶ Identify clearly defined, short-term, attainable milestones and track progress against them.

▶ Consider contingency plans upfront, such that worst-case scenarios are “pre-planned” and, ideally, “pre-mitigated.”

▶ Communicate regularly with all staff on progress. Celebrate successes and develop “lessons learned” from any setbacks.

▶ Consider after-visit discussions with patients to both engage them in the practice’s implementation of its electronic medical record and to solicit patient feedback.

Local Help is Available

As part of the HITECH Act, there will be approximately 60 to 70 Regional Extension Centers (RECs), each serving a defined geographic area in the U.S. and together covering a minimum of 100,000 primary care

providers. Their intended purpose is to “offer technical assistance, guidance, and information on best practices that support and accelerate health care providers’ efforts to become meaningful users of Electronic Health Records (EHRs).”

Fortunately, the primary function of the RECs is to provide the consulting services necessary to help physician practices adopt EHRs and qualify for Meaningful Use incentives. These non-profit centers are to be staffed with consultants who have clinical backgrounds and understand the physician practice world. The consulting services necessary for a practice to convert to electronic records span the entire gamut of EHR adoption: evaluation, purchase, implementation, work-flow mapping, paper record digitization, practice management, achieving security and privacy compliance, optimization, and Meaningful Use demonstration.

Each REC will vary on the specific services they will offer, as well as their pricing models. Some may offer their services for free, while others may charge. It is anticipated that even for RECs that charge, their pricing will likely be substantially less than typical consulting fees, because of the federal mandate and its subsidies.

The first step is locating your local REC. A list of all funded RECs can be found at the link provided at the end of this chapter. Click on the REC’s website for more information such as address and contact person. First contact with a REC generally requires basic practice information such as number of physicians, number of locations and their specific Medicare/Medicaid share. It is advisable to reach out to your local REC as soon as possible given the Meaningful Use deadlines. The RECs themselves are under similar time requirements to demonstrate meaningful use for the practices they support in order for the REC to receive its full reimbursement.

LINKS

EHR Selection

American College of Physician resource site on EHR adoption

http://www.acponline.org/acp_press/electronic_health_records

What is Meaningful Use?

<http://www.cms.gov/apps/media/press/factsheet.asp?Counter=3564>

<http://healthit.hhs.gov/blog/onc>

<http://healthit.hhs.gov/blog/faca>

https://twitter.com/ONC_HealthIT

Medical Home and Patient-Centered Primary Care

<http://www.pcpcc.net/>

Regional Extension Centers

<http://healthit.hhs.gov/portal/server.pt?open=512&objID=1495&mode=2&cached=true>

Patient and consumer perspectives

<http://www.cfah.org>

Society for Participatory Medicine

<http://participatorymedicine.org>

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***Anthony Gold** is the CEO of Healthy Humans, a doctor-directed solutions provider developing software platforms to provide greater connectivity between physicians and patients. Healthy Humans is demonstrating spectacular health outcomes at greatly reduced costs, and has already touched the lives of many people. He is also the president of the Open Solutions Alliance (OSA), a non-profit global organization focused on addressing the interoperability of open source amongst business infrastructures.*

Case Examples

The following case examples provide a wide range of scenarios involving the use of technology tools to enhance patient engagement. The cases include care environments of all sizes, from solo practitioners to health systems. Some of the cases reflect mature use, while others represent early or intermediate stages of adoption. As a result, readers will find a broad range of perspectives contained herein. The case examples were collected through in-depth personal interviews, and then written for presentation in a common format. The editor would like to thank all of the contributors for their generous commitment of time in the interview process, and their willingness to share candidly both the successes and challenges of their endeavors.

Each case includes one or more key words, which should help the reader quickly identify those of greatest interest. Contact information is provided for all contributors.

Trinity Clinic Whitehouse

Whitehouse, Texas

Amy Mullins, MD

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What is the type and size of health care delivery environment?

Family practice with 3 physicians and one Nurse Practitioner in one location. 5,100 total patients. Part of a larger multi-specialty group with about 250 physicians.

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

We are doing e-visits, initially through a stand-alone portal application and now switching over to integrate with EMR. There were about 200 condition-specific e-visit templates available to choose from. We surveyed patients on 15 that felt good to the physicians, and ultimately selected 3 where patients had the most interest: these are sinusitis, and follow-ups on hypertension and depression. There is currently no reimbursement from payers—the visits are paid out-of-pocket by patients. Price was set at \$20-25 per e-visit based on a survey of patients, which is close to the co-pay for most with insurance. Currently have a low percentage of users, probably due to the fact that we are open access and patients don't have a problem getting in for follow-ups. However, we definitely saw a spike in usage during a physician maternity leave when the schedule got tight.

How has this improved patient engagement?

E-visits provide a great option for those patients who have difficulty getting into the office: e.g. students, and people who work some distance from the practice. They also provide a real financial benefit for patients with no insurance, or who would lose pay when taking time off to come in.

In what ways has it affected your practice?

There's been minimal impact on daily routine due to relatively low volume (one or two e-visits per week per physician). We do find e-visits are easier to manage than the unreimbursed phone communication that they often replace, and the standard

templates provide for very good documentation and high consistency on completeness.

What has been the reaction of physicians and other practice staff?

Physicians have found this works very well. Since they handle their own e-visits, there is limited impact on our other staff. In the broader multi-specialty group, there has been some concern among other physicians on moving to e-visits, but as the "pilot" practice, our experience has been very positive.

Other comments/lessons learned?

Talk about it with your patients and focus the e-visits on those conditions that are most comfortable for you and your patients.

Be sure to advertise what you're doing. We posted framed flyers around the office that said "ask us about our e-visits," and we have a take-away available for interested patients with pricing and contact information.

An e-visit application that integrates directly with your EMR will avoid having to cut and paste notes into the chart.

GroupHealth Cooperative

Seattle, Washington

Matt Handley, MD

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What is the type and size of health care delivery environment?

Consumer governed, regional integrated delivery system with approximately 1,000 physicians

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

We have a multi-function patient portal linked to the EMR, enabling online communication with providers and patient access to key elements of their EMR, including: lab results, medications, allergy and immunization history, and after visit summaries. The portal also allows patients to exchange secure messages with their doctors, request refills online, and provides access to a searchable knowledge base.

How has this improved patient engagement?

Asynchronous communication modes provide an alternative method for patients to access care in ways that meet a diversity of needs and preferences. As of June 2010, 63 percent of Group Health's patients have access to online services, with approximately 30 percent of outpatient primary care encounters being conducted through secure messaging. In surveys (CAHPS and an internally developed instrument) patients reported high satisfaction for specific aspects of the online services as well as for overall access to care.

In what ways has it affected your practice?

Enhanced patient access through the portal has been supported by additional practice workflow re-design focused on same-day scheduling and enhanced phone access. In addition, other workflows were re-designed in order to integrate best practices from the Chronic Care Model with the new electronic access modalities. Physician compensation has also been aligned through incentives for patient satisfaction, clinical quality and productivity (which values the use of secure messaging and telephone calls with patients).

What has been the reaction of physicians and other practice staff?

Initial concerns related to increased physician workload to support electronic communication have been addressed by re-designing the typical day to reflect the reality of increasing electronic encounters—which can actually reduce the need for in-person encounters. In addition, team roles have been restructured, and physician panel size has been reduced as part of the overall medical home pilot initiative at Group Health.

Other comments/lessons learned?

It's not easy to get everything perfect up front; use of quality improvement cycles (Plan-Do-Study-Act) to improve the patient portal and workflows over time has been very important.

Fully leveraging web-based, EMR-linked electronic communication with patients is not simply a technology issue. It also requires re-thinking many aspects of practice workflow.

Dartmouth Hitchcock Medical Center

Lebanon, NH

Nancy Cochran, MD, Nancy.E.Cochran@dartmouth.edu

Kate Clay, M.A., RN, shared-decision-making@blitz.hitchcock.org

What is the type and size of health care delivery environment?

Various practices within a regional integrated delivery system

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

We started the shared decision making (SDM) process more than 10 years ago. Early work in the Spine and Breast Cancer Centers expanded to other areas. Primary tools are the Ottawa Personal Decision Guide and the suite of patient decision aids (on DVD) from Health Dialog. Decision aids are 30 to 60 minute videos providing key information in a readily understandable format, with actual patients sharing their personal decision stories. Although the initial efforts were led by specialty practices, there are a number of decisions that are appropriately managed in primary care. These include decisions on screening exams such as PSA and colonoscopy as well as decisions on certain surgeries. The Center for Shared Decision Making at DHMC is the organizational center of excellence for SDM, maintains the library of decision aids, and provides patient counseling services.

How has this improved patient engagement?

