IMPLEMENTATION GUIDE

QUALITY IMPROVEMENT STRATEGY PT 1

Tools to Make and Measure Improvement

May 2013

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Introduction

Patient-Centered Medical Home (PCMH) transformation entails numerous changes—to processes, workflows, scheduling systems, and the care team structure, among others. These changes are intended to support the partnerships between patients, families, and care teams that lead to improvements in care delivery and health outcomes, patient and family experience, and staff satisfaction.

Patients and families have a reasonable expectation that the care they receive will be safe, effective, efficient, equitable, patient-centered, and timely. These attributes, put forth in the Institute of Medicine's landmark 2001 report, *Crossing the Quality Chasm*, constitute the aims to which healthcare should aspire. Action to improve the quality of care is essential to achieving these aims, and the need is urgent. Whether a practice's goal is to transform to the PCMH Model of Care or to implement a new electronic health record, the ability to continuously improve systems is critical.

How does a practice working on PCMH transformation develop and support a culture of continuous quality improvement?

A culture of quality starts and ends with engaged leadership. Engaged leaders provide inspiration and direction and they help providers and staff understand what PCMH transformation is and why it is important. Engaged leaders provide protected time and tools for quality improvement (QI) work and they hold staff accountable for improvement. To learn more about the role of leadership, including board member engagement in QI, see the Engaged Leadership Implementation Guide.

Message to Readers

This Guide addresses the SNMHI key changes:

- Choose and use a formal model for quality improvement.
- Establish and monitor metrics to evaluate improvement efforts and outcome; ensure all staff members understand the metrics for success.
- Ensure that patients, families, providers, and care team members are involved in quality improvement activities.

The fourth Quality Improvement Strategy key change is covered in the Quality Improvement Strategy Part 2: Optimizing Health Information Technology for Patient-Centered Medical Homes Implementation Guide.

Practices beginning the PCMH transformation journey often have questions about where and how to begin. We recommend that practices start with a self-assessment to understand their current level of "medical homeness" and identify opportunities for improvement. The SNMHI's self-assessment, the Patient-Centered Medical Home Assessment (PCMH-A), is an interactive, self-scoring instrument that can be downloaded, completed, saved, and shared.

Readers are also encouraged to download additional Safety Net Medical Home Initiative Quality Improvement Strategy materials:

- Quality Improvement Strategy Executive Summary provides a concise description of the Change Concept, its role in PCMH transformation, and key implementation activities and actions.
- A3 Type Report Template.
- Do It Yourself Run Chart.
- Cambridge Health Alliance Practice Improvement Team (PIT) Development Toolkit.
- Webinars provide additional examples, tips, and success stories and highlight the best-practices of SNMHI sites and other leading practices
- Recommended materials from external sources can be found under Additional Resources.

With the key changes of Engaged Leadership in place, follow these high-level steps:

- Choose a QI model or strategy and stick with it.

Effective practices use a QI model or strategy to organize their change efforts. Although the evidence isn't clear on which particular method works best, research indicates that teams with an organizing quality improvement approach are better able to make changes in practice than those without one.[1] This Implementation Guide, which is designed to help practices select appropriate QI methods and measurement tools, focuses on the two QI methodologies we've seen most often used in healthcare: the Model for Improvement and Lean.

- Understand measurement and use it to guide and drive change.

Measurement is a core component of all QI models. Teams need to be able to understand whether the changes being made are actually leading to improved care and improved outcomes. For data to have an impact on an improvement initiative, providers and staff must understand it, trust it, and use it. Suggestions for how to use data to engage and motivate staff are also highlighted in this Guide.

- Engage front-line staff and patients/families in making changes to the work.

The work of transformation is done best when those most involved in the work are engaged in the process of changing that work—because they know the work processes and can see if the changes are effective. Practices need to engage and empower all members of the care team in the process of practice transformation including patients, family members, and caregivers. Suggestions for how to engage care team members in QI are presented in this Guide. Strategies for obtaining feedback from patients and families and using it for quality improvement can be found in the Patient-Centered Interactions Implementation Guide.

