

Primary Care Practice Facilitation Curriculum

Module 27: Helping Practices Optimize EHRs for
Patient-Centered Medical Home
Transformation and Quality Improvement



Agency for Healthcare Research and Quality
Advancing Excellence in Health Care • www.ahrq.gov



IMPROVING
PRIMARY CARE

Primary Care Practice Facilitation Curriculum

Module 27. Helping Practices Optimize Electronic Health Records for Patient-Centered Medical Home Transformation and Quality Improvement

Prepared for:

Agency for Healthcare Research and Quality
U.S. Department of Health and Human Services
540 Gaither Road
Rockville, MD 20850
www.ahrq.gov/

Contract No. HHSA2902009000191-Task Order No.6

Prepared by:

Mathematica Policy Research
Princeton, NJ

Primary Author

Lyndee Knox, Ph.D., LA Net Community Health Resource Network

Contributing Authors

Grace Floutsis, M.D., Community Health Alliance of Pasadena (ChapCare)
Allyson Gottsman, Colorado Health Extension System
Kari Loken, Colorado HealthTeamWorks
Mary McCaskill, North Carolina Area Health Education Center Program (NC AHEC) at
University of North Carolina at Chapel Hill

Series Editors

Jesse Crosson, Ph.D., Mathematica Policy Research
Robert J. McNellis, M.P.H., P.A., Agency for Health Research and Quality
Janice L. Genevro, Ph.D., Agency for Healthcare Research and Quality

AHRQ Publication No. 15-0060-EF
September 2015

This document is in the public domain and may be used and reprinted without permission except those copyrighted materials that are clearly noted in the document. Further reproduction of those copyrighted materials is prohibited without the specific permission of copyright holders.

The findings and conclusions in this document are those of the authors, who are responsible for its contents; the findings and conclusions do not necessarily represent the views of AHRQ. Therefore, no statement in this report should be construed as an official position of AHRQ or of the U.S. Department of Health and Human Services.

The meaningful use program has been discontinued. Practice facilitators will still find the concepts in this module instructive when helping practices use their electronic health records for quality improvement.

Suggested Citation

Knox L, Floutsis G, Gottsman, A, Loken K, McCaskill M. Primary Care Practice Facilitation Curriculum (Module 27). AHRQ Publication No. 15-0060-EF, Rockville, MD: Agency for Healthcare Research and Quality; September 2015.

Contents

- Instructor’s Guide 1
 - Time 1
 - Objectives 1
 - Exercises and Activities To Complete Before, During, and After the Session 1
- Module 27. 4
 - Ways to Help Practices Use Their EHRs to Support PCMH and Quality..... 4
 - Providing EHR Support to Practices 4
 - Obtaining In-Depth Training on Specific EHRs..... 5
 - Coordinating With Technical Experts on EHRs and Data 5
 - Ways That EHRs Support the PCMH..... 6
 - Helping Practices Optimize EHR Use 7
 - Understanding the Impact of EHRs on Patient Experience 25
 - Using EHRs in Quality Improvement..... 26
 - Helping Practices Enhance Use of Other Health IT Resources for PCMH..... 27
 - A Note About Small Practices and EHRs..... 27
 - Conclusions..... 28
 - References..... 29
- Appendix 12C 31

Module 27. Helping Practices Optimize Electronic Health Records for Patient-Centered Medical Home Transformation and Quality Improvement

Instructor's Guide

Practice facilitator (PF) competencies addressed in this module:

- General knowledge of patient centered medical home (PCMH)
- General knowledge and skills for optimizing electronic health record (EHR) systems to support PCMH
- Cultural competency with practices related to their health information technology (IT)

Time

- Pre-session preparation for Learner: 2–5 hours
- During the session: 1 hour, 45 minutes

Objectives

After completing this module, learners will be able to:

1. Help practices explore ways to optimize their EHR to support key PCMH functions.
2. Identify key EHR-related workflows.
3. Describe meaningful use reports.
4. Describe clinical decision supports and how they support PCMH and quality.
5. Describe patient portals and how they support PCMH and quality.
6. Describe ways that EHRs (and related systems such as registries) can support PCMH and quality.
7. Understand roles PFs can play in helping practices optimize their EHRs for these purposes.
8. Understand important decisions PFs need to make when helping practices with their EHRs.
9. Access information to support practices in creating reports, using clinical decision supports, and implementing patient portals.

Exercises and Activities To Complete Before, During, and After the Session

Pre-session preparation for learners. Ask the learners to read items 1–5 and then explore items 6–9 below. (2–5 hours)

Prerequisite modules

1. [Module 25](#). The Patient Centered Medical Home: Principles and Recognition Processes
2. [Module 26](#). An Introduction to EHRs and Meaningful Use
3. [Module 27](#). Ways That EHRs Support the PCMH (this module is the primary focus of this session)
4. Integrating Clinical Decision Support Tools into Ambulatory Care Workflows for Improved Outcomes and Patient Safety
<https://www.healthit.gov/sites/default/files/clinical-decision-support-0913.pdf>
5. Small practice considerations in clinical decision support implementation:
https://www.healthit.gov/sites/default/files/cds/3_5_10_sm_practice_considerations.pdf
6. An exemplar patient portal use case: <https://www.healthit.gov/case-study/patient-portal-benefits-patient-care-and-provider-workflow>

Optional reading

1. Health IT-Enabled Quality Measurement: Perspectives, Pathways, and Practical Guidance. Available at
<https://digital.ahrq.gov/sites/default/files/docs/page/ahrq-pathways-report-20130912.pdf>
2. Higgins T.C., J. Crosson, D. Peikes, R. McNellis, J. Genevro, and D. Meyers. “Using Health Information Technology to Support Quality Improvement in Primary Care.” AHRQ publication no. 15-0031-EF. Rockville, MD: Agency for Healthcare Research and Quality, March 2015.

During the Session. Presentation (30 minutes)

1. Present key concepts from the module.

Discussion. Ask questions and explore answers with learners. (15 minutes)

- What is your experience working with practices to use their EHRs for reporting and PCMH- and quality-related functions described in this module?
- What is your own experience as a patient interacting with IT systems in a practice?
- How can EHRs support the key elements of PCMH?
- How can EHRs support quality improvement?

Activity. Create a vision chart for enhancing PCMH with a practice HER. (45 min)

1. Divide learners into groups of three to five people.
2. Provide each group with a copy of the PCMH-EHR vision chart.
3. Have each group identify a “PF” for the activity.
4. Ask PFs to facilitate their group to identify a practice to focus on for the exercise
 - A practice that one member of the group is working with already.
 - Practice case study in [Appendix 12C](#).
5. Have PFs facilitate their group in creating a *vision chart* for the practice.
6. At end of the exercise, have PFs and groups reflect on the facilitation process with their group:
 - What worked well in facilitating the group and the process?
 - What changes would you make next time?

Large group report out (15 minutes)

- What two lessons did your group learn about EHRs supporting PCMH? What are their implications for your work?
- What two lessons did you learn about facilitating these types of exercises with teams? What are their implications for your work?

Module 27.

This module provides an introduction to the ways electronic health records (EHRs) support key elements of the patient centered medical home (PCMH) and support quality improvement. It discusses how PFs can help practices better use their EHRs to establish a PCMH and improve quality. This module builds on two other modules, which you should complete before beginning this module:

- [Module 25](#): The Patient-Centered Medical Home: Principles and Recognition Processes
- [Module 26](#): An Introduction to EHRs and Meaningful Use

Ways to Help Practices Use Their EHRs to Support PCMH and Quality

As a PF, one of your most important roles will be to help practices evaluate and optimize their EHR and related information technology (IT) systems to support the PCMH. Some of the actions you can take to support practices include:

- help practices assess current use of their EHR and create an action plan for enhancing its use for the PCMH
- help practices improve workflows involving their EHR
- help practices improve the quality, efficiency, and usefulness of their reporting
- work with practices to select and deploy clinical decision supports (CDSs)
- work with practices to deploy patient portals to engage patients and improve access

Providing EHR Support to Practices

Deciding how much hands-on support you should provide to a practice with its EHR and reporting systems can be difficult. As a PF, your main goal is to build internal capacity in your practices to continuously improve and to operate according to the principles of the PCMH. Given this, you will focus on (1) helping practices to assess and improve their systems, (2) providing them with information and other resources, (3) sharing exemplar practices, (4) facilitating implementation of improvements using Plan Do Study Act (PDSA) cycles and other processes, and (5) providing training when appropriate.