A robust shared decision-making process ensures that patients have access to all the relevant information, have clearly thought through their preferences and priorities, and can be effective participants in making medical decisions where a number of legitimate alternatives are available. The vast majority of patients exposed to SDM are strong advocates of the approach.

In what ways has it affected your practice?

Effective use of SDM requires training of staff as well as some adjustments to practice responsibilities and workflow. In addition, use of SDM tools at the primary care level can be an effective filter on referrals for certain types of surgeries, reducing the backlog of

patients awaiting surgical consults (e.g. knee and hip osteoarthritis referrals to orthopedics).

What has been the reaction of physicians and other practice staff?

The pre-implementation view of physicians typically varies from reluctant to enthusiastic; however, once the processes and tools are put in place, the reactions are almost universally positive.

Other comments/lessons learned?

Getting the timing right on the use of the decision aids is very important for maximum effectiveness.

Integration of primary care with specialists through an SDM process can have significant system-level benefits, but stronger incentives and coordinated work flows are needed to ensure effective primary care participation.

Dartmouth Hitchcock Medical Center

Lebanon, NH

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What is the type and size of health care delivery environment?

Pediatric practice within a regional integrated delivery system. One of six Pediatric and Family practices (mixed sizes and settings) from a regional research network (Clinicians Enhancing Child Health) that initially participated in this project.

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

National surveys indicate that 70 percent of adolescents report at least one of eight health risk behaviors, for which guidelines recommend screening and preventive services. Parents and adolescents also indicate they would like health care providers to discuss a broad range of health issues, including various risk behaviors that many physicians do not typically discuss. In our search for an effective screening and engagement mechanism, we developed a PDA-based questionnaire administered at pediatric well-patient visits. The questionnaire is currently used with teenage patients, and there are two versions targeted at different age groups. Questions focus on behavioral risk factors for teens, including diet, exercise, smoking, alcohol use etc. The patient completes the questionnaire in the waiting room and the answers are immediately available to the physician who will be conducting the exam.

The tool is intuitive to use, designed to present one question at a time with multiple choice answers. Once the patient selects an answer, the next question immediately appears on the screen. Some of the questions are branching, but all of this is handled through the software so the patient is not required to do any navigation. The screener software can be licensed for a nominal fee that supports ongoing research. http://www.cancer.dartmouth.edu/cech/healthyteens_software.shtml

How has this improved patient engagement?

The clinician interface alerts the physician to specific risk areas based on patient response, enabling discussion to be focused on those areas during the patient encounter. The PDA represents a novelty that appeals to teens, and in a post-visit survey, 73 percent said use of the PDA screener made it easier to discuss issues with the health care professional.

In what ways has it affected your practice?

Work flow needs to be developed to support the use of the screening tool in a practice. Teens use the tool while waiting to be seen, which reduces clinician time with patient spent collecting basic information and allows more time for active counseling.

What has been the reaction of physicians and other practice staff?

Reception to the screener has been very positive, and the original participants have continued to use it in their routine care.

Other comments/lessons learned?

Even with the added focus brought by the screening tool, physicians find it challenging to address multiple risk behaviors in a meaningful way during a typical length visit.

Medical College of Wisconsin

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What is the type and size of health care delivery environment?

Family Medicine Residency with 10 faculty and 22 residents.

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

Team-based approach to chronic care with integrated HIT support. Have had EMR for six years, including population management capability, so EMR is fully integrated with the workflow. Some key elements of the approach include:

- ▶ Foundation is the Chronic Care Model
- ▶ Trained staff supporting Motivational Interview (MI) techniques
- ▶ RN and MA supporting individual physician as a team
- ▶ MAs do all standing order work
- ▶ Nurses focus more on case manager role
- ▶ Population management through registry with individualized physician reports every two months
- ▶ Case management based on identifying highest risk patients from registry—capable of handling 10 to 15 percent of the panel
- ▶ One nurse focused on wellness
- ▶ Special templates in the EMR to organize data entry and flow, with goal-setting, individual care plans, patient education materials, national guidelines
- ▶ Offering the Chronic Disease Self Management Program through the Wisconsin Dept of Health Services

How has this improved patient engagement?

Motivational interviewing techniques help activate patients by focusing on the goals that are most important to them, while individual care plans establish action plans that are well aligned to these goals. Population management prevents patients from “falling through the cracks,” increasing population performance to national guidelines. Case management enables appropriately intensive engagement with the highest risk patients that is coordinated from (rather than divorced from) the patient’s medical home.

In what ways has it affected your practice?

Depending on the current workflow, division of responsibilities, and HIT support in any particular practice, the implementation of a team-based chronic care model will require more or less practice re-design.

What has been the reaction of physicians and other practice staff?

There is nothing more rewarding for staff than fully utilizing their skills as part of a high-functioning care delivery team.

Other comments/lessons learned?

Redistribution of workload among staff was critical to making this work.

It can take physicians some time to get used to a shared approach to patient care.

Gundersen Lutheran Health System & Franciscan Skemp Healthcare

La Crosse, WI

Bud Hammes, PhD

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What is the type and size of health care delivery environment?

Two regional integrated delivery systems with 600+ employed physicians

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

Advance care planning with patient and family. Our goal is to fully integrate advance care planning, broadly defined, into the routine of care. Key elements of our standard approach include:

- ▶ Three-stage model of advance care planning with defined triggers for each stage:
 - First stage in out-patient setting. Review at annual visit for those 55 and older.
 - Second stage for serious illness with potentially life-threatening complications.
 - Third stage in final year of life.
- ▶ Trained facilitators support patient engagement. Nurses, social workers and chaplains.
- ▶ Patient education materials, both paper and electronic, are distributed in all settings of care.
- ▶ Advance care planning page within patient electronic medical record that also incorporates physician notes on patient preferences.
- ▶ Hospital unit nurses conduct standard interview based on questions guided via electronic decision tree connected to the patient's EMR.

Measuring quality of process: Are we engaging over 55s at their annual visits? Did we have advance directive in the chart when it was needed? Was a patient preference utilized appropriately in making a decision?

How has this improved patient engagement?

Benefits are similar to other examples of shared decision making. Patients are better informed, have clearly thought about goals and values, and are active participants in decisions that affect them. In this situation, there is also a strong family component to ensure that family members understand and support the patient's wishes. Key decisions are made deliberately in advance, rather than under duress in a moment of crisis.

In what ways has it affected your practice?

It's very important to define standard processes in the normal work flow of all settings where appropriate. Effective integration of workflows, supporting technology, and the "human factor" is critical.

What has been the reaction of physicians and other practice staff?

The model has been in place for some time and has strong support from physicians and staff. It helps assure physicians that whether they pursue aggressive treatment or limit some treatments, they are providing care the patient would want, and making these decisions with family is less complex and time consuming because folks are already on the same page.

Other comments/lessons learned?

EMR is critical to manage this at the system level, because you need to have advance directives available on short notice in any potential care setting.

When implementing this, there will be a large bubble of work on the front end to bring patients on board. It's very important to develop a plan to get this work done steadily over time as it can take more than a year.

Connemaugh Physician Group

Johnstown, PA

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What is the type and size of health care delivery environment?

Solo GYN office with 30 to 40 new patients per month, operating within a larger, multi-specialty practice

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

E-mail communication with patients. There is currently no standard approach to e-mail use within the larger group. This office started e-mails fairly informally and is now moving to EMR based. We currently offer e-mail in two situations: young patients with mothers in the care loop, and older, more complex patients. About 5 to 10 percent of total patients are part of the regular e-mail population. The most common topics include: clarifying expectations, things forgotten during an office visit, and quick follow-ups that don't really require an office visit.

How has this improved patient engagement?

E-mail works well to keep everyone on the same page in 3-way communication with adolescent patients and their mothers. It's also extremely helpful with more complex patients to help manage referrals, change of treatment, etc. Patient comments have been very favorable.

In what ways has it affected your practice?

We're not currently being reimbursed for either e-mails or phone calls, and e-mail generally saves time vs. talking on phone. It also helps avoid trying to fit unnecessary visits into a busy schedule. You need to check e-mail periodically, but this is easy to fit into the normal routine. Until now we've manually printed e-mails for inclusion in the chart, but we're moving to EMR.

What has been the reaction of physicians and other practice staff?

I prefer the asynchronous nature of e-mail vs. phone calls for convenience and flexibility. There hasn't been a significant impact on office staff other than probably some reduction in the number of patient phone calls that need to be handled.

Other comments/lessons learned?

We initially had some concern about patient overuse, but this has turned out to be rare and easily managed by suggesting the need to schedule an office visit.

Focusing e-mail communication with targeted populations works well. We don't advertise it, but suggest e-mail follow-up to individual patients where we feel it's appropriate.

Henry Ford Health System

Detroit, MI

Vanita Pindolia, PharmD, vpindoli@hap.org

What is the type and size of health care delivery environment?