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The Change Concepts for Practice Transformation: A Framework for PCMH

"Change concepts" are general ideas used to stimulate specific, actionable steps that lead to improvement. The Safety Net Medical Home Initiative (SNMHI) established a framework for PCMH transformation to help guide practices through the transformation process. The framework includes eight change concepts in four stages:

- Laying the Foundation: Engaged Leadership and Quality Improvement Strategy.
- Building Relationships: Empanelment and Continuous and Team-Based Healing Relationships.
- Changing Care Delivery: Organized, Evidence-Based Care and Patient-Centered Interactions.
- Reducing Barriers to Care: Enhanced Access and Care Coordination.

The Change Concepts for Practice Transformation have been most extensively tested by the 65 safety net practices that participated in the SNMHI, but they are applicable to a wide range of primary care practice types. The Change Concepts have been adopted by a number of other improvement initiatives, reflecting their generalizability in primary care regardless of patient population or practice structure. The Change Concepts were derived from reviews of the literature and also from discussions with leaders in primary care and quality improvement. They are supported by a comprehensive library of resources and tools that provide detailed descriptions and real examples of transformation strategies. These resources are free and publicly available. To learn more, see the Change Concepts for Practice Transformation.

Key Changes for Quality Improvement Strategy

The eight Change Concepts provide a framework for PCMH transformation. Each change concept includes multiple "key changes." These provide a practice undertaking PCMH transformation with more specific ideas for improvement. Each practice must decide how to implement these key changes in light of their organizational structure and context. The key changes for "Quality Improvement Strategy" are:

- Choose and use a formal model for quality improvement.
- Establish and monitor metrics to evaluate improvement efforts and outcome; ensure all staff members understand the metrics for success.
- Ensure that patients, families, providers, and care team members are involved in quality improvement activities. (Covered in the Patient-Centered Interactions Implementation Guide.)
- Optimize use of health information technology to meet Meaningful Use criteria. (Covered in the Quality Improvement Strategy Part 2 Implementation Guide.)

Setting the Stage for Success

Prepare your team for success from the start. Make sure that the leadership of your organization is engaged and is equipped to lead a team through a complex process of organizational and cultural change.

The Role of Leadership

Leaders need to be closely associated with the QI activities and teams—visible, interested, and engaged. Effective leaders will dedicate time and attention in order to overcome barriers that can derail improvement efforts. These leaders ensure that they are kept up-to-date on QI activity progress, and are aware both of current challenges and successful changes as a result of QI efforts.

Leaders must be able to:

- Understand and articulate to all staff what a fully transformed PCMH will look like. Explain how shifting from episode-based care to preventive, comprehensive, empanelled care will help patients achieve optimal health, and will help the practice to function better.
- Provide the overall strategy (the What, Why, and How) for QI. Set the vision and provide ongoing support and encouragement.
- Describe how front-line staff and patients will fill central roles in the transformation, and how the leaders will support them in this effort.
- Provide training and skill set development to enable front-line participation in QI.
- Provide visible, ongoing support to QI teams by attending meetings, participating in selected QI activities, reviewing data, and engaging directly with teams.
- Understand and articulate how metrics will be used to assess progress.
- Monitor progress, provide opportunities to participate, and provide ongoing skill building.

- Understand the stresses that come from organizational change and provide appropriate support and moderation of project activities to help teams adapt to and cope with change. (More about the impact of change on organizational culture is covered in the next section.)

Leaders ensure that the chosen approach to QI matches the organization's vision, mission, and values. To learn more about the role of leadership in PCMH transformation, see the Engaged Leadership Implementation Guide.

Change is hard enough; transformation requires epic whole-practice re-imagination and redesign.[2]

Adaptive Reserve

PCMH transformation is challenging work because it entails broad changes in multiple areas of the practice. Practices that succeed have "adaptive reserve"—the ability to continually learn and grow as they go, to thrive during change.[2] How does adaptive reserve relate to quality improvement?

- Having a commonly understood process and methodology provides a shared vocabulary and a foundation for understanding the nature of process change.
- A commonly understood QI methodology provides a sense of control. Teams can use it to make things better, and this can help with the sometimes negative emotional consequences of change.
- QI methods allow teams to experience "wins"—successes, even on a small scale—which can be very rewarding. Leaders should look for every opportunity to celebrate these small wins.

Embedding QI and measurement within the daily operations of a practice is essential for driving transformation and sustaining the gains.

The Impact of Change on Organizational Culture

Any substantial change requires deep and continuous engagement throughout the entire organization. Typically, when change occurs in one part of the organization, the entire system is impacted. Changes may result in intended improvements, but may also have negative unintended consequences. Teams need to continuously gather and analyze data in order to understand the impact of both intended improvements and potential unintended consequences.