In the course of your work with each practice, you will need to decide how much direct hands-on support you should provide. In other words, you need to figure out how much you should take on yourself (such as generating reports) versus teaching the practice how to do it.

Some experienced PFs warn about the challenges of providing direct hands-on support in this area as you can easily get pulled into “fixing” a practice’s EHR rather than helping the practice improve quality and build internal capacity.

Others believe it is sometimes necessary for a member of the PF team to provide hands-on support to get a practice over the “hump.” This may be particularly true for smaller practices that have limited access to experts on EHRs and other health IT systems.

You will have to determine when this type of direct support is necessary and whether you or members of your team have the knowledge and skills to provide it.

When a practice's needs fall outside your team's capabilities, you will want to know where to find the right expertise. One place you and your practices can look for this external expertise is the health information exchange (HIE) in your area. Go to <https://www.healthit.gov/topic/health-it-and-health-information-exchange-basics/health-information-exchange> for more information on HIEs.

Obtaining In-Depth Training on Specific EHRs

The amount of training you need to work with the practices you are supporting will vary. If you are working with a single practice or a group of practices that use the same EHR, it can be useful for you to complete in-depth training on the system. In some instances, you may want to obtain training to become a “super user” for a specific EHR. Vendors are often unwilling to provide non-customers with this training, but you may be able to access the training because you provide services to the practice. Another way to access training can be to go through Community Health Center Controlled Networks (<https://www.nachc.com/HCCNs.cfm>). Becoming a super user can be particularly helpful in your work with solo practitioners and small practices that may have little or no support for their EHR outside of technical assistance from the vendor.

If you are supporting practices that use many different EHRs, it will not be feasible for you to become a super user for each system. Instead, you will need to rely on super users within the practices for expertise about the systems and their functionalities.

Regardless of whether you receive in-depth training on a particular EHR, you should focus on building capacity in practice staff rather than getting directly involved in the work of the practice. Many of the changes that are needed to EHRs will help increase capacity, such as building report templates that can be used multiple times or implementing a CDS.

Coordinating With Technical Experts on EHRs and Data

Another important skill is knowing where your work with an EHR and related systems starts, because the work of technical experts stops. This line is not always clear. Ideally, the quality improvement facilitator, technical EHR expert, and data experts coordinate their activities. EHR implementation or upgrades can provide an opportunity to improve workflows and quality, and efforts to improve quality and redesign workflow often require changes to EHR setups. Just as daily practice huddles are a good way to plan for patient care, huddling with others who support the EHR in the same practice is a good idea. It helps all those providing support to increase their efficiency and to reduce the number of distractions and duplicate questions.

Learn when to call on colleagues or consultants for assistance. Some facilitation programs use a team approach. In these instances, as the quality improvement facilitator, you will have a good idea of when to call in your colleagues—as you will be in frequent communication, know their skill sets, and understand what they can do for your practices. If you are working

independently or as part of a facilitation program that does not include technical experts, you will need access to consultants with these competencies. If you are working as part of a program, your program director should provide these resources for you. Take time to get to know the consultants and understand the types of technical expertise they can provide to you and your practices.

Coordinate your work with that of consultants. You will want to meet with the consultants and make sure you are not duplicating one another's work. Ideally, you can develop an improvement plan together with the practice and the technical experts and assign roles based on this plan as a means of coordinating activities. Regular communication, updates, and joint meetings will assist you in coordinating the work. Refer to [Module 7](#) on Practice Facilitator Professionalism to read about working with consultants.

Ways That EHRs Support the PCMH

As described in [Module 25](#) about the patient-centered medical home, the PCMH is a team based model where the primary care team is responsible for coordinating and ensuring the comprehensiveness and quality of each patient's overall care. The PCMH model encompasses five core principles:

- “A **patient-centered orientation** toward the whole person that requires understanding the patient's and the family's preferences and providing the patient's entire range of care needs.
- **Comprehensive, team-based care**, which relies on a (not necessarily physically co-located) team of providers that might include physicians, nurses, pharmacists, nutritionists, social workers, information technology specialists, and practice managers, in order to meet the patient's care needs.
- **Care coordinated and/or integrated across all elements of the complex system** (both medical and behavioral health care), including specialists, hospitals, and skilled nursing facilities; home health workers; community services and supports; and the variety of other clinicians and providers who see the patient.
- **Continuous access to care** with shorter waits to get appointments, enhanced hours, and alternative methods of communication such as email and telephone.
- **A systems-based approach to quality and safety**, some important aspects of which are: (a) the practice uses evidence-based medicine and clinical decision-support tools to guide decision making; (b) the practice and patients and families participate in performance measurement and improvement; (c) patient experience and feedback are measured, with data from these measurements acted upon; and (d) the practice participates in population health and management (Meyers, Quinn and Clancy, 2011).”

Select for a more detailed definition of the PCMH model.

EHRs and related systems support the PCMH by collecting, storing, and managing personal health information, collecting patient-generated information through patient portals and

facilitating care team communication through functionalities like tasking. Clinical decision support (CDS) capabilities and well-structured flow sheets and templates facilitate delivery of guideline-based care. Patient registries facilitate population management. Tasking functions support communication among care team members. Secure messaging and telehealth can improve access. Internal health education materials and care plans can support self-management and patient engagement (Meyers et al., 2011; Nance et al, 2014). Table 27.1 provides an overview of how EHRs and other health IT systems can support the PCMH.

Table 27.1. Technological capacities for supporting the PCMH

Medical Home Principle	Technological Capability	Required Health IT Functionality	Examples of Health IT Applications
Patient-centered, whole-person orientation	<ul style="list-style-type: none"> - Uniquely identify patients, including language preferences - Identify the patients' care preferences and preferred learning mode, and facilitate their self-management with input from providers 	<ul style="list-style-type: none"> - Access to patient health records and preferences - Support for patient self-management 	<ul style="list-style-type: none"> - EHRs - PHRs - Telemedicine
Comprehensive, team-based care	<ul style="list-style-type: none"> - Collect, store, manage, and exchange relevant general medical and behavioral health information 	<ul style="list-style-type: none"> - Collect standardized, accurate, and essential data elements - Facilitate medication reconciliation - Allow registry views for monitoring by patients 	<ul style="list-style-type: none"> - EHRs - PHRs - Patient registries - Telemedicine
Coordinated care	<ul style="list-style-type: none"> - Collect, store, manage, and exchange relevant general medical and behavioral health information 	<ul style="list-style-type: none"> The above, plus: - Support care coordination - Incorporate data from outside systems - Allow linking to other resources 	<ul style="list-style-type: none"> - EHRs - PHRs - Patient registries - Telemedicine
Continuous access to care	<ul style="list-style-type: none"> - Communication among practice team and patients 	<ul style="list-style-type: none"> - Allow access via secure Web portal, E-mail, or PHR 	<ul style="list-style-type: none"> - Web portals - Secure E-mail - PHRs - Telemedicine
Systems-based approach to quality and safety	<ul style="list-style-type: none"> - Collect, store, measure, and report on the processes and outcomes of individual and population performance and quality of care - Uniquely identify patients in the practice - Support providers' decisionmaking on tests and treatments 	<ul style="list-style-type: none"> - Allow automated quality measurement - Allow improved interfaces with public health services - Allow outcomes evaluation - Allow evidence-based CDS at the point of care - Allow risk stratification of patients for performance measurement 	<ul style="list-style-type: none"> - EHRs - Patient and population registries - Pay-for-performance outcomes databases - Telemedicine - PHRs with decision support tools

Source: Mathematica's adaptation from the Patient-Centered Primary Care Collaborative, 2009, pp. 7-14.
Key: CDS = clinical decision support; EHR = electronic health record; PHR = personal health record.

Reproduced from: Moreno, Peikes, and Krilla, 2010.