Regional integrated delivery system and a teaching clinic within that system

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

Medication Therapy Management Program created in response to 2006 CMS requirement for individuals with Part D coverage. Patient eligibility is determined electronically via registry. Clinical pharmacists re-search medication histories and adherence and make telephonic contact. Elements of the phone intervention include:

- ▶ Verifying disease and medication history
- ▶ Use of motivational interview techniques to identify patient goals and issues
- ▶ Recommendation of appropriate medication changes for efficacy and/or safety

Nearly 60 percent of interventions involve changing therapy to improve efficacy and greater than 40 percent involve changing therapy to improve safety. Staffing is 2 clinical pharmacists and 1.5 technicians per 650 enrolled patients. Use of pharmacists who have completed a clinical residency is found to increase credibility with physicians.

We're currently piloting integration of MTM into a medical home site to determine how a formal MTM program such as the one described above can add value to a care manager in an existing practice. This is a teaching clinic with approximately 200 patients currently enrolled in the MTM program.

How has this improved patient engagement?

Analysis of 2006 data revealed an overall improvement in electronically measurable clinical outcomes for MTMP enrollees versus individuals who declined

enrollment. Cost-savings analysis indicated a greater reduction in total prescription per member per month costs (\$PMPM) of 17.2 percent for MTMP enrollees versus a seven percent reduction for those who declined MTMP. Patients who enrolled in 2006 also saw a sustained positive effect in lowered \$PMPM for prescription drugs in 2007. (The program is ongoing at the present time).

In what ways has it affected your practice?

Since the pilot clinic already had a care management function, it has proven very important to clarify roles and responsibilities of the care manager vs. clinical pharmacist. It's also critical to define office processes to identify patients most likely to benefit from MTM, to recruit those patients, and to communicate effectively between the primary care physician, the care manager, and the clinical pharmacist.

What has been the reaction of physicians and other practice staff?

Main issue is sorting out specific roles and responsibilities in this new process and related workflows.

Other comments/lessons learned?

Certain techniques, such as setting a specific time for a phone interview with the clinical pharmacist, have been found to significantly increase enrollment rates.

Clinical pharmacists do not have to be co-located in the primary care practice, but establishing effective communication channels among the care team members is important. Technology can be an enabler.

Vermont Blueprint for Health

Burlington, VT

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What is the type and size of health care delivery environment?

This is a state-sponsored activity encompassing providers in Burlington, St. Johnsbury, Barre, and Central Vermont. Currently 58 providers in 12 practices with about 60,000 patients. A key focus of this pilot is the integration of community-based resources to support patient engagement in primary care practices that are too small to provide the resources themselves.

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

Community care coordination teams are intended to fill a gap and provide services that are not usually integrated with a primary care practice. A typical community health team includes a mix of clinical and non-clinical personnel. Average size team is five people run by a nurse coordinator. Actual team mix is determined at the local level, and can include nurses, dietitians, social workers, fitness experts, etc.

Patients can be referred from the participating practices for chronic disease management as well as for wellness and prevention support. Referrals are also made from hospital ER or social services.

The core team activity is coordination of care, broadly defined. This includes integration of behavioral health with primary care, chronic disease self-management, coordination and tracking of referrals, medication management, hospital and ED visit follow-up, personal plan tracking, as well as general support navigating the system—including those needing insurance.

Technology infrastructure and communication support for the initiative is via a DocSite registry which is in the process of being mapped to existing practice EMRs.

Funding for the community teams is currently provided by the state and payers.

How has this improved patient engagement?

The teams are up and running, and seeing large numbers of patients. Qualitatively, the teams are able to engage patients much more intensively than would otherwise be possible for a typical practice. We expect to have quantitative results to report in six to nine months.

In what ways has it affected your practice?

This varies by practice, but each practice needs an internal process to refer patients and to interface with the local care team as appropriate.

What has been the reaction of physicians and other practice staff?

Practice support for the community health team concept has been extremely positive. Physicians are delighted to have both the tools to support more effective population management, and the ability to call on non-traditional resources to help patients with a wide range of issues.

Other comments/lessons learned?

Community input on team make-up has been very positive, although the variation presents some challenges in tracking what everyone is doing.

Will soon have a multi-payer database to be able to look at controlled comparisons.

Delta Health Alliance

Stonesville, MS

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What is the type and size of health care delivery environment?

Delta Health Alliance is a not-for-profit consortium founded in 2001 to support community-based health care initiatives that target health and wellness in the Mississippi Delta. DHA functions by coordinating the delivery of health care programs communities can access, providing targeted education and training to facilitate consistency across providers, and facilitating translational research to replicate evidence-based health care programs that work. At any given time there are a number of active initiatives and research projects. This project focuses on chronic disease management in a PCMH model. There are two participating rural clinics with Nurse Practitioners as primary providers, supported by a Medical Director, Clinical Pharmacist, and lay community health workers. The majority of patients at these clinics are employed but have no health insurance.

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

The chronic diseases chosen for this study were diabetes, hypertension and CAD, and clinic patients with any of these diseases are eligible to participate. A key element of the program is patient education provided through multi-media programs. (Emmi Solutions) The programs are disease-specific, take about 20 minutes on average to view, and contain three main components:

1. Emphasis on patient responsibility for his or her own care and healthy behavior;
2. Disease-appropriate patient self-management techniques;
3. Evidence-based preventive care and screenings the patients will require for their condition—what it is and why they need it.

These programs are available in the clinics and via internet from the patient's home, but community

health workers equipped with laptops and cell modems are available to call on the patient in a home environment that may not include a computer or broadband access.

How has this improved patient engagement?

The project has been running less than a year, but early results (typical HEDIS metrics) are very promising. In addition, no-show rates on scheduled visits are down significantly and voluntary enrollment in the weight loss group is excellent.

In what ways has it affected your practice?

The approach is to include information therapy as part of the normal work flow, where the primary care provider can prescribe the appropriate patient education tools during an office visit.

What has been the reaction of physicians and other practice staff?

Participants are very enthusiastic. The level of teamwork combined with the opportunity to play an active part in the research has been exciting and empowering for people.

Other comments/lessons learned?

In environments such as underserved rural areas, a partnership between nurse practitioners, physicians and clinical pharmacists can be very effective. In these areas, technology can be a key enabler and lay community health workers can also provide a critical link between patients and clinical providers.

Delta Health Alliance is gratefully acknowledged for support of this project through HRSA Grant Number U1FRH0741. The Delta Health Alliance is a non-profit organization based in Stoneville, MS that advocates, develops, and implements collaborative programs to improve the health of citizens in the Delta through the support of partnerships that increase access and availability of health care, conduct and apply health research, or offer health education programs that foster healthy lifestyles for Deltans.

Annapolis Primary Care

Annapolis, MD

Patricia Czapp, MD

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What is the type and size of health care delivery environment?

Family medicine practice with five physicians

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

We are using an EMR with integrated patient portal. We went live on Epic MyChart last year. Patients can review most of their chart including meds, immunizations, past medical history and health maintenance items. They can also request an appointment, seek medical advice, conduct an e-visit, or request an Rx refill. Although they can view a visit summary, patients cannot see actual physician visit notes. Lab results were initially set up to require manual release by physician on everything. After some experience we have the release to patient completely automated except in the case of HIV test results and pathology reports. We're currently experimenting with e-visits on a limited basis. If we already have a relationship with the patient, and there is a chronic problem that requires review of data but no physical exam, e-visits seem to work well. They're also appropriate for certain acute problems where a good initial diagnosis can be made based on the answers to questions without a physical exam. Currently billing patients out of pocket for the e-visits, but hoping to see payer coverage in the not-too-distant future.

How has this improved patient engagement?

Patients really like getting lab results electronically. Rx refill requests are a time saver for everybody, and patient also like being able to e-mail with quick question. Overall we're getting very high patient satisfaction on the portal.

In what ways has it affected your practice?

It's very liberating to use e-mail rather than phone calls for most non-visit patient interaction. It's efficient, flexible, and we save money on postage from not mailing test results. We're still sorting out e-visits and continue to experiment.

What has been the reaction of physicians and other practice staff?

We certainly had some initial physician reluctance when we went live with the portal, mainly fear of being overwhelmed by e-mail. That hasn't happened though, and the office is quieter because the phone rings less frequently. On balance, people have gotten much more comfortable with the changes.

Other comments/lessons learned?

If you're moving to an EMR, go ahead and deploy the portal on day one. There's really no need to wait. If you have an EMR, but don't have a portal, consider adding it. The portal is the jewel of the system and can be a competitive marketing advantage. The EMR mainly benefits the practice. In most cases patients won't even know you have it. The portal is what brings all the benefits to the patients. And if you're nervous about adding all the portal functionality right away, start with a few things and add more later.