It's virtually impossible for a team to anticipate all of the impacts and outcomes of system changes. Leaders can help track these impacts and assist team members in adjusting to them by periodically taking pauses from **doing** the work to reflect on how the work is progressing. These purposeful pauses can provide rich opportunities for learning.

Practice transformation requires providers and staff to review roles and processes for improvement opportunities. This includes the ways in which care is delivered and how staff relate to one another. Change, even positive change, can be uncomfortable. Discomfort is temporary and normal. Leaders who recognize that discomfort is inherent to the process of change will be better prepared to help their teams understand and manage their own feelings. It is also a hallmark of transformational change where new systems and processes are designed and implemented. This is different from incremental change, in which improvements are made to existing processes. Using a QI model is an effective way to mitigate feelings of unease because it provides an organizing framework that gives staff confidence in the change process as well as an opportunity to directly participate in the change.

Change and improvement efforts can be spread incrementally at first so that leaders can learn from experience (positive and negative) and build on successes before going organization-wide.[3] The goal is to transform care in such a way that the organization is more capable of managing change in the future, using objective evidence that transformation is actually resulting in improved clinical processes and outcomes.

Staff will likely have many questions, and leaders should conduct frequent purposeful conversations to address them. These interactions can bring to light and address limitations or unintended consequences in proposed improvements. Leaders should not spend a great deal of time trying to convince or convert active resisters, but should listen attentively to them and express respect for their opinions. Acceptance usually increases over time as results are achieved, (e.g., improved HbA1c rates).

Tips for leaders in addressing response to change:

- **Take time to pause and reflect.** This reflection process can be effective for problem solving when scheduled as a regular (e.g., monthly, bi-monthly) dialogue with the project team leader and team. This is a valuable conversation for practice teams to build into their meeting agendas as a regular group activity. Remember, it takes practice to become more effective in using QI processes for improvement.
- **Work from the perspective of the improved process.** This strategy is more engaging than focusing on existing aspects of the current state—focus on "what can be" rather than the frustrating "what is."
- **Have a realistic timeline for implementation.** It's not reasonable to expect staff to drop certain behaviors they believed served patients well or added value and immediately perform a new set of value-adding behaviors perfectly. Staff need time and support to change.
- **Address resistance.** Practice transformation disrupts organizational patterns and may realign sources of organizational power.[2] An additional source of resistance to change can be a lack of understanding on the part of those affected by the change as to why change is necessary and what it will accomplish. Resistance can also come from fear of being perceived as incompetent as one is learning new skills and approaches. Connect the new vision with elements of what you are currently doing as a way to foster motivation and build confidence in the ability to make necessary changes.[4]
  - Listen. Gain an understanding of the opposing viewpoint.
  - Address PCMH limitations frankly and honestly—if you don't have an easy answer, admit it.
- **Effectively support the dynamics of change and transition.** One of the most important principles in organizational change is similar to the Hippocratic Oath: First, do no harm. Implementing change poorly is often worse than not implementing change at all. Poor implementation negatively influences staff perspective and willingness to change and can undermine future efforts.
- **Acknowledge that the upcoming changes involve some loss.** Familiar patterns of behavior within the practice will be changing, and this is hard! Provide a means for staff to honor and grieve what "has been." This will serve you well as a means of transitioning staff to move forward into the future "what will be" scenario.[5]

To learn more about change management techniques, see the Engaged Leadership Implementation Guide.

Build a Quality Improvement Infrastructure

Establish a QI Policy and Structure

The commitment your team has made to PCMH transformation requires a stable QI structure that supports your organizational values and strategic goals. The structure needs to be clearly articulated and both written and verbally expressed.

- Start by creating an organizational QI policy that outlines your organization's quality goals and your process for identifying strategic QI priorities. A successful QI policy provides a roadmap for how to proceed with your organizations' QI efforts. See Appendix B for an example of an organization-level QI program description.
- Define roles and responsibilities. Who is on the QI committee council? Who is the contact for metrics? Are there identified clinical champions? Write brief descriptions of key roles.
- Outline a process for organizing, monitoring, and concluding improvement projects.
- Provide information about how QI is resourced within your organization.