Helping Practices Optimize EHR Use

While many practices have implemented EHRs, few are using them to their full potential (Higgins et al., 2015). In part, this is due to the design of many EHRs. They can be difficult and non-intuitive to use and can disrupt the way clinicians and staff traditionally interact with each other and use clinical information. Often this is also due to a lack of time and capacity in the practice for staff to reflect on how their EHR and its use can be enhanced to support better care.

As a PF, you can help create a time and space for your practices to reflect on how they interact with and use their EHR and how they can optimize its use to support better care, better patient experience, and better staff experience.

Helping practices determine whether they need to optimize their EHR use. To help practices determine whether and where they need to improve their EHR use and workflows, listen to staff members' and clinicians' complaints about the EHR. The issues they raise can help you identify areas that need attention first.

Direct observation is another way to assess areas that need improvement. It can help you determine whether employees are following established workflows or using workarounds. Workarounds may indicate that staff need more information and training or that something in the EHR process is not working well. Before you conduct observations, work with staff to map current workflows; then, compare what they are actually doing against what was mapped to identify discrepancies and workarounds.

Another sign that enhancements are needed is if performance on quality indicators does not improve. For example, if the number of patients leaving with a printed care plan does not increase or if the number of patients not receiving indicated care increases, then you will want to consider whether current use of the EHR may be contributing to the problems (National Learning Consortium, 2013).

Helping practices design a plan to optimize their EHR use. You can use approaches such as appreciative inquiry, discussed in [Module 9](#), to help practices think about and design improvements. For example, you could have practice staff create a “vision” for how they could use their EHR and related systems to more fully realize key principles of the PCMH and optimize patient care. Table 27.2 shows a worksheet you can use to help practices create a vision and plan for optimizing their EHR to support the PCMH.

Table 27.2. Sample vision chart template

Medical home principle	Alignment with meaningful use	Functionalities in our EHR and related systems that support this	How we use these now	How we might use these in the future
Patient centered care				
Comprehensive team-based care				
Coordinated care				
Continuous access to care				
System-based approach to quality and safety				

Working with practices to map EHR workflows. For a practice to optimize use of its EHR, practice staff must understand what they are currently doing. You can work with clinicians and staff to create a list of problematic EHR workflows, and map and redesign them.

The four main steps involved are:

1. Identify a specific EHR workflow that needs improvement.
2. Map out the details of the workflow “as it is.”
3. Evaluate and redesign the workflow.
4. Implement, test, and refine the workflow using PDSA cycles.

We discuss these steps in turn below.

Step 1. Identify EHR workflows that need improvement.

Map patient interactions. One way to identify workflows is to map a patient’s interactions with the practice from start to finish. For example, you can follow every patient interaction with the practice from scheduling an appointment, to checking in, to receiving service, to checking out, through following up, and identify the EHR workflows that accompany each action and stage.

Figure 27.1. Useful Resources for Mapping EHR Workflows and Optimizing EHR Use

California HealthCare Foundation EHR Workflow Resource

<https://www.chcf.org/publication/electronic-health-record-deployment-techniques/>

Physician Foundation Workflow Toolkit

https://physiciansfoundation.org/wp-content/uploads/2017/12/EHR_Workflow_Toolkit_-_Margret_Amatayakul.pdf

Office of the National Coordinator for Health Information Technology

<https://www.healthit.gov/resource/workflow-process-mapping-electronic-health-record-ehr-implementation>

AHRQ Health Information Technology Resource Center

<https://digital.ahrq.gov/health-it-tools-and-resources>

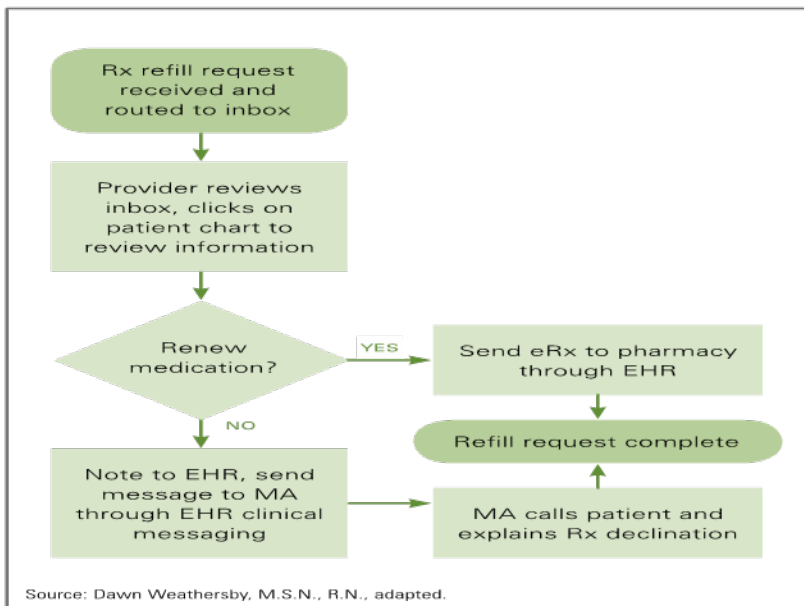
Patient flow can vary based on type of visit, type of insurance, age of patient, whether the person is a new patient or existing patient, and whether the visit is a scheduled or walk-in visit—so you will want to consider these factors and perhaps focus on a specific visit type. This approach is usually preferable because it focuses on the patient’s experience rather than the work of the practice and provides an opportunity to identify missed or new opportunities to advance PCMH principles using EHRs.

Create an inventory of processes. Another way to identify EHR-related workflows is to work with clinicians and staff to create an inventory of processes. Be aware that the number of processes can grow quickly. One clinician identified more than 150 processes at his practice that involved EHR use. Examples of processes include scheduling, check-in, behavioral health, case management, billing, group visits, in-house labs, post-visit follow-up, health education attendance, and medication refills (Kushinka, 2011).

Focus on meaningful use. Many of the practices you work with will be pursuing meaningful use. You can use the required functionalities for the stage they are currently pursuing as a starting place for this work. See [Module 26](#) from this curriculum for more information on meaningful use.

Step 2. Map the current workflows. Once the practice staff and clinicians have identified current EHR workflows that need enhancement, you can work with them to map these workflows. One of the best ways to do this is to observe the clinician or staff person actually using the system. You can use the mapping methods described in [Module 10](#) on Workflow Mapping or use other toolkits and resources for this purpose. Figure 27.1 provides links to two workflow mapping toolkits that are easy to use and effective. Figure 27.2 provides an example of an EHR-based workflow for refilling prescriptions.

Figure 27.2. Workflow map for refilling prescriptions



Reproduced from Kushinka, 2011.

Step 3. Redesign or optimize the workflows. After mapping a workflow “as is,” work with the practice to develop an enhanced workflow or set of workflows. Help the practice consider what changes are possible within the constraints of its existing EHR, whether any of the changes will require vendor support or can be carried out in house, and the costs of the modifications, and then incorporate these in the decisionmaking process. You can use the questions from [Module 10](#) on Workflow mapping to help your practices redesign EHR related workflows or the ones provided in Figure 27.3 of this module. You will also want to work with the practice to determine whether it is worth working with the vendor to customize the EHR to support the newly optimized workflow.

Following are some additional ideas about how to help a practice optimize EHR use and workflows:

Helping practices generate ideas for redesigning an EHR workflow. One way to do this is to have participants on the redesign team brainstorm ideas for changing the workflows to more fully reflect PCMH principles. For example, you can ask them to think of ways to redesign the process to enhance patient experience or the five principles of PCMH. This type of initial brainstorming can help practices think systematically about how to improve their PCMH. Below we describe some ways to generate ideas.