MedPeds

Laurel, MD

Cheryl McKenzie

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What is the type and size of health care delivery environment?

Six physicians and 17,000 patients, both pediatric and internal medicine. Level 3 NCQA certification and participating in a PCMH pilot.

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

We've been using a standard patient portal integrated within EMR (eClinical Works). The portal is fully functional so patients can do everything except view physician's consult notes. We encourage patients to have a portal account with an e-mail address where we can reach them.

We are just getting started with a chronic care portal. (MyMDOfficeLink) This is a pilot for enhanced patient self-management of chronic disease, and is currently focused on a sample population of high risk diabetic and hypertensive patients. The chronic care portal functionality includes:

1. Customized care plans
2. Health diary
3. Tele-health device integration (currently using blood pressure and glucose monitors)
4. Patient education library with customized questionnaires to test patient knowledge
5. Secure messaging
6. Virtual visits (live virtual visits with video conferencing as opposed to asynchronous e-visits)

There is currently no payer reimbursement for virtual visits and patients pay a small fee out of pocket.

How has this improved patient engagement?

We've produced a tri-fold and a podcast on the web site helping to define for patients what a medical home is. Chronic portal users are required to review additional information and complete a questionnaire. Although the chronic care portal is just starting up, we believe it will dramatically improve patient self-management by providing a proactive two-way link between office visits.

In what ways has it affected your practice?

Population management in general and the chronic care portal in particular require additional training and resources, as well as new office workflows. We have needed to re-train, change and add staff.

What has been the reaction of physicians and other practice staff?

We've taken on a lot and people are probably feeling a little stressed at the moment, but this is natural given that we're in the early stages and still working the kinks out.

Other comments/lessons learned?

It takes resources to do this kind of intensive population management, but we believe the chronic care portal is the key to the success of our Patient Centered Medical Home. It truly gives us the ability to reach out and engage those patients most in need of additional support.

Duncan Medical Associates

Duncan, OK

Jeff Jones, MD

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What is the type and size of health care delivery environment?

Three family physicians plus an OB-Gyn and PA, with about 12,000 active patients. Participating in Oklahoma Medicaid Medical Home program and a multi-year pilot with the City of Duncan (550 health plan members) with 16 family physicians in other practices. The latter is the focus of this case.

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

The Duncan pilot has been operating for five years and is focused on establishing mutual accountability between patient and physician, managed through a web-based application (MedEncentive). The application is initiated by the physician during the office visit and provides:

- ▶ Evidence-based guidelines for the patient's condition
- ▶ Recommended information therapy for patient self-management

Participation is voluntary for both physician and patients. The physician reviews evidence based guidelines and confirms that the guidelines are being applied (or provides a specific reason why they are not appropriate). The patient is directed to the MedEncentive website where he/she reviews the prescribed information therapy, passes a comprehension test, declares their compliance, and then rates the doctor's performance. Both parties are incentivized for their participation. The physician receives an additional \$15 above the normal office visit reimbursement, and the patient is reimbursed for the co-pay.

How has this improved patient engagement?

Patients gain knowledge of the evidence-based guidelines for their condition and receive appropriate information therapy to support self-management.

In what ways has it affected your practice?

The process ensures that physicians review evidence-based guidelines and offer condition-appropriate information therapy for each patient.

What has been the reaction of physicians and other practice staff?

Practice staff is unaffected and we've found the application easy to integrate into physician workflow around the patient visit.

Other comments/lessons learned?

Four-year average PMPY claims cost for the city is essentially flat (0.6 percent increase) against the baseline five years prior, and 34.9 percent lower than projections based on age and inflation.

Patient (employee) participation rates of 55 percent and above are most likely to produce employer cost containment. The level of patient incentive significantly affects participation, and incentives below \$15 were found inadequate to produce the necessary participation rates.

Internet access and proficiency were not an issue in this study, but represent a critical success factor.

University of Oklahoma, College of Medicine

Tulsa, OK

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What is the type and size of health care delivery environment?

The Doc-to-Doc Pilot involves 50+ practices with approximately 200 primary care physicians and 100 specialists actively participating.

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

Purpose of the pilot is to test technology-enabled referral management and virtual referrals as a means to provide specialist access for Medicaid patients and the uninsured. The application used is MedUnison's DocSynergy, which has two main components:

- ▶ Referral management through an admin-to-admin module that handles the administrative aspects of referrals
- ▶ A physician-to-physician module that enables rapid triaging and virtual consultations, where appropriate

When the primary care physician feels that a referral may be appropriate, a referral transaction is generated in the system. The primary care physician can ask the specialist to review the specific case electronically for prioritization of a visit, or may ask the specialist for an informal consult to determine whether an office visit is necessary. During the course of the pilot, and in other environments, 50 percent or more of potential specialist referrals were found not to require a live patient visit, and could be handled through an informal, virtual consultation. With an appropriate reimbursement structure, this can obviously have a significant cost impact in addition to other patient benefits.

How has this improved patient engagement?

Primary patient impact is better and faster access to specialist care. In addition, the reduction in unnecessary specialist visits increases specialist capacity and reduces backlog. This, in turn, reduces wait times for visits by patients who really do need to see the specialist.

In what ways has it affected your practice?

Referral management in most practices was initially found to be manual, with a high degree of variability. Use of the electronic tool largely automated and standardized the process. As described above, the backlog of appointments dropped significantly in some of the specialty practices.

Other comments/lessons learned?

The application can bring the described benefits in any environment—not just Medicaid—as long as there is some incentive for physicians (particularly the specialists) to participate.

HealthPartners

Minneapolis, MN

Karen Kraemer

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What is the type and size of health care delivery environment?

Regional integrated delivery system

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

We started a Shared Decision Making pilot in 2005, training nursing staff within the health plan case management team. The approach was to ensure that case managers could recognize decisional conflict in any relevant situation and provide support to patients using the Ottawa methodology. Following this, we expanded to behavioral health and disease management staff, and now have over 200 people trained to provide the service. We intentionally took a broad-brush approach to addressing decisional conflict rather than focusing on specific interventions.

In 2009 we launched three other initiatives:

► **Health Plan** Proactively target condition-specific populations including low back pain, PSA, benign uterine, knee osteoarthritis, and stable CAD. Developed a resource guide and targeted letter. Resources include information in the HealthWise knowledge base on the HealthPartners website.

► **Care Delivery** Four pilot projects are testing changes in process: urology-prostate cancer, oncology-breast cancer, ortho-knee osteoarthritis, and neuro-spine. In 2010 we will expand to OB for elective C-sections, and we have done a pilot within the palliative care team at the hospital.

► **Community** Did a forum with key stakeholders in 2008 to share collective findings. Sponsored Minnesota Shared Decision Making Collaborative starting in 2009.

How has this improved patient engagement?

We've been able to measure improvements in patient perception of decision quality, satisfaction with decision, and satisfaction with the decision process.

In what ways has it affected your practice?

Currently testing specific process changes to incorporate SDM into the practices mentioned above. Medical management system tracks resources, and targeted outreach efforts. Documentation and data collection is done in the hospital EMR, but have not incorporated into the practice EMR yet.

What has been the reaction of physicians and other practice staff?

Process is not as time-consuming as initially feared. SDM appears to enhance the patient experience in a positive way.

Other comments/lessons learned?

Getting the timing right is critical. Be able to assess decisional conflict and move spontaneously into decision support.

SDM should not be an organizational carve out—it needs to permeate the organization.

HealthPartners

Minneapolis, MN

Nico Pronk, PhD, FACS

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What is the type and size of health care delivery environment?

Regional integrated delivery system

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

A major challenge for payer sponsored health and wellness programs is low participation. Enrollment in such programs can be in the range of five percent or less. Unfortunately, these programs also tend to be disconnected from the employees' primary care providers. HealthPartners conducted a pilot study with Kaiser Colorado that focused on the effectiveness of integrating PCPs into the process as a referral mechanism.

The project was funded by Robert Wood Johnson, and was built around telephonic intervention on weight loss, integrated with primary care using a 5As model (Assess, Advise, Agree, Assist, Arrange). The primary care physicians essentially pursued the first three steps, seeking agreement from their patients to participate in the program. Receptive patients were then referred to HealthPartners, who executed the active intervention. Patient referrals from physicians were facilitated by a clearly defined process and web site. The combination of proactive engagement from the patient's primary care physician, coupled with rapid, formal follow-up scheduling by the program, resulted in significantly improved enrollment rates in comparison to other approaches. Additional information is available on this approach, including the specific protocol.^{4,5}

⁴Pronk, N.P. Incorporating Exercise and Diet Recommendations into Primary Care Practice. In: McTiernan, A. ed. Cancer Prevention and Management through Exercise and Weight Control. CRC Press, Taylor & Francis Group, Boca Raton, FL, 2006. Chapter 32, p. 501-516.