QI team structures vary from organization to organization. Some large organizations such as hospitals have dedicated QI staff; if your practice is part of a large organization, you may even have a formal QI department. At the other end of the continuum, if your practice is free-standing, your practice team itself may serve as the QI team, taking on QI work in addition to other day-to-day clinical and operational responsibilities. Regardless of your structure, formalize your QI priorities, goals, measures, and explicit QI projects so that they are commonly understood across your organization. Provide a standard template for QI charters and projects, and publish regular reports of progress and outcomes for staff, the board, and for patients and families.

Dedicated Time for QI

Establish opportunities for staff to participate in practice-wide QI work. Depending on the size and structure of your organization, this may include the structure of a formal QI committee that clarifies the organization-wide QI strategies, identifies priorities for process improvement, works to remove barriers, and tracks progress. Work sessions can identify specific objectives and questions for consideration. Document the results of these sessions as part of the organization's QI activities so that they can be reported internally and externally.

Practice-wide engagement in QI activities:

- Helps the entire organization stay focused on quality.
- Creates accountability for completing action items for follow-up between QI committee meetings.
- Ensures the use of a specific improvement model to keep the QI committee's work on track.
- Publicly tracks teams' ongoing QI efforts and discoveries, and celebrates progress and successes. This fuels the effort and demonstrates the value of the QI committee's work to the practice.

Using a QI model is an effective way to mitigate feelings of unease because it provides an organizing framework that gives staff confidence in the change process as well as an opportunity to directly participate in the change.

Tips for QI Committees and Team Management

Reviewing and discussing data is key to creating a culture of QI within an organization. Designate time to review and manage PDSA cycles and outcomes or other QI tools used for improvement.

Effective QI meeting management is fundamental to maintaining momentum for QI efforts. These meetings will vary in size and structure based on the types of changes being made, the number of staff engaged, and the size and structure of the site or organization. However, there are some basic guidelines on meeting management and agenda items to consider:

- Always start and end on time.
- At the first meeting, collaboratively set ground rules or "norms" for the team. Keep these posted during future meetings or as part of all meeting agendas as a reference. One key to success in these meetings is to **invite everyone's input**, which encourages building trust, which in turn can result in people feeling more comfortable to share their ideas.
- Use a standard meeting template that includes the following (See Appendix C for a sample meeting agenda):
  - Aim, charter or goals of the team. "**What are we trying to accomplish?**"
  - Standing time for a quick check-in, status report on completed tests or tasks, review of action items with due dates and responsible party, and a short evaluation of the meeting.
  - Time for discussion of decisions that need to be made during the meeting.
  - Time for a discussion of measures and data. Consider the following:
    - What do you notice? Are the measures moving?
    - Is there a sudden dip or a big jump? Can you indicate what the change is with an annotation?
    - Is the information what you need? Could you stratify some of the measures to give you a more granular picture of what is happening?
    - Are there other measure and data considerations?
- Ask for input from others on agenda items ahead of time.
- Keep leadership informed of what is happening; ask for help and support as needed.
- Communicate work with the broader staff.
- Make it fun once in a while…what would motivate the folks at your site? Remember, this is hard work that can take time!

Plus/Delta is a simple, quick (5–10 min), and effective evaluation tool that works very well for this. To use, draw a vertical line down the center of an easel pad. At the top of the left column put a plus sign; at the top of the right put a triangle or delta sign. Under the plus write comments from meeting attendees about what went well during the meeting or what should be continued or brought forward for the next meeting. Under the delta write comments about what could be improved or done differently.

Quality Improvement Strategies and Tools

Once you have a QI team in place and strategic QI priorities identified, adopt a formal model for QI including a measurement strategy. Having an organizational QI strategy is critical for successful PCMH transformation. Adopting a stable QI strategy gives staff confidence, skills, and a specific approach to use in making meaningful changes to improve care for patients and families. The goal of a QI strategy in healthcare is to ensure that the delivery of products, services, and care meets or exceeds established standards. QI strategies typically are identified as part of an organization's overall strategic planning process. There are many QI models from which to choose.

For over 20 years, healthcare has actively borrowed QI methods from other industries to improve quality of care. Among the most widely used tools for continuous quality improvement are the Model for Improvement that includes plan-do-study-act (PDSA) cycles, and Lean; both will be discussed in detail. Other widely used methods such as Six Sigma and Total Quality Management are beyond the scope of this guide. Similar to the Model for Improvement and Lean, these strategies also emphasize measurement and the systematic analysis of processes to reduce unnecessary variation.