Observe the workflow. Another way of stimulating ideas for redesigning the process is to observe a clinician or staff person carrying out the targeted workflow. As you observe, you can note reasons for any difficulties that arise. Are there issues with inadequate training? Does a template need to be redesigned? Are data capture methods such as copy/paste and cloning (auto-generation of frequently entered text) needed? Are so many alerts being generated that clinicians

ignore them? Based on this, what changes are needed to improve the flow? (National Learning Consortium, 2013)

Observe the physical environment. Note what type of hardware clinicians are expected to use to make entries. Do they use tablets or computer terminals? Are they easy to use? Are there enough of them or do clinicians and staff have to wait to use them? Are terminals located in areas where distractions and privacy are issues? Do they function well or are there frequent problems with hardware? Based on this, what changes are needed to improve the process? (National Learning Consortium, 2013)

Examine the data requirements. Consider whether any data requirements are unnecessarily burdensome. Some clinicians complain about having to collect much more information than is necessary or than they did in the past with paper charts. In some cases, this may reflect improvement in documentation. In other instances, templates may contain redundant or rarely used fields that slow down data entry and increase the burden on clinicians. In these cases, the practice may want to eliminate the redundancies and make rarely used fields optional. The practice will also need to consider whether the changes will affect collection of data needed for claims, quality reporting, or other purposes. (National Learning Consortium, 2013)

Access existing data. Look for ways to reduce the burden of data entry by pulling data from other parts of the system. For example, could information that rarely changes and appears in one area of the record (such as patient demographics) be used to fill fields in other areas? Are there opportunities for patients to enter these data themselves, removing some burden from staff? What improvements are indicated based on the answers to these questions? (National Learning Consortium, 2013)

Assess the value of the data and determine whether the data can be obtained from other sources. Does the importance of the data justify collecting them? Is the practice collecting any data that have no clear purpose or use? Clinicians should be involved in determining what information is needed and what might be eliminated. (National Learning Consortium, 2013)

Assess impact on patients. The practice should also consider the effects on patients of the current workflow and the proposed redesign. Will the changes enhance or detract from the patient experience? Is the process patient-centered? Does it support coordinated care? Improved access? Patient engagement? A positive customer experience? One way to determine these impacts is to shadow a patient through a visit or be a not so “secret” shopper and emulate the interaction of a patient with the old and redesigned processes. Figure 27.3 contains a list of questions you can use to help your practices assess and redesign existing EHR-related workflows.

Figure 27.3. Questions to stimulate thinking about EHR workflow redesign

- Are there any parts of the current process that present risk to the clinic?
 - Variation in practice
 - Action not documented in chart (e.g., excessive or inconsistent use of “sticky” notes)
 - Incomplete documentation (in chart, on orders, for communications)
 - Inadequate security (e.g., prescription pads, sample drugs, access to information)
 - Lack of documented policy
 - Delays in provision of care over which clinic has no control
 - Loss or misplacement of documents resulting in duplicate testing, lost charges, payment denials
 - Role ambiguity
 - Other
- Are there any parts of the current process that may result in significant loss of productivity?
 - Unnecessary phone calls, emails and texts
 - Waiting for chart or other information
 - Unnecessary steps
 - Delays due to manual procedures that do not impact quality of care or patient safety
 - Other
- Are there any aspects of the process you believe are particularly prone to error? Why?
 - Lack of training
 - Lack of time
 - Lack of documented procedure
 - Lack of staff
 - Lack of quality controls
 - Lack of information
 - Other
- Are there any aspects of the process in which you would like to see more improvements, given the opportunity presented by an EHR?
 - Eliminate bottlenecks, backtracking
 - Reduce workarounds due to errors
 - Reduce duplication of effort
 - Reduce number of steps or amount of time
 - Adopt new models of care planning (e.g., standing orders, medical home)
 - Improve chronic care management (e.g., patient recall, home monitoring, disease management)
 - Improve compliance (e.g., ABN, E&M coding, HIPAA/HITECH, meaningful use incentives, etc.)
 - Adopt proactive preventative care practices
 - Adopt or improve value-driven care processes (e.g., generic drug utilization)
 - Support consumer empowerment (e.g., personal health record access, automated self-assessment, report cards)
 - Improvement quality measurement and reporting
 - Improve health plan contract negotiation
 - Improve patient safety reporting (e.g., post-market drug surveillance, communicable disease)
 - Adopt new revenue opportunities (e.g., medical concierge, alternative therapies)

Adapted from: Amatayakul M, EHR Workflow Toolkit for Physician Practices; 2011. Margret\A Consulting, LL.
https://physiciansfoundation.org/wp-content/uploads/2017/12/EHR_Workflow_Toolkit_-_Margret_Amatayakul.pdf.

Used with permission.

Step 4. Test and refine the redesigned workflows. The practice can use PDSA cycles to test the new workflows and make further improvements. As part of this process, you can suggest that clinicians and staff role-play any workflows that involve patients. This will help them (1) become comfortable with the new workflow and (2) identify any “kinks” in the process that need to be addressed before they use it with real patients. You can also work with staff and clinicians to create scripts for introducing the process to patients or improve interaction with patients around the new process when appropriate. (National Learning Consortium, 2013)

Step 5. Create visual users guides for clinicians. You can create a guide by taking screen shots of each “click” a clinician must make in the course of different types of visits (be sure no real patient data are displayed) when carrying out a task such as e-prescribing. Then assemble the screen shots into a spiral-bound booklet. Clinicians and staff can use the guides to help them navigate through non-intuitive processes, and human resources and the office manager can use them to train new hires. This small intervention can help you build credibility with clinicians and staff as a source of practical support.

Enhancing reporting from EHRs. Practices need actionable data to carry out activities central to the PCMH, such as population management and continuous quality improvement. EHRs are not the only source of these data. Effective reporting programs in a practice typically involve use of data from multiple systems, including practice management systems, patient registries, and financial systems in addition to EHR data. However, a practice’s EHR plays a central role in reporting and is an essential source of these data.

Most EHRs include a built-in automated reporting function to generate a number of useful reports. Federally certified EHRs must include the ability to generate reports on core meaningful use measures and a minimum of three additional clinical quality measures.

As a PF, you will need a solid understanding of the following:

- The reporting needs of each of your practices
- How they generate these reports
- The reporting capabilities of the practices’ EHR and related systems

You should become familiar with other types of reports the practice generates regularly. Table 27.3 provides a list of some common reports. When you are working with many practices that use different EHRs, it may not be feasible for you to know how to generate reports in all of them. You may become proficient on one or two EHR systems; otherwise, it will be important for you to know whom to contact for help, both inside and outside the practice.

Table 27.3. Reports commonly generated from EHRs

<p>Quality improvement and management</p> <ul style="list-style-type: none">• Number of open or closed encounters (per day, week, and month)• Productivity (number of patients seen per hour)• Referral patterns, both internal, for supportive services (e.g., social work, nutrition) and specialists, and external, for specialists and community-based organizations• Patient flow, as measured by wait time and cycle time• Health and functional status by patient and population• Educational materials provided• Adherence to recommended treatment guidelines, decision support use, and literature searches• Performance on key Healthcare Effectiveness Data and Information Set (HEDIS) measures• Missed opportunity reports for followup and impact on HEDIS and other quality metrics• Gaps in care reports for individual patients for use to recall patients and fill gaps in care• Privacy and security audit logs <p>Third-party and regulatory reporting</p> <ul style="list-style-type: none">• Physician Quality Reporting System (PQRS) required by CMS for Medicare• Patient centered medical home (PCMH) required by PCMH accreditors• Uniform Data System required by HRSA from FQHCs• Clinical quality measure reporting (CQM) required by CMS• Accountable care organization (ACO) reporting requirements• Specific health plan reporting requirements <p>Clinical care</p> <ul style="list-style-type: none">• Open referrals• Incomplete lab reconciliations• Provider panel reports• Population reports• Risk stratification reports• Gaps in service reports• Missed opportunities reports <p>Other</p> <ul style="list-style-type: none">• Meaningful use attestation reports• Patient centered medical home (PCMH) accreditation

Source: Hodach R, Handmaker K. Training and Technical Assistance: Connecting Health IT Professionals with Community Health Centers; 2014. Permission granted.

As a PF, you can help a practice create an inventory of its reporting needs and existing methods for generating reports. You can work with the practice to identify any overlaps and redundancies in reports and to find ways to make the processes more efficient. Table 27.4 contains an example of a report inventory form that a PF might use for this purpose.

Help practices generate meaningful use reports. To work with a practice on its reporting needs, you can begin with meaningful use reporting, if applicable. Be prepared to help practice staff develop effective workflows for reporting on the clinical quality measures (CQMs) they have selected for meaningful use (HealthIT.gov, 2014a).