⁵Pronk, N.P., Boucher, J., Jeffery, R.W., Sherwood, N.E., & Boyle, R. Reducing the incidence of type 2 diabetes mellitus: A health plan and care delivery perspective. Disease Management and Health Outcomes, 2004, 12(4):249-258.

How has this improved patient engagement?

Program enrollment rates of 70 percent were achieved, vs. typical rates of 5 percent or less.

In what ways has it affected your practice?

It requires only minor changes to incorporate a program referral into the standard office visit.

What has been the reaction of physicians and other practice staff?

This is easy for physicians to do and they tend to be very supportive as long as there's a defined process and appropriate compensation for their time.

Other comments/lessons learned?

We found this approach to be much more effective at engaging employee/patients than traditional enrollment mechanisms. Some adjustments to reimbursement are necessary to make the integration of primary care into payer-sponsored health and wellness programs widespread. Payers should be in a position to evaluate overall costs and benefits of increased enrollment within their own populations. Advanced, web-based EMRs with integrated population management capabilities can significantly enhance the ease of integration of patient support activities such as we describe.

Seattle Children's Hospital

Seattle, WA

Eugene Kolker, PhD

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What is the type and size of health care delivery environment?

Childrens hospital in collaboration with pediatric practices. Focus population is teens with type 1 diabetes, typically late high school and early college age.

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

A major challenge in the management of type 1 diabetes in teens is the transition from live-at-home child to live-away adult. Data shows significant declines in adherence behaviors as young adults transition from parental management of their condition to self management, with a higher incidence of ED visits in this population.

The goal at Seattle Children's Hospital was to develop a support mechanism to help young adults manage this transition process in a way that fit seamlessly into their daily lifestyle. The mechanism selected was a social networking application with functionalities that include:

- ▶ Ability to "friend" the student's physician, communicate and share health data
- ▶ Dashboard to track blood glucose levels
- ▶ Discussion forum with other diabetes patients using the application
- ▶ Meal manager based on FDA database
- ▶ Educational information
- ▶ One-click link to Facebook
- ▶ Physician interface providing a population view of all panel members using the application

The user interface was designed by focus groups of teens.

Currently planning to pilot outside the hospital, engaging with multiple community organizations.

How has this improved patient engagement?

There is no data at present since we've just gone live, but we expect to see solid improvement in recommended self-management behaviors through the use of the application and its supporting tools.

In what ways has it affected your practice?

The application requires periodic interaction by physicians with their patients through a web-based application. Physicians already using a portal environment to communicate with patients will be right at home.

What has been the reaction of physicians and other practice staff?

Very early in the process for physician feedback.

Other comments/lessons learned?

Development of this application has highlighted the need for an online flexible health record system that is under the control of the patient. The varied ways in which the current, piecemeal, paper and disc method of record keeping fails us all was brought home as the difficulties young diabetes patients face were documented in the development of MDU.

Marillac Clinic

Grand Junction, CO

Steve Hurd, PhD, steve.hurd@stmarygj.org

What is the type and size of health care delivery environment?

Marillac serves approximately 8,000 uninsured patients, offering fully integrated medical and behavioral health care, dental services, vision exams and glasses, and access to affordable medication.

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

We strive to be a highly functional patient centered medical home. Many aspects of what we do have a direct bearing on patient engagement and activation:

- ▶ Everything starts with providers understanding the context of the patient's total experience including psycho-social factors; what's going on in their life and how that affects health.
- ▶ We realize the necessity of addressing the patient's primary concerns before addressing the clinic's reason for the scheduled visit. For example, if we are following a patient for diabetes, and the patient tells us she is newly caring for her eight year-old grandchild, we make sure we address the patient's concern before we address her diabetes.
- ▶ We have a strong multi-disciplinary team approach in the practice. We don't make the patient travel. Rather, we bring another member of the care team to the exam room.
- ▶ We have learned that we increase patient engagement in the treatment process if the patient observes the interaction between the clinicians. We prefer not to talk about the patient in the hallway prior to the introduction.
- ▶ We use motivational interviewing to establish realistic goals with the patient based upon a mutual agreement of the patient's readiness to change. An obvious corollary to mutual goal setting is using the model of shared decision making.

▶ A group support model provides patients a higher degree of confidence that they can learn how to manage their chronic condition. We introduce newly diagnosed patients with patients who are already successfully managing their condition. In our monthly diabetes group, for example, patients and family members learn about diet, exercise, food preparation and medication management from other patients. Frequently, our patients volunteer to meet during the week to shop for food, cook, and exercise together. Members prioritize topics to be discussed. Guest speakers may be invited to attend. Vital signs are taken by medical personnel prior to the group. A medical and behavioral provider attend the group, which typically lasts 2.5 hours. Patients who need medication adjustment meet with the medical provider individually after the group.

▶ Family engagement is vital. Often, the goals of family members are not aligned, and we'll bring a specialist on our team in to help resolve issues that may exist. This greatly increases the probability of clinical success as well as the patient's overall feeling of well-being.

▶ We extensively involve our patients in the quality improvement process of the clinic. We use patient satisfaction questionnaires. However, we develop much richer feedback and identify more actionable items when we invite a dozen or so patients to share a dinner with us.

How has this improved patient engagement?

Because we use jointly developed care plans with mutually agreed goals, our team knows whether progress is occurring. We acknowledge differences in activation levels of our patients, and we encourage our patients to establish short-term goals to develop confidence. Our patients tell us they're very satisfied with this approach to care, and we think most of them would not want to go back to a more traditional environment.

In what ways has it affected your practice?

Because of the holistic, team-based approach, our workflow is quite different from a typical practice. A guiding philosophy of all our work flow design is that team members operate at the peak-of-license.

What has been the reaction of physicians and other practice staff?

Our patient-focused staff really enjoys team-based care. Collegiality rather than hierarchy is a strong value of the team. Physicians state that they can't imagine working in a traditional model.

Other comments/lessons learned?

Blending cultures among providers with different training backgrounds is arduous and doesn't occur overnight. A continuous improvement mindset is critical for maintaining momentum. Having an operations or practice manager with expertise in LEAN processes, and using teams to address process flow is strongly recommended. Marillac has learned that without this, providers tend to revert back to working independently.

Parkside Pediatrics

Simpsonville, SC

Scott Dobson, MD

drdobson@parksidepediatrics.com

What is the type and size of health care delivery environment?

Pediatric practice with five physicians and a nurse practitioner

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

We started the practice four years ago out of residency, and wanted to be paperless from the start. We were also looking to use a web site and portal as a differentiator (EMR and portal are eClinicalWorks). Spent a lot of time designing the website and still get 2 to 3 new patients per day through it. We'd like all our patients to use the website and portal and encourage everyone to register.

The portal is full-featured and allows parents to see all aspects of their children's record except visit notes. This includes immunization records, labs, referrals, etc. They're also able to request appointments and prescription refills, and can get answers to non-urgent clinical questions in 24 hours or (usually) less.

We publish a monthly electronic news letter on current topics (e.g. coping with flu season), that also provides a link back to the website, and we're on Facebook and Twitter.

Currently developing "Parkside University" with classes for parents in a variety of subjects. We're using the web site not only for promotion and registration, but also to survey parents to ensure the content meets their needs.

How has this improved patient engagement?

From the beginning, we wanted to be a modern practice with old-fashioned values. This meant engaging our patients via e-mail, the website, and social networking, but also listening to our patients, both as patients and customers. Listening well means both face-to-face, and electronically. In fact, we have

a patient group managed by a "mom" through a social networking app. As to Parkside University, the goal is to provide information up front in a group setting in order to reduce the need for down-the-road communication.

In what ways has it affected your practice?

Each of the three partners in the practice takes one day a week away from patients to work on the business and creative side of the practice. We've managed this way from the beginning, but it's definitely different from a typical practice.

What has been the reaction of physicians and other practice staff?

Physicians are fully committed to the practice model and staff is hired for their "attitude fit" with us. The "Parkside Way" is about enthusiasm and putting the patient first.

Other comments/lessons learned?

Invest the time in web site design to make it really user friendly. Advertise the web site every chance you get, e.g. bulletin boards on exam room doors change regularly but always have information about the web site. And don't let your web site stagnate; there should be new content all the time.

The University of Utah Hospitals and Clinics

Salt Lake City, Utah

Julie Day, MD

Julie.day@hsc.utah.edu

What is the type and size of health care delivery environment?

We're an academic medical system with ten sites and about 100,000 patients.

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

We've implemented a portfolio of strategies over several years to provide appropriate access, improve team-based care, and develop proactive care planning and execution.