Once a QI strategy is in place, it is important to "tell the story" about the improvements and differences being experienced throughout your organization. The intention is that over time, everyone will have more knowledge about QI and be familiar with more aspects of the transformation taking place within your teams, practices, and organization as a whole.

The use of a formal QI strategy will likely require providing training for essential QI staff and possibly hiring an experienced external coach or consultant to help guide the team/organization in the use of QI methods. Though many of these methods are not difficult to use, it is important to understand how and when to appropriately use them.

A QI model or strategy provides an organizing framework for approaching change systematically.

Getting Started

Now that you have an understanding of the organizational change process and have established policies and structures for QI within your organization, it's time to start improving. In this Guide, we discuss in detail the Model for Improvement/PDSA and Lean.

The Model for Improvement is an easy-to-understand model that focuses on process improvement through rapid-cycle, small tests of change conducted at the front lines. Beginning the QI journey with the Model for Improvement provides a structure for understanding the intention of each improvement and a mechanism to test proposed changes in real time—initially on a small scale, and then scaling up over time to implement, spread, and sustain PCMH transformation organization-wide.

Adopting a stable QI strategy gives staff confidence, skills, and a specific approach to use in making meaningful changes to improve care for patients and families.

Using the Model for Improvement in Practice

One of the most straightforward and prevalent improvement approaches in healthcare is the Model for Improvement.[6] This model can be used as a primary QI strategy or as a vehicle for accelerating improvements using other QI models or strategies.

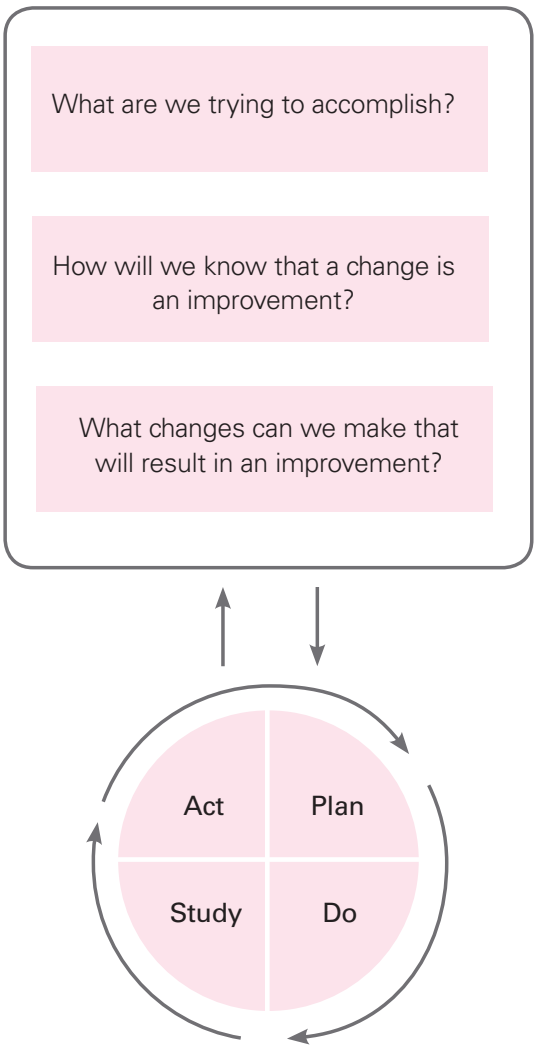
The first component of the model (see Figure 1: The Model for Improvement) explores three fundamental questions that lay the foundation of an improvement effort:

1. **Aims: What are we trying to accomplish?**
   This question leads to the development of an Aim statement for each improvement. The Aim should be time-specific, measurable, and concise. It should also define a specific population of focus. In addition to the big picture, there are the incremental changes—accomplishments—along the way that will add up to the overall Aim. For example, an incremental Aim may be to implement a new approach to care delivery using team-based care.

2. **Measures: How will we know that a change is an improvement?**
   What measures will be used to know that the change is an improvement? Measures and definitions are necessary to answer this question. The data collected during the rapid testing cycles used in the Model for Improvement will help to assess and understand the impact of changes designed to achieve the Aim.