In some instances, you may first need to help the practices select the CQMs they intend to report. To do this, you can first help them determine which CQMs have automated reports available in their EHR. You can do this by reviewing the vendor's Web site and contacting their support desk. In larger practices, you may be able to consult with the practice's health IT staff or EHR super users.

Next, you can help the practice staff determine which of these measures they will report on for meaningful use. Here are some questions you can use to help them select their CQMs (HealthIT.gov, 2014b):

1. Do any of the eligible CQMs align with quality improvement work the practice is undertaking? If so, selecting these measures can support not only meaningful use but also the quality improvement work.
2. Do any of the CQMs align with the demographics or conditions of patients whom the practice commonly sees? If so, these CQMs can help the practice better understand its patients and their care.
3. What measures are the practice's EHR certified to submit? Do these meet the above criteria?
4. Can the practice submit CQMs electronically (which is a requirement of 2014 for Stage 2 and higher)?
5. What other reporting programs does the practice engage in that might be partially met with the CQMs? More information on overlap of different reporting requirements is available at <https://www.ihs.gov/promotinginteroperability/previousreqs/2011-2014/cqmoverview/>.

Help practices generate population health management reports. Population health management (PHM) is a central element of the PCMH and something that was very difficult to achieve before the advent of electronic data systems. PHM uses information on groups of patients to support proactive care, fill gaps in care, and monitor quality of care with the goal of improving the health outcomes of specified groups such as patients with diabetes, elderly patients, or patients with asthma (Cusack et al., 2010; Institute for Health Technology Transformation, 2012).

To implement PHM, a practice must be able to use its EHR and related data systems to identify and track patient cohorts by condition, demographic variables, or risk level; monitor adherence to care plans; track medication use; and monitor progress toward treatment goals.

One way to do this is to create patient or population “registries” that gather information and provide reports on specific groups of patients defined by the practice, such as patients with hypertension or diabetes. Some EHRs include registry functions but many practices opt to run separate, specialized population management systems along with their EHRs. These systems may automatically pull data from the EHR, labs, and other data systems, and then use this information to generate reports by condition, clinician, or other variables. These reports can then be used for patient monitoring, outreach, and care gap identification. Some systems can also generate point-of-care reminders for indicated services. In some practices, the interface between all of these systems is handled by manual data entry by the staff (Hodach and Handmaker, 2014).

In addition to tracking patient care and health status, practices also need the capacity to classify patients by their current health status and risk—to enable health care professionals to intervene appropriately with high-risk patients and those who might become high risk. You can work with your practices to identify the analytics that will be most helpful to them in service planning and managing their patient populations. Then you can help them build the skills for generating these analyses or identify external resources to do so. Table 27.5 provides an example of a basic report on a patient panel that a medical assistant might use to make outreach calls.

Table 27.5. Sample panel management report

1	2	3	4	5	6	7	8	9	10	11	12
Name	DOC SM	BP DATE	BP/s	BP/d	LDL Date	LDL	A1c DATE	A1c	DIABETIC	SMOKER	DATE ASKED IF SMOKES
Patient A	NO	2/21/2011	127	70	11/30/2010	93			NO	NO	11/20/2010
Patient B	YES	2/15/2011	110	55	2/15/2011	145	9/25/2010	11.3	YES	YES	2/15/2011
Patient C	NO	4/7/2010	158	87	4/11/2010	81	4/11/2010	6.7	YES	NO	3/15/2008
Patient D	YES	1/20/2011	148	95	12/14/2010	170	12/14/2010	8.9	YES	YES	12/12/2009
Patient E	NO	10/28/2010	129	72	12/10/2010	54	12/10/2010	9.6	YES	YES	3/30/2010
Patient F	NO	8/21/2010	125	88	4/20/2010	125			NO		
Patient G	YES	6/24/2010	149	85	4/16/2009	102			NO	NO	12/2/2008
Patient H	NO	3/5/2011	147	90	3/5/2011	81	3/5/2011	12.1	YES	NO	3/5/2011
Patient I	NO	1/29/2010	120	64	2/3/2010	65			NO	NO	12/22/2004
Patient J	YES	1/5/2011	117	81	1/5/2011	112	1/5/2011	5.9	YES	YES	7/5/2010
Patient K	YES	7/24/2008	152	85	7/14/2008	157			NO		

Source: Knox and Brach (2013). Used with permission.

Help practices generate customized reports. Practices’ reporting needs often go beyond the data that are available through automated reporting in their EHR. In such cases, you can help your practices increase their capacity to generate ad hoc reports to meet these needs.

Examples of useful reports that are often customized include care gap reports that can be used by care teams to call patients back in for missed services and risk stratification reports that can help practices identify patients who are high utilizers or at risk for avoidable hospitalizations.

You will want to understand how each practice produces these customized reports and understand the skills and resources they have for doing so. In some cases, practices may require outside assistance, which you can help them access. Once the reporting process is created, it can be used repeatedly and become part of the practice’s overall capacity to generate actionable information.

If your facilitation team includes EHR or data experts, you can these team members to assist the practice in creating this reporting capacity. Then you can work with the practice to change its workflow so the reports are generated routinely.

Some EHRs require additional analytics software. For example, some community health centers use Crystal Reports, a data integration and analytics software, to pull data from their EHR and practice management system and generate reports for population management, panel management, and business management. You should be knowledgeable about these supplemental products and the ways practices use them to create actionable information that supports quality and PCMH.

Help practices validate data for reports. You can also help practices build capacity for validating the data in their reports. The old adage of “junk in, junk out” holds here. Things can and do go wrong at any point in the report generation process. When you are working with practices to produce reports, you should first validate the accuracy of the reports.

Regardless of the system, the basic functions of EHRs are the same. Each EHR includes graphic user interfaces, which staff and clinicians see when they enter information. The fields where data are entered map to underlying tables where these data are stored. Thus, each entry field in a graphic user interface maps to a particular data column in the underlying database table (Levy, 2014). The programming underlying an automated report tells the system to pull data from particular columns or places in the database, perform specific calculations with these data, and then display the results in a report template.

Common causes for errors in EHRs include the following:

- Incorrectly mapped data
- Mistakes in data entry
- Incorrect calculation of denominators
- Copy and paste errors (which occur when the user copies and pastes information from one location to another but fails to capture all of the text)
- Inaccurate speech-to-text entries (introduced by dictation software) that have not been validated

If it is the first time the practice is generating a particular report, the first step is to run a test report with only a few patients’ data, and then compare the information produced for the report with what is contained in the patients’ electronic health records.

The second step is to do validity checks on the reports to look for the following:

- “Out-of-range” values that do not make sense or are not possible to obtain for the variable being reported
- Results that are skewed in an unexpected direction
- Data in the wrong format (such as decimals that should be whole numbers and vice versa)

The third step is to check the denominators used. To do this, you will need to work with staff to determine what data were included in the denominator. For example, suppose a practice found that 23 percent of its patients with diabetes with HbA1c in the current year had an HbA1c test result, and clinicians at the practice insisted that this could not be correct. You would then want to explore possible reasons for this by asking the clinicians and staff how the information is recorded in the health record. You might find that information on HbA1c testing is stored with lab results but HbA1c results obtained from point-of-care testing are stored in a different area of the EHR. If the denominator for the HbA1c performance calculation includes only one of these sets of information, the percentage of patients reported to have received the test will be inaccurate.

You can work with staff who are generating and using the reports to (1) validate the information, (2) train them in processes related to report generation, and (3) set up procedures for regularly validating the results of reporting.

Help practices improve workflow for generating reports. In small practices, the practice manager, billing staff, or another staff member with some technical skills often runs reports. In larger organizations, there may be personnel dedicated to this task, or staff may split time between other duties and running reports. Staff who run reports should be knowledgeable about clinical processes and workflows, understand what should go into denominators and numerators, be comfortable working with numbers and software, and have time in their schedule dedicated to generating reports.

In very small practices, make sure that the computer repair person or hardware expert is not put in charge of managing reporting or activities such as providing clinical decision support. These individuals typically do not understand the workflows related to these actions and so usually are not successful in this role. If this is the only option for a practice, then you should train this individual on related workflows to prepare him or her to assist.