The first initiative focused on improved access as a critical enabler for effective patient engagement. The care team initiative developed a patient centered approach where the whole team is responsible to know the care plan, with each member having a clearly defined role appropriate to their individual skills. The planned care initiative then designed a more proactive approach with mutual goal setting, a jointly-developed written care plan for every patient, and expanded pre-visit planning. The pre-visit planning started with lab work and has expanded to a pilot involving clinical pharmacist review of complex patients.

A wide variety of technologies support our engagement strategies. A key tool is an EMR integrating care plan templates with protocol-based order sets, point of service reminders and pharmacy management capabilities. Patient access to personal health records is provided via a web portal, and additional communication is provided through call-center messaging. Some customization of the EMR was done in house—mainly around templates, protocols and reports.

How has this improved patient engagement?

Qualitatively, we feel very good about the increased engagement we're seeing through these strategies. Quantitatively, we've had improved performance on a wide variety of clinical quality metrics, and significant

improvement in patient satisfaction as measured by the AMGA Patient Satisfaction Survey.

In what ways has it affected your practice?

In addition to improved satisfaction, we've also seen increased practice efficiency. Although the staff cost per provider increased about 19 percent from 2003 to 2008, the staff cost per Work RVU declined nearly 11 percent over the same period. Another way to say that is, the cost of offering additional staff support for providers as we implemented these strategies has been more than offset by the increased capacity and productivity of those providers in the new environment.

What has been the reaction of physicians and other practice staff?

Physician and staff satisfaction as measured on surveys has increased over time as we've implemented these strategies.

Other comments/lessons learned?

Challenges for implementation include cost-effectively matching the right people to the right tasks, maintaining trained staff, and managing through some reduction in autonomy for clinicians that is necessary to standardize processes.

Fairview Health Services

Minneapolis, MN

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Djenane Oliveira, PhD, dolivei1@fairview.org

What is the type and size of practice?

Fairview Health Services, in partnership with the University of Minnesota, is a network of seven hospitals, 48 primary care clinics, 55 specialty clinics, and 28 retail pharmacies that serves Minneapolis-St. Paul, as well as communities throughout greater Minnesota and the Upper Midwest. Medication Therapy Management (MTM) services have been provided for 11 years to over 11,000 patients. Currently, the program has 16 pharmacists and two residents who provide care in 20 ambulatory clinics, one employer site and one virtual care site. All patient consultations are conducted in person unless there is a specific contract in place under which telephonic or virtual visits are required. By the end of 2010, 41 clinics within the Fairview System are going to the Health Care Home model. MTM services are integrated into half of these directly, and via virtual care in the other half.

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

The Fairview Medication Therapy Management (MTM) Program is a patient-centered practice in which the pharmacist assumes responsibility for all of the patient's drug-related needs using a standardized method, including assessment, care plan and evaluation. MTM pharmacists provide care to patients considered at risk such as patients who are not reaching goals for certain disease states (diabetes, hypertension, asthma, congestive heart failure), patients with multiple chronic conditions using multiple medications, and patients who were recently discharged from hospital. An MTM pharmacist's responsibilities include:

1. Focusing holistically on the patient
2. Identifying a patient's drug-related needs and the committing to meet these needs
3. Ensuring that all of a patient's drug therapy is appropriately indicated, the most effective, the safest and the patient is compliant

4. Identifying, resolving and preventing drug-related problems

5. Achieving therapy outcomes and ensuring documentation of those outcomes

Fairview Clinics engage patients using the Patient Activation Measure to understand their level of activation, or interest in managing their health issues. In order to change to a health care home model, Fairview Health Services is redesigning the way care is delivered throughout the entire system. The workflow in the clinics and the roles of team members—nurses, medical assistants, health coaches, MTM pharmacists, diabetes educators, asthma educators, chaplains—are being redefined to better fit the needs of patients. Also, different ways of providing care are being utilized, such as co-visits between MTM pharmacists and providers, virtual care, e-visits, and a more frequent use of telephonic and e-mail contacts. MTM pharmacists use motivational interviewing techniques to better engage patients.

Fairview uses an MTM documentation system (Assurance) to enable pharmacists to easily track patient information, the interventions implemented, and the outcomes of what they do. We are able to print reports that list the drug-related problems we identify and solve as well as the clinical and economic outcomes of our services. We also use it to print a patient friendly medication list, where we can include pictures of the medications the patient is taking. We can print a medication diary for the patient, if he or she wishes.

How has this improved patient engagement?

From September 2008 through December 2009, 10,858 patients received MTM services within Fairview Health Services, with 49,081 drug therapy problems resolved.

On clinical outcomes, a Fairview MTM diabetes study showed the percentage of patients meeting all goals increased from one percent to 22 percent. There is an

increase in patient satisfaction indicated in multiple patient surveys with 97 percent of patients agreeing or strongly agreeing that their overall health and well-being has improved.

In what ways has it affected your practice?

The program is growing significantly and MTM pharmacists are better and more utilized at clinics around the Fairview System. Besides providing face-to-face MTM, MTM pharmacists presently have an expanded role at the clinics: they participate in clinic care conferences, provide education to other providers, participate in transition of care projects, and do co-visits with other providers. In a published study of program results, we reported a reduction in total annual health expenditures exceeding the cost of MTM services by more than 12:1. (Clinical and economic outcomes of medication therapy management services: the Minnesota experience. *J Am Pharm Assoc.* 2008;48:203-211).

What has been the reaction of physicians and other practice staff?

A recent research conducted to understand primary care providers (physicians, physician assistants, and nurse practitioners) experiences and perspectives on Fairview MTM showed the following:

- ▶ PCPs want and expect MTM practitioners to work collaboratively with the health care team;
- ▶ MTM services provide a source of education for both patients and providers; and
- ▶ MTM services contribute to preventative health care efforts and improving health care outcomes.

These are examples of PCP perspectives on MTM, in their own words:

“The fact that MTM is right here in our clinics several days a week and also available through our medical records system, I can contact them any time and we’ve worked together enough and trust each other

enough that you can talk to them anytime about questions about medications, questions about patients, so I feel like it has become an integral part of my practice.”

“You’d almost have to be living in a cave these days not to be affiliated with MTM, or to be open to it.”

“I see an MTM pharmacist as a provider. I see your role as a medical provider on the team, which is different than the druggist role that people sort of assume pharmacists take on.”

Other comments/lessons learned?

MTM pharmacists have to follow one philosophy of practice and be able to provide care that is consistent and standardized between different practice sites. In other words, there is only one practice model for MTM services throughout the entire Fairview System so that patients and providers know when to utilize and what to expect from these services. Another important learning is the need to streamline the documentation of the practice, which will produce quality data and give us the ability to track outcomes of the program.

Health TeamWorks

Lakewood, CO

Allyson Gottsman

agottsman@healthteamworks.org

What is the type and size of health care delivery environment?

Health TeamWorks, (formerly Colorado Clinical Guidelines Collaborative) a non-profit multi-stakeholder collaborative committed to improving health and health care purchased a statewide license for “ReachMyDoctor” software for all physicians, staff and patients in Colorado to encourage care management using a registry, care coordination and patient engagement. Health TeamWorks is serving both in a convening role and providing coaching support for the Colorado Multi-stakeholder Patient Centered Medical Home demonstration pilot and several other PCMH initiatives. Between the pilot and other quality improvement efforts in Colorado, approximately 1,400 physicians and staff in 700 practice locations have access to the web-based software.

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

Our strategy is to integrate enhanced IT with re-designed processes to improve patient engagement, effective care plans, and care coordination. We use a web-based application (ReachMyDoctor from RMD Networks) that integrates most of what we’re doing with improved care management. This includes:

► **Registry Functionality** incorporates care plan templates with customizable appropriateness and frequency. Red-Yellow-Green performance tracking. Take home page for patient with guidelines and trends. Can be populated automatically or manually from lab and EMR. FQHCs really like the registry functionality.

► **Coordination of Care** capability to set up a “care team” visibility that includes all concerned providers and family members. Reduces redundancy and duplicate testing. Ability to have ongoing dialog between multiple caregivers within the patient record.

► **Patient engagement** HIPAA compliant e-mail communication. Patient or provider profile information is provided on screen with every communication. (patient info includes, problems, meds, allergies, etc). Can have test results sent to inbox for easy forwarding to patients. Has capability for reminders on follow-up with original information/result. There is also a patient portal to upload results, patient can see health record, get reminder notices, see run charts, complete care plan, what is overdue, etc.

Currently there are 45 to 50 practices in Colorado that are active users of the registry/care plan functionality. Roughly 35 to 40 practices are using the patient engagement tools. Several hospital systems and IPAs are using it for care coordination and confidential IPA business related matters.

How has this improved patient engagement?