3. **Ideas: What changes can we make that will result in an improvement?**
   All improvements require making changes, though not all changes lead to improvement. The changes that are most likely to result in improvement—and achievement of the Aim—are the ones that should be tested first.

Figure 1: The Model for Improvement



Source: Langley GL, Nolan KM, Nolan TW, Norman CL, Provost LP. *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance*. 2nd ed. San Francisco, CA: Jossey-Bass; 2009.

The second component of the Model for Improvement is the **Plan-Do-Study-Act (PDSA) cycle**. The PDSA cycle is the improvement engine—the thought process applied to a desired improvement:

- **Plan.** Planning an intervention.
- **Do.** Testing the change on a small scale.
- **Study.** Observing, measuring, and analyzing the tests of change.
- **Act.** Using the knowledge gained to plan the next steps.

The PDSA cycle is an efficient method for testing change in the real world. Change ideas are initially tested on a small scale (e.g., one provider, one patient, one time) to learn if the change idea has merit and to determine if the change idea is likely to result in the desired improvement organization-wide. If this initial PDSA cycle results in improvement, the cycle can be expanded to test whether the improvement strategy continues to be successful. This expansion allows an improvement team to continue to test the change idea by increasing the scope of the PDSA cycle (e.g., the number of patients, providers, practices across an organization) before moving to organization-wide implementation.

Small tests of change can be conducted rapidly and sequentially, allowing time to measure and analyze results before increasing the size and scope of the improvement process. If changes you are testing using the PDSA cycle approach do not result in improvements, the "Study" and "Plan" parts of the cycle provide the structure to explore and identify additional actions for the next rounds of "Do" and "Act." After adequate and successful testing, an improvement team can move to implementation with more confidence, having demonstrated success through multiple PDSA cycles. The use of PDSA cycles provides objective evidence that the improvement has been successfully demonstrated prior to full-scale implementation increasing buy-in for the change and reducing the risk of investing in a change that simply does not work.

For additional information on the Model for Improvement, click here.

The first step in any improvement effort is to answer the question: What are we trying to accomplish?

In PCMH transformation, this can refer to many things: changes to delivery, the way staff work, or scheduling, to name a few. It is important to hold the vision of what all of these changes together will look like. This is your overall or global Aim.

Case Study: Putting the Model for Improvement into Practice

A hypothetical site has selected a care team for a pilot based on the team's panel of patients. The team consists of a PCP (Dr. Blue), an MA (Pat), a half-time RN (June), and a front desk staff person (Lauren). At a meeting to discuss their QI project, the team identifies one specific change they would like to test toward accomplishing their incremental Aim. They want to begin doing daily morning huddles to better prepare and provide more comprehensive care for all patients seen throughout the day.

Using the Model for Improvement as their guide, they determine the following:

INCREMENTAL AIM: What are we trying to accomplish?
The team's Aim statement: We will provide more comprehensive and better care for all patients throughout the day, and will increase communication among team members so there are fewer missed opportunities with patients, easier flow throughout the day, and more satisfied staff.

MEASURES:
How do we know that a change is an improvement? (The team identifies specific measures that will show them whether or not they are making progress toward their Aim. One example is presented below.)
Improve the delivery of preventive care services for Dr. Blue's eligible patients.

Numerator: Number of patient visits during which a patient in need of at least one preventive care service was offered that/those care services (e.g., overdue Pap test, flu shot).
Denominator: Number of patient visits with at least one identified preventive care need met.

IDEAS:
What change can we test that will result in the improvements we seek? Use a daily morning huddle to review needs of patients being seen that day; proactively plan for labs, tests, and immunizations; coordinate flow.

AIM STATEMENTS:
Without specific targets, it is not possible to know whether or not you are improving. So, the team writes an Aim statement in the SMART format: Specific, Measurable, Actionable, Realistic, and Time-bound.
For example:
"We will improve the delivery of preventive care services for Dr. Blue's eligible patients by 25% in the next two months by preparing for and implementing daily huddles."

Small tests of change can be conducted rapidly and sequentially, allowing time to measure and analyze results before increasing the size and scope of the improvement process.

The team knows that they will need to run several tests (PDSA cycles) to determine the best and most effective way to achieve this Aim. They begin with an initial PDSA cycle.