In small practices, an emerging best practice is to put the practice manager in charge of running reports. The practice manager gives the reports to the PF and the practice improvement team to interpret and act upon them (personal communication, Kristi Bohling DaMetz, December 3, 2014).

Help practices take action on reports. Reporting is not useful if it does not lead to effective and meaningful action. Some practices have become adept at generating the reports necessary for patient care and quality improvement, but have difficulty using them to guide action. Another very important role you can play for your practices is to help them move information and data into action.

Once a practice has developed the capacity to generate reports on patient populations and on care team patient panels, how can staff and clinicians use these reports to support pro-active care, outreach, filling service gaps, or guiding decisions about services the practice needs to be providing? Using these data effectively may require training staff to fill new roles, modifying workflows, and redesigning job descriptions, roles, and evaluations. For example, are the medical assistants trained on panel management? Do they know how to generate the reports they need for this or who to get them from? Are there clearly defined processes and workflows for using these reports for patient outreach and to inform patient care? Does the medical assistant's job description and evaluation include these activities? Are root cause analyses conducted to determine why patients did not receive recommended services and is this information fed back to the quality improvement team?

When reports on clinical quality measures are produced for meaningful use, are the findings incorporated into the quality improvement processes at the practice? Who receives this information? How is it used to improve care quality? Does the quality improvement team review

the reports? When reports are produced for payers on HEDIS performance, does the quality improvement team review these reports and use them to improve care? Are root cause analyses conducted to identify the reasons for low (or exemplary) performance? Is this information then used to design and test improvements using PDSAs? Are future reports used to monitor progress?

As a PF, you can observe how practice staff use the reports they generate and help them reflect on and optimize their use of these data. Often practices lack the time and structure to use this information to improve their processes and care. You can help them build capacity in these areas by bringing these issues to their attention, sharing examples of how practices successfully develop and use reports, helping them develop a plan for improving their use of reports and data, and conducting PDSAs to test these plans.

Helping practices implement clinical decision supports.

Clinical decision support (CDS) systems are computerized tools to help clinicians make decisions at the point of care. They include reminders and alerts, clinical guidelines, condition-specific order sets, actionable patient summaries, support in making diagnoses, and reference information (HealthIT.gov, 2014).

Figure 27.4. Information on Meaningful Use requirements for Clinical Decision Support

Centers for Medicare & Medicaid Services. Clinical decision support: More than just alerts. Tipsheet. September 2014, https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/ClinicalDecisionSupport_Tipsheet-.pdf (Centers for Medicare & Medicaid Services, 2014)

CDS systems help practitioners manage complexities encountered during routine care for chronically diagnosed patients (HealthIT.gov, 2014). They reduce the need for clinicians to rely on memory to do the right thing and thus can support improved adherence to evidence-based treatment guidelines. They can also help care teams provide more proactive care—a process that is at the heart of the PCMH—by alerting them to upcoming and missed preventive and chronic care needs of a specific patient (Nace, et al., 2014).

CDS can be active or passive. Active CDS requires a response by the user. Examples include alerts, reminders, required fields, and templates. They require clinicians to complete or override the request. This can be helpful or can become annoying to clinicians depending on how many times they are interrupted. Passive CDS does not require a response, but might provide patient data, links to knowledge sources, guidance triggered by a particular context or circumstance, and hypertext links. For example, an information button that appears during data entry the first time a clinician selects a particular drug would be passive CDS.

There are two levels of CDS guidance: evidence-based and normative-based. Evidence-based guidance is based on research and best evidence. Some clinicians find strict evidence criteria to be overly rigid and non-intuitive. Others find it helpful. The intent is to keep the clinician up to date with the latest research finding on the topic. More recently, evidence-based guidance has

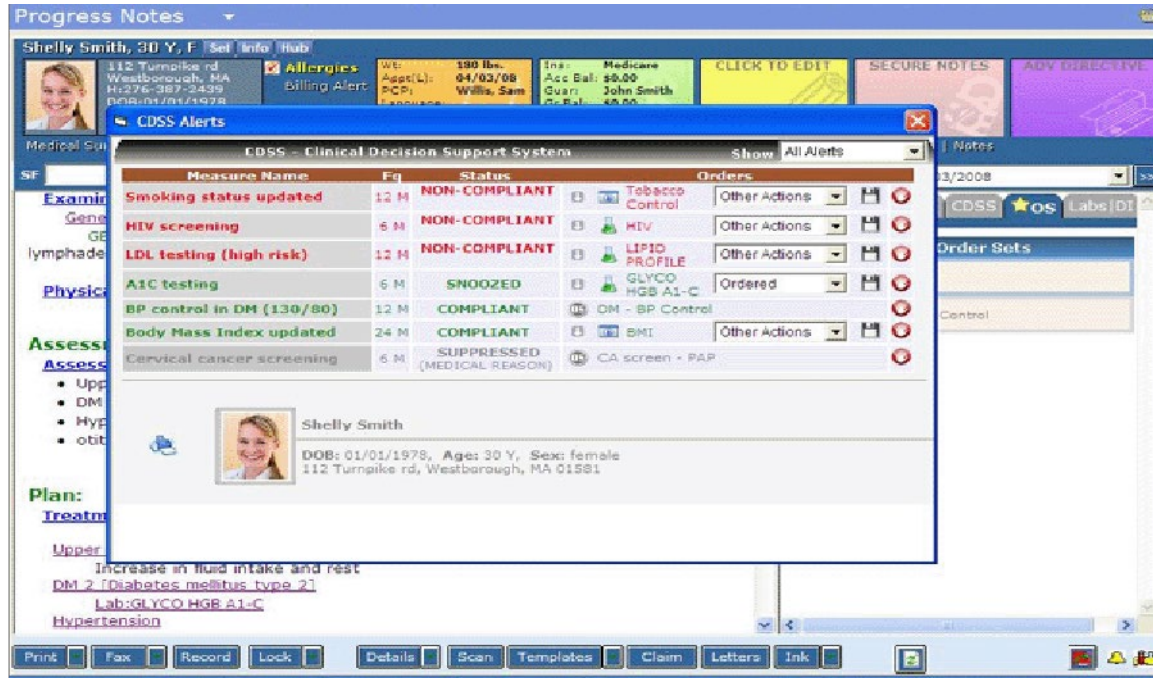
been used to encourage shared decisionmaking with patients. Some clinicians are not comfortable with this; others are. Normative-based CDS is used when there is no accepted best practice data. It is based on recommendations from a panel of experts to establish guidelines.

Practices are required to implement CDSs for meaningful use certification. Figure 27.5 provides links to Federal resources on CDS required to meet meaningful use requirements. As a PF, you should be familiar with the meaningful use requirements for CDS and be prepared to help your practices select and implement CDS appropriate to their populations or direct them to resources on this topic. You should also be knowledgeable about exemplars in the local area in the use of CDS who can share their experiences with your practices if needed.

You can introduce practices to the CDS “5 rights” framework developed by Osheroff and use this to help them evaluate their use of CDS for consistency with these emerging best practices in CDS use. The 5 rights framework suggests that in order for CDS to be beneficial to patients it must provide:

1. “the right information (evidence-based guidance, response to clinical need)
2. to the right people (entire care team- including the patient)
3. through the right channels (e.g., EHR, mobile device, patient portal)
4. in the right intervention formats (e.g., order sets, flow-sheets, dashboards, patient lists)
5. at the right points in workflow (for decision making and action)” (Levick et al, 2012)

Figure 27.5. Sample CDS with alerts



Source: eCW Web site.

Helping practices improve use of patient portals. A patient portal is a secure Web site where patients can view some or all of their health information contained in the EHR. This includes visit summaries, lab results, immunizations, and allergies among other things. It can also include information on health education materials that the practice has provided to the patient. Some portals allow patients to exchange secure emails with their providers, make requests for prescription refills, make payments, and schedule non-urgent visits (HealthIT.gov, 2014d).