We have found that patients particularly like to bring home their personal “dashboard” (which presents run charts of their progress on health indicators such as LDL, BMI, and HbA1c) and post it on the refrigerator or some other visible location. Many patients accustomed to the convenience of asynchronous communication in their daily life really appreciate being able to “e-mail” their care team for appointments, billing questions, prescription refills and simple clinical questions that can be handled more easily via e-mail than trying to connect on the telephone.

In what ways has it affected practices?

Practices report a huge benefit in being able to support patients who travel, have busy schedules, or difficulty getting to the office. Having a large number of patients who choose electronic requests for appointments, prescription refills, and billing questions has decreased phone traffic, enabling the practices to be more responsive and effective in triaging patients who do call with immediate needs. Practices find that e-mail represents an alternative rather than additional contact.

What has been the reaction of physicians and other practice staff?

“We never want to be without electronic communication again,” says Hillary Browne, Spruce Street Internal Medicine, in Boulder Colorado. “It offers significant advantages to both us and our patients in terms of convenience and efficiency. And the patient dashboard helps us more actively engage patients in their care, allowing them to understand guideline-based care and learn first-hand how their behaviors impact their health.”

Other comments/lessons learned?

It's important to develop a work flow to effectively use a registry and e-mail communication, especially if there is any manual data entry in the registry. Using process improvement techniques, time can be saved on other tasks in the practice and redirected to registry maintenance. Developing workflow and standing orders that enable the entire care team to work at the top of their licensure are important changes that bring both increased efficiency and staff and patient satisfaction. Practice leadership is essential, including a commitment to continuous quality improvement and population management.

Capital Health Plan

Tallahassee, FL

Nancy Van Vesseem, MD, nvvessem@chp.org

What is the type and size of health care delivery environment?

Small Center for Chronic Care (CCC) operating within a 20+physician employed medical group as part of a non-profit community health plan.

Briefly describe the strategy you are using to enhance patient engagement, including technology enablers.

The CCC provides an intensely coordinated team approach to the medical care of CHP members (Commercial and Medicare) with certain chronic conditions. The CCC supports the members in coping with the physical, social, and emotional aspects of chronic illness to achieve improved outcomes. The goals of the program include improving the functional status of these patients, improving continuity of care and reducing inpatient admissions (rescue care) by increasing intensive, evidence-based outpatient primary care. Patients are recruited based on severity of illness burden, but participation is totally voluntary. The average age is about 50, frequently with psycho-social factors that complicate care.

In this environment, the optimal panel size is probably 300 to 350 patients per physician with comparable support staff to a typical practice. This enables us to spend more time with patients on any given visit, and also see our patients more frequently. We try to address all health conditions during a visit, and spend a lot of time communicating with the patients, both during visits and outside. We develop detailed care plans and perform comprehensive case management with Center staff.

How has this improved patient engagement?

The whole point of this approach to is engage much more intensely and effectively with these patients. We measure success based on patient satisfaction, health outcomes and cost. In satisfaction, we know our internal group tends to score better with members on the annual CAHPS than non-staff practices, and the CCC scores better than the rest of the internal group.

It can be challenging to assess health outcomes with chronic disease, but we know from our cost analysis that these patients as a whole have fewer inpatient days than we would predict, which we feel is a good near-term outcome measure. Our measure of cost is risk adjusted efficiency, which incorporates all claims-based costs, and takes into account our higher cost of primary care for these patients. The CCC panel has averaged 90 percent efficiency over the last three years, meaning their actual cost of care is 10 percent lower than predicted by diagnosis.

In what ways has it affected your practice?

Both workflow and patient flow are somewhat different than in a typical primary care practice. Some of our processes, such as case management, don't exist in most practices.

What has been the reaction of physicians and other practice staff?

You have to realize that this is a very different kind of practice, with more intensive patient engagement and a panel that has, by definition, a lot of challenges. Some people really love it, but not everyone would want to practice this way.

Other comments/lessons learned?

We believe there's tremendous value for everyone in this approach and we would like to expand it. Our biggest challenge is actually recruiting physicians willing to deal with such a challenging patient base.

APPENDIX A:

Patient Engagement Resource List

ACP PCMH

http://www.acponline.org/running_practice/pcmh/

AHRQ PCMH Resource Center

http://pcmh.ahrq.gov/portal/server.pt/community/pcmh__home/1483

Alliance of Community Health Plans

<http://www.achp.org>

American Academy on Communication in Healthcare

<http://www.aachonline.org>

Association of Cancer Online Resources

<http://www.acor.org>

California Healthcare Foundation

<http://www.chcf.org>

Center for Medical Home Improvement

<http://www.medicalhomeimprovement.org>

DHMC Pediatric Screener

http://www.cancer.dartmouth.edu/cech/healthyteens_software.shtml

DocSynergy

<http://www.doc2docstudy.org>

Emmi Solutions

<http://www.emmisolutions.com>

e-patients.net

<http://www.e-patients.net>

Family Voices

<http://www.familyvoices.org>

Foundation for Informed Medical Decision Making

<http://www.fimdm.org>

Health Disparities Collaborative

<http://www.healthdisparities.net>

Health Sciences Institute

<http://www.healthsciences.org>

Healthcare Transition Initiative

<http://hctransitions.ichp.ufl.edu/>

Healthy Ready to Work

<http://hrtw.org/>

Hogg Foundation for Mental Health

<http://hogg.utexas.edu>

Impact

<http://impact-uw.org>

Insignia Health

<http://www.insigniahealth.com>

Integrated Behavioral Health Project

<http://www.ibhp.org/>

Integrated Primary Care

<http://www.integratedprimarycare.com>

Journal of Participatory Medicine

<http://www.jopm.org>

Kids as Self Advocates

<http://fvkasa.org/resources/health.php>

The MacArthur Initiative on Depression and Primary Care

<http://www.depression-primarycare.org/>

MedEncentive

<http://www.medencentive.com>

Medication Management Systems

<http://www.medsmanagement.com>

Motivational Interviewing.org

<http://www.motivationalinterviewing.org>

MyCareTeam

<http://www.mycareteam.com>

National Center for Medical Home Implementation

<http://www.medicalhomeinfo.org>

New Health Partnerships

<http://www.newhealthpartnerships.org/>

Ottawa Personal Decision Guide

<http://decisionaid.ohri.ca/decguide.html>

Patient Centered Primary Care Collaborative

<http://www.pcpcc.net>

ReachMyDoctor

<http://www.reachmydoctor.com>

Respecting Choices

<http://respectingchoices.org>

**Rhode Island Dept of Health Adolescent
Healthcare Transition**

<http://www.health.ri.gov/family/specialneeds/transition/index.php>

Society for Participatory Medicine

<http://participatorymedicine.org/>

Stanford Chronic Disease Self Management Program

<http://patienteducation.stanford.edu/programs/cdsmp.html>

**TALC: The Adolescent Leadership Council of Hasbro
Children's Hospital**

<http://www.hasbro-brown-talc.org/index.htm>

TransforMED

<http://www.transformed.com>

Vermont Blueprint for Health

<http://healthvermont.gov/blueprint.aspx>

Waisman Resource Center

<http://www.waisman.wisc.edu/wrc/pub.html>

APPENDIX B



Snapshot of People's Engagement in Their Health Care

A review of 31 national surveys found that Americans do not actively and consistently perform the actions directly linked to benefiting from available health care.

The review of surveys conducted between 2001-2009 found that for the majority of engagement behaviors for which survey data were available:

- One-third of American adults perform them consistently
- About one-third of people perform them inconsistently or tentatively
- A final third do not perform them at all

Why focus on engagement in health care?

Health care is one of many strategies we enlist in our effort to live life free of suffering. This study focuses on our engagement in our health care for three reasons:

First, because in order to benefit from the care available to us, we and our caregivers face a growing number of responsibilities to find safe, decent care and then make good use of it.

Second, because the increased demands on us to participate in our care disadvantages those of us who are unable to do so and contributes to disparities in health outcomes.

Third, because health care reform has sparked a multitude of new efforts, many of which are directed to be "patient-centered," there is an opportunity to institutionalize support for our engagement in our care in the new policies, measures and practices that are developed.

What is at stake?

Those of us who are unable or unwilling to participate actively and knowledgeably in our care are more likely to suffer preventable illness, receive less effective care, pay more out-of-pocket costs, experience poor outcomes and suffer a diminished quality of life. From a societal perspective, non-engagement wastes public and private resources, contributes to unnecessary suffering and erodes the health of the population.

What constitutes engagement in health care?

Here, engagement is defined as "actions we must take over time to obtain the greatest benefit from the health care services available to us."