Practices can use their patient portals to help them meet meaningful use requirements that would be difficult to meet otherwise. These include providing patients with:

- timely electronic access to changes in health information,
- electronic copies of their health record,
- clinical summaries after each office visit, and
- patient-specific education resources

As a PF, you can provide resources to your practices on the use of patient portals to improve access and communication and help them create a plan for implementing or optimizing use of

Figure 27.6. Additional resources on patient portals

General resources

<https://www.healthit.gov/faq/what-patient-portal>

(HealthIT.gov, 2014e)

Case example involving low-literacy patients

<https://www.healthit.gov/case-study/meeting-needs-diverse-patient-population-through-patient-portals>

their portal. You can help practices that provide care to patients with low literacy and low health literacy think through appropriate uses of portals for these populations. Figure 27.7 provides links to some helpful resources on implementing and using patient portals.

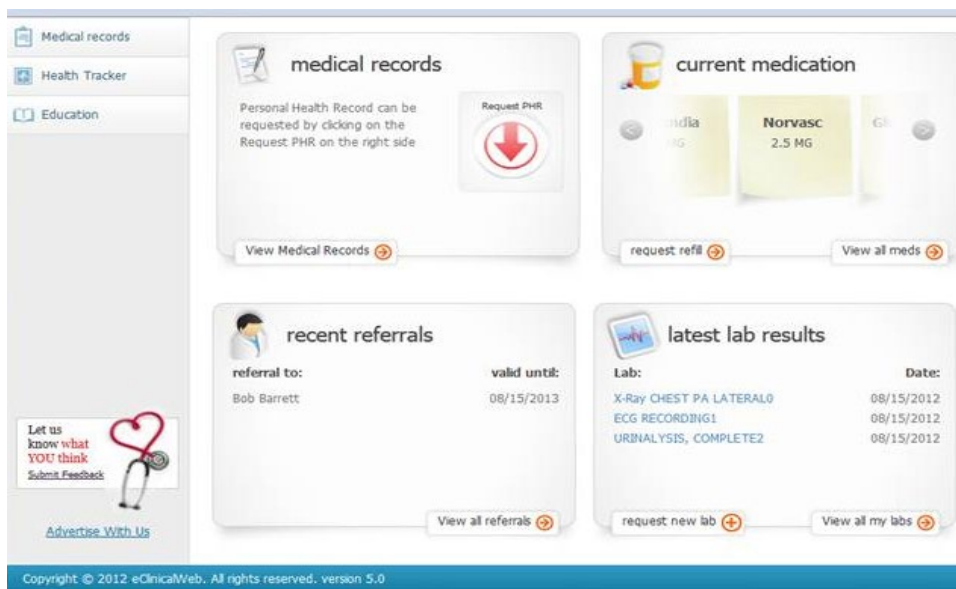
You can also assist your practices in evaluating the portal that is included in their EHR and develop a vision for how they might use a patient portal to encourage patient engagement and to support meaningful use of their EHR. You can help them create a plan for including use of the portal in their clinical workflow, and help them pilot the portal with selected patients to obtain feedback about it. You can also help them design reports that track use of the portal and meaningful use-related metrics.

Finally, you can work with your practices to consider how their adolescent patients may interact with the portal, and what policies need to be in place to maintain their privacy. Some introductory resources on this important topic are available at

- <https://clinicians.org/adolescents-and-stage-2-meaningful-use/> and
- <https://bok.ahima.org/doc?oid=300867#.X6o6aWhKiM8>.

Figure 27.7. Example of a patient portal





Source: eClinical Works. Example of a patient portal (2014). Used with permission.

The process of patient adoption of patient portals is slower than you might expect; to speed the process and meet meaningful use targets, you can suggest that practices develop a script and workflow to promote patient portal adoption, which may include having patient volunteers in the waiting room explaining why they like the portal and how they use it. Take advantage of a patient advisory council if the practice has one.

Understanding the Impact of EHRs on Patient Experience

EHRs can have both positive and negative effects on patient experience. They can reduce the paperwork patients need to complete, and make it easier for them to share their health information with other providers. They can help improve coordination of care and communication among care team members working with the patient. They can reduce unnecessary tests and procedures and provide patients with direct access to their medical information (HealthIT.gov, 2013). For more information on potential benefits of EHRs for patients, visit <https://www.healthit.gov/topic/health-it-and-health-information-exchange-basics/benefits-ehrs>.

However, if practices are not thoughtful in how they use EHRs during visits, EHRs can negatively affect the patient's experience. For example, EHRs can interrupt communication and relationship building among staff, clinicians, and patients. When front desk staff or clinicians interact with an EHR, they are not interacting with the patient. Eye contact is more difficult and the personal interactions that are central to building relationships and trust may be disrupted. A patient in one clinic complained that, "All I see is the tops or backs of heads. The person at the front desk just types away, pushing things to me over the countertop. The MA is busy looking at the screen in front of her. Even the doctor ends up looking at that screen hanging off the wall. It's like my kids and their TV. I can't pry them away. I know they are only doing their job, but

it's become so impersonal. You know what I don't feel I ever see anymore? People's eyes. Their faces.”

As a PF, you can help your practices think about how their use of the EHR and other health IT both improves and disrupts patient experience. One way to do this is to shadow a patient or replicate the experience by having someone on the practice team play the role of a patient. The “pretend” patient can document his or her experience before, during, and after a visit, and then the practice can use this information to adjust EHR and non-EHR workflows to improve patient experience, as well as identify areas where staff may need training to improve the way they interact with patients while using health IT.

Another very helpful process, called *experience-based co-design*, is to partner with one or two patients in the practice and work with them to describe and map a recent encounter with the practice. As a PF, you can facilitate and even lead these discussions. Make sure that the patient feels comfortable and that confidentiality is respected. Once you and the patient complete a map of the experience, you can engage practice or care team members and the patient in brainstorming about ways to improve the patient's experience. This is best done with at least two hours of time, in a small group with five to eight clinicians, one or two patients, and yourself. (Knox and Brach, 2013). Additional information and resources on experience-based co-design are available at <https://www.kingsfund.org.uk/projects/ebcd>.

In addition to the actions described above, it may be helpful to work with patient partners and staff to develop scripts that staff and clinicians can use with patients when they introduce them to a process for the first time. For example, you might help a practice create a script for explaining the patient portal to a patient and why they would like the patient to register and begin to use it. (National Learning Consortium, 2013)

Using EHRs in Quality Improvement

EHRs are an essential tool for quality improvement, and along with other health information technologies, are one of the nine quality levers identified by AHRQ's National Quality Strategy. Everything discussed in this module directly or indirectly affects quality of care. Generating accurate reports for population and panel management helps fill gaps in care and make proactive patient care possible. Well-designed and deployed CDSs assist clinicians to deliver evidence-based care and reduce gaps in care. Improved data validation processes ensure accurate and actionable data. Using IT functions like patient portals may increase patient engagement and access (Emont, 2011).

Figure 27.8. Resources from the National Quality Strategy

Overview of the National Quality Strategy

<https://www.ahrq.gov/workingforquality/>

Ideas for using EHRs to improve quality from HealthIT.gov:

<https://www.healthit.gov/faq/how-can-i-use-my-electronic-health-record-improve-quality>

EHRs and related health IT can be used to support improvements in performance and outcomes in every area of the practice. This includes improving diagnoses, improving decisionmaking, increasing the safety of prescribing, improving adherence to guidelines, and improving billing and coding. When used properly EHRs can also help improve patient participation in their care (HealthIT.gov, 2014).

Performance reports generated through EHRs and other health IT can be powerful motivators for practices (Levy and Stephenson, 2014). If providers and staff can see how they are performing against the practice as a whole and compared to other providers, it can motivate them to improve their method (Ettorchi-Tardy, Levif M, et al, 2012). Being able to track their individual improvement over time can provide positive reinforcement for continuing and even exceeding expectations.

Helping Practices Enhance Use of Other Health IT Resources for PCMH

Other types of health IT also support key principles of the PCMH. As appropriate, you will want to be prepared to help your practices think about ways to use these health IT resources to implement and maintain their PCMH as well. For example, how might they use other existing or new health IT to support secure messaging for communications between care teams and patients, phone visits, telemedicine visits, and home monitoring devices?

Working with practices on these issues extends beyond the scope of this particular module but it is important for you to be aware of these issues as they will become increasingly significant in coming years.

A Note About Small Practices and EHRs

When you are working with small practices and EHRs, be aware that they face unique challenges. They have fewer skilled staff available to manage the EHR and, in some cases, may have little or no expert IT support. As their PF, you may be their only resource with any level of knowledge about using EHRs to improve care quality. At the same time because the practice is small, it may also be easier to implement improvements because there are fewer individuals to convince to change.

You may need to consider more strategies to assist small practices of one to three clinicians (Healthcare Information and Management Systems Society, 2011). Strategies may include finding external partners, consultants, and collaborators to expand the skill set available to the practice on a regular basis and adjusting the pace of improvement work to allow the small practice to adapt to the changes.

If the practice is a for-profit endeavor by a clinician-entrepreneur, the owner's professional career cycle is also important to consider. Those close to retirement may be more reluctant to make these types of improvements and shoulder the costs. You will need to understand—at a high level—the return on investment for these practices for implementing EHRs and other health

IT resources, and be able to explain these to the owner and leadership of the practice. It is helpful to understand the primary mission for a practice and connect to this as a source of motivation.

For any practice, leveraging outside assistance from payer groups, businesses, or hospitals interested in supporting improvement can help encourage leadership to invest in activities that support quality such as EHRs and health IT. Ultimately, any practice that is transforming to a PCMH and implementing meaningful use will need to follow the same process, regardless of size, which includes providing leadership, time, and resources.

Conclusions

As a PF, helping practices better use their EHRs may be one of the most important things you do. Effective use of EHR reporting, clinical decision supports, and other functionalities in health IT systems can make the difference between poor care and well-organized proactive care that improves patient outcomes. It can also make the difference between frustrated, demoralized staff who are overwhelmed with work and those who are efficient and well-prepared. Helping practices better use their EHRs to improve care is a key contribution of practice facilitation.

References

- Amatayakul, M. EHR Workflow Toolkit for Physician Practices. Grant #90RC00003/01. Topeka, KS: Kansas Foundation for Medical Care; 2011.
- Centers for Medicare and Medicaid Services. *Clinical decision support: More than just alerts. Tipsheet.* September 2014. https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/ClinicalDecisionSupport_Tipsheet.pdf.
- Cusack CM, Knudson AD, Kronstadt JL, Singer RF, Brown AL. Practice-Based Population Health: Information Technology to Support Transformation to Proactive Primary Care (Prepared for the AHRQ National Resource Center for Health Information Technology under Contract No. 290-04-0016.) AHRQ Publication No. 10-0092-EF. Rockville, MD: Agency for Healthcare Research and Quality. July 2010.
- Emont S. Measuring the Impact of Patient Portals: What the Literature Tells Us. California HealthCare Foundation, Oakland, CA, May 2011. <https://www.chcf.org/publication/measuring-the-impact-of-patient-portals-what-the-literature-tells-us/>. Accessed December 19, 2014.
- Ettorchi-Tardy A, Levif M, Michel P. Benchmarking: A Method for Continuous Quality Improvement in Health. *Healthcare Policy* 2012;7(4):e101-e119.
- Healthcare Information and Management Systems Society. *Improving Outcomes with Clinical Decision Support: An Implementer's Guide.* "Small Practice Considerations." HIMSS; 2011. https://www.healthit.gov/sites/default/files/cds/3_5_10_sm_practice_considerations.pdf. Accessed December 19, 2014.
- HealthIT.gov. Benefits of HealthIT. Information Technology in Health Care: The Next Consumer Revolution. February 2013. <https://www.healthit.gov/topic/health-it-basics/benefits-health-it>.
- HealthIT.gov. Improved Diagnostics and Patient Outcomes. 2014. <https://www.healthit.gov/providers-professionals/improved-diagnostics-patient-outcomes>.
- HealthIT.gov. What Is a Patient Portal? 2014. <https://www.healthit.gov/faq/what-patient-portal>
- HealthIT.gov. Benefits of EHRs. March 2014. <https://www.healthit.gov/topic/health-it-and-health-information-exchange-basics/improved-diagnostics-patient-outcomes>
- Higgins TC, Crosson J, Peikes D, McNellis R, Genevro J, Meyers D. Using Health Information Technology to Support Quality Improvement in Primary Care. AHRQ Publication No. 15-0031-EF. Rockville, MD: Agency for Healthcare Research and Quality. March 2015.
- Hodach R, Handmaker K. Three keys to achieving population health management. *Population Health News*, 2014;1(2):1-12.

Institute for Health Technology Transformation. Population Health Management: A Roadmap for Provider-Based Automation in a New Era of Healthcare. New York: 2012.
https://www.exerciseismedicine.org/assets/page_documents/PHM%20Roadmap%20HL.pdf. Accessed December 19, 2014.

Knox L, Brach C. *Practice Facilitation Handbook: Training Modules for New Facilitators and Their Trainers*. Agency for Healthcare Research and Quality, Rockville, MD; June 2013. Module 17. Trainer's Guide: Electronic Health Records and Meaningful Use.

Kushinka, SA. *Electronic Health Record Deployment Techniques*. Issue Brief. Sacramento (CA): California HealthCare Foundation, January 2011.

Levick D, Saldana L, Velasco FT, Sittig DF, Rogers KM, Jenders RA, Osheroff JA, Teich JM. Improving outcomes with CDS: an implementer's guide, Second Edition. Scottsdale Institute, AMIA, AMDIS and SHM. 2012.

Levy J, Stephenson D. EHR-enhanced QI: Insights from the NYC DOHMH experience: The Primary Care Information Project. Joslyn Levy and Associates, LLC, July 2010; (49).
https://www.pcpcc.org/sites/default/files/media/cmd_cehia_pcip_7-8-2010.pdf.

Levy S, Jr. Graphical user interface (GUI). *Encyclopaedia Britannica*; 2014.

Meyers D, Quinn M, Clancy CM. Health Information Technology: Turning the Patient-Centered Medical Home from Concept to Reality. *Am J Med Qual*. 2011 March/Apr;26:(2):154-156.

Moreno L, Peikes D, Krilla A. Necessary But Not Sufficient: The HITECH Act and Health Information Technology's Potential to Build Medical Homes. (Prepared by Mathematica Policy Research under Contract No. HHS290200900019I TO2.) AHRQ Publication No. 10-0080-EF. Rockville, MD: Agency for Healthcare Research and Quality. June 2010

Nace D, Marchibroda J, Crawford J, Nohrden C. Meaningful Connections: A resource guide for using health IT to support the patient centered medical home. Patient-Centered Primary Care Collaborative: Meaningful Connections, Washington, DC. 2014:43.
https://www.pcpcc.org/sites/default/files/media/cehia_mc.pdf.

National Learning Consortium. Strategies for Optimizing an EHR System: Checklist. Bloomington, NM. Health Information Technology Research Center (HITRC). Stratis Health; 2013.

Appendix 12C. Case Example: OnlyOneforMiles

The practice OnlyOneforMiles is interested in working with you to implement panel management and to improve their diabetes care. The Chief Medical Officer is excited about the project and responds to your emails to them about the project within a day. You schedule a meeting with him. You ask him to identify key individuals who might participate on the Care Model project team for the intervention period. He says okay. When the day of the meeting comes, Dr. Enthusiasm shows up for the meeting. But no one else is with him. You ask where the others are and he says that everyone was too busy that day to join.

As the two of you visit about project expectations, he mentions that the CEO is not interested in participating and is concerned the project and changes will make the practice lose money. The practice is also implementing its EHR in the next two months and so staff and clinicians are stretched thin. Despite the challenges, the practice is financially fairly stable, and has a low rate of clinician and staff turnover. The practice recently began to transition to care teams from traditional physician-centric models, which has been causing some conflict, but so far things are going okay with that change.

Dr. Enthusiasm is excited about working with you as he thinks it complements the change to care teams and might help improve them. He also thinks that the practice should try to implement panel managers and wants a practice facilitator to help. He wants to know next steps to starting work with you. Dr. Enthusiasm's practice is located in a semi-rural community and is one of the only sources of primary care for low-income patients in the region.