In 2007, the Center for Advancing Health (CFAH) launched an initiative to develop a behavioral definition of engagement. The Engagement Behavior Framework (EBF) was derived from interviews with 210 individuals, 57 professional health stakeholders and comprehensive reviews of the peer-reviewed and advocacy literature. It consists of such actions as ensuring that relevant medical information is conveyed between our providers and institutions, asking questions of your provider when any explanations or next steps are not clear and evaluating recommended tests and treatments in discussion with your health care provider. There are a total of 42 specific behaviors that fall into one of the following ten categories:



The full framework can be viewed at www.cfah.org.

Approach

CFAH reviewed 31 publicly available national surveys conducted from 2001-2009 to identify items that matched the 42 behaviors in the EBF. Data from those items were aggregated across studies.

Findings

For the majority of the behaviors for which data were available, one-third of adults performed them regularly, one third did so inconsistently and one-third did not do so at all.

This is a rough approximation because even within a set of behaviors, individuals' performance of specific actions may vary significantly. Because data came from 31 surveys, it is impossible to analyze the extent to which people behave consistently across different behaviors.

When data were examined within and across the behavior sets, some patterns of emerged:

- More of us appear to perform simpler tasks (e.g., make a list of medications) than complex actions (e.g., make informed treatment decisions).
- The depth of participation in any engagement behavior set tends to be shallow. For example, more of us seek out information about a provider or health plan than actually use that information to make a choice.
- We appear to defer information and advice-seeking until we have a specific need: our participation takes place "just in time."

For any single behavior, those less likely to participate are those with little education, marginal health literacy, low incomes, multiple chronic conditions and lack of health insurance.

While such barriers affect a sizable number of people, lack of participation is also common among those who face none of them.

We Are Less Likely to	We Are More Likely to
Proactively communicate with health care providers	Have a personal or regular provider
Organize health care	Check that health plan will cover care
Make treatment decisions	Discuss potential benefits of a medical test or treatment with provider
Follow treatment plans for: <ul style="list-style-type: none"> ▪ Allergies ▪ Arthritis ▪ Lung conditions ▪ Depression ▪ High cholesterol 	Follow treatment plans for: <ul style="list-style-type: none"> ▪ Cancer ▪ Diabetes ▪ Heart disease ▪ Hypertension ▪ Stroke
Promote health by eating plenty of fruits and vegetables, maintaining a healthy weight and being moderately active	Obtain immunizations, screenings and other preventive care from a health care provider
Put end-of-life plans into written or legal documents	Talk to adult children about what to do if one can no longer make decisions about care
Use objective information to: <ul style="list-style-type: none"> ▪ Select a health care provider or health plan ▪ Make a medical decision ▪ Compare treatments 	Seek information about specific health conditions and medical care

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Promote health by eating plenty of fruits and vegetables, maintaining a healthy weight and being moderately active	Obtain immunizations, screenings and other preventive care from a health care provider
Put end-of-life plans into written or legal documents	Talk to adult children about what to do if one can no longer make decisions about care
Use objective information to: <ul style="list-style-type: none"> ▪ Select a health care provider or health plan ▪ Make a medical decision ▪ Compare treatments 	Seek information about specific health conditions and medical care

APPENDIX C:

Sample Comment Cards

Insert your
practice logo here

Helping Us Improve Your Experience of Care

Please answer the following questions based on your experience today.

What do you like **most** about your care here?

What do you like **least** about your care here?

What is the one thing you would like to see **changed?**

Insert your
practice logo here

Helping Us Improve Your Experience of Care

Please answer the following questions based on your experience today.

What do you like **most** about your care here?

What do you like **least** about your care here?

What is the one thing you would like to see **changed?**

APPENDIX D:

How to Conduct a Walk-Through

A walk-through is your opportunity to experience what patients and family members experience when they receive care at your organization. For example, if you are examining the emergency room, choose a particular type of patient (e.g., one with asthma). You and another team member would then present to the emergency department as a patient with that disease and the patient's family member. Here are some tips on how to conduct a successful walkthrough:

1. Let the staff know in advance that you will be doing this walk-through. As a result of this warning, they will probably be on their best behavior. However, experience suggests that it is far better to have them part of the process than to go behind their backs. Ask them not to give you special treatment.

2. Go through the experience just as the patient and family member would. Call in advance, if the patient would have to. Drive to the emergency department, drop the patient off, find a place to park, and check in. Try to act as if you have never been there before. Follow the signs. Tell the clerk that you are simulating a patient's experience and that you want to go through whatever a normal patient would have to do (e.g., the check-in process). Actually fill out the forms if there are ones to fill out. Find out how long a patient would typically wait and sit in the waiting room for that amount of time. Wait your turn. Do the same in the examining room. If the patient undresses, you should undress. If the patient does a peak flow meter, you should too. Ask each health care provider to treat you as if you were a real patient. If you are doing a walk-through of the cardiac catheterization service, hold the sandbags on your leg the required amount of time. Experience it all.

3. As you go through the process, try to put yourself in the patient's (or family member's) position. Look around as they might. What are they thinking? How do they feel at this moment?

4. At each step, ask the staff to tell you what changes would make the experience better for the patient and what would make it better for the staff. As you do the walk-through, think about how you would answer the following questions and ask the staff you interact with to answer them when you can:

- ▶ What made you mad today?
- ▶ What took too long?
- ▶ What caused complaints today?
- ▶ What cost too much?
- ▶ What was wasted?
- ▶ What was too complicated?
- ▶ What involved too many people or too many steps?
- ▶ What did you have to do that was just plain silly?
- ▶ Write down their ideas as well as your ideas. But also write down your feelings.

5. Finally, between the two of you (patient and family member), write down a list of what needs you found and what improvements could be made. Keep track of the things that can be fixed the next day versus problems that will take longer to remedy.

Excerpted from: The CAHPS Improvement Guide, 2003, Edgman-Levitan, et al

Individual Examples of Patient Engagement

STORY 1

Dr. Lutz of The Center for Internal Medicine makes electronic communication available to his patients through a portal system called Reach My Doctor. One of his patients, in particular, provides an excellent example of the benefits of an online Personal Health Record (PHR). While out of town, Charles was unfortunate enough to experience severe chest pain—a non-descript and alarming presenting symptom for sufferers and ER staff members alike. The differentials for this symptom abound, presenting challenges to Emergency Room staff that frequently do not have access to detailed patient history. In this case, however, Charles was able to provide ER staff with information to access his PHR, on which Dr. Lutz had placed a copy of his baseline, slightly irregular EKG. This allowed for comparison with the EKG taken at the ER that day, in which the irregularities seen could be confirmed as normal for Charles. The benefits of this streamlined interaction included less time at the ER, avoidance of hospitalization, less testing and probing to uncover a non-existent problem, and decreased cost for the ER, the payers, and Charles himself.

STORY 2

Living in Saudi Arabia and receiving medical care in the United States might sound like a geographical impossibility, but for Dr. Hillary Browne's patient Adam, the anomaly is routine. Adam resides in Saudi Arabia and was recently diagnosed with celiac disease during an in-country visit with the military. The use of electronic health records has allowed Dr. Browne to enjoy the freedom of managing a patient's health care and monitoring his status from halfway around the world, and has given Adam the mobility his life demands. Despite being oceans apart, Adam has, through regular contact with Dr. Browne, been able to keep his malady under control and has even seen consistent improvement in his lab results.

STORY 3

Erin visited the office of her doctor, Dr. Hillary Browne, on a Thursday with an annoying but not severe Urinary Tract Infection. After her assessment and as is typical, Dr. Browne prescribed an industry-recommended antibiotic to rid her patient of the infection and sent Erin on her way. Over the weekend, while Dr. Browne was checking lab results online, she noticed that the particular strain of Erin's infection was resistant to the medication she had prescribed. Wishing to provide her patient with the best possible care, Dr. Browne contacted Erin to let her know the situation, and asked for her pharmacy so she might correct the ineffective medication. Dr. Browne was able to immediately prescribe a more appropriate antibiotic through e-Prescribing, circumventing the usual delays inherent in phone or fax communication—particularly on the weekend. The combination of online lab results and e-Prescribing significantly streamlined the process of adjusting Erin's medication for all parties involved.

STORY 4

Don is a busy executive who does not have time for diabetes. He went to great lengths to keep his diabetes under control, including hiring a private chef and a personal trainer; however these measures proved ineffective without the addition of an insulin regimen. His care provider, Dr. Hillary Browne, repeatedly suggested to him the importance of starting insulin, but Don continued to refuse. Having seen success with other patients using chronic disease monitoring via electronic health record, Dr. Browne suggested this as an avenue to allow both her and Don to monitor his prescriptions and progress over time while using insulin. With this tool in mind, Don agreed to start a regimen and has seen great improvements in his Hg A1c after just one month. Don admits he would not have tried this intervention if it weren't for the electronic functionality that allows him and his doctor to easily track his progress together.



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