Test a huddle with one team:

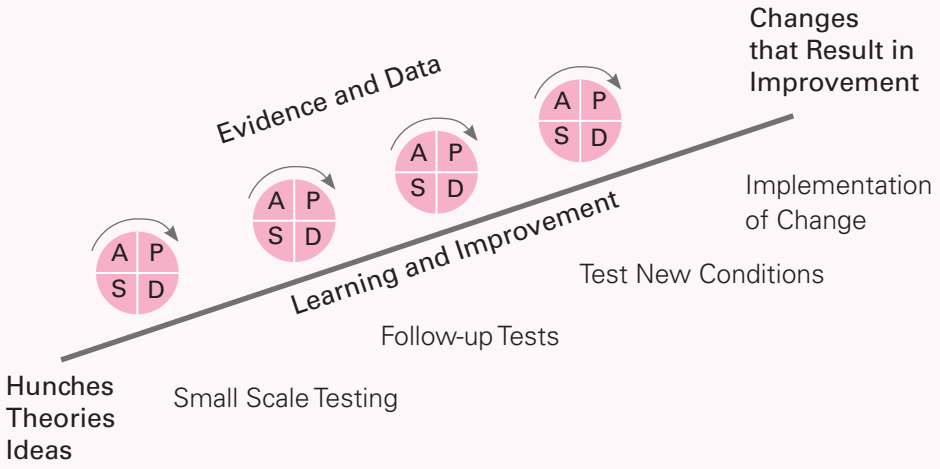
- Objective: Dr. Blue's care team (Dr. Blue, MA Pat, RN June, and Lauren from the front desk) will test a five minute huddle each morning to discuss that morning's patients for three consecutive days, using pre-collected information from each patient's medical record.
  - **Prediction:** The morning session will run more smoothly and the team will be better prepared to provide, or at least offer, preventive services to those in need. Five minutes may not be enough time, but they really want to keep it short.
- Plan: Who, When, How: Lauren will print out a list of the morning patients the prior afternoon and give the list to Pat. Pat will pull up the patient's information from the electronic health record (EHR) in the morning and note any needed labs, tests, or immunizations. The team will review these notes at the 7:50 am huddle.
  - **Data collection:** Quantitative data—how many morning visits were they able to review in the huddle? How many patients were identified as overdue or currently in need of preventive care services (e.g., needed labs, tests, immunizations)? Qualitative data—Was reviewing patient data the afternoon before doable for Pat? Did it feel burdensome? Was five minutes enough time to discuss all morning patients? Did the care team feel better prepared for patient visits? Who is responsible for capturing these data? How will they capture these data?
- **Do:** The team huddled at 7:50 am on Tuesday, Wednesday, and Thursday to discuss each morning patient.

The following data were collected:

	Mon	Tues	Wed	Thurs
List of patients printed (Lauren)	√	√	√	n/a
Review patient info in EHR; Note needed preventive care services (Pat)	n/a	√ (all morning pts reviewed, 15 mins)	√ (all morning pts reviewed, 20 mins)	√ (all morning pts reviewed,17 mins)
# of patients in need of at least one preventive care service	n/a	5	3	2
# of patients seen in morning session	n/a	10	13	9
Huddle time	n/a	14 mins	12 mins	8 mins
Notes		Two patients declined services (both Pap tests)	Two walk-in patients were not reviewed nor discussed in morning huddle	

- **Study:** On Fri, the team met for 10 minutes during lunch to review the data on what went well and what didn't. What they found: One unexpected issue was that Pat had a much harder time pulling the data from the EHR in a timely manner than she had expected. They had two walk-in patients one day who hadn't been included in the preparation, which affected flow. The team noted several overdue preventive services that were taken care of within scheduled visits that likely wouldn't have been completed without the huddle discussion in the morning. Generally, Dr. Blue and the rest of the team felt better prepared for the prescheduled visits, and they all liked feeling more 'team-like.' All three days required more than five minutes to discuss patients, but they predict they can get to five minutes as the rest of the kinks are worked out.
- **Act:** Should the team Adopt, Adapt, or Abandon this change? They decided to adapt the change by having Lauren share the patient list earlier on the previous day. Pat will pull information from the EHR as she is able during the afternoon to see if most of the work can be accomplished that way. They will retest for three more days using this new improved process, and predict that this will work better for Pat. They will continue to monitor the time the huddle takes each day, and the number of patients eligible for preventive services.

Figure 2: Multiple PDSA Cycles, Part 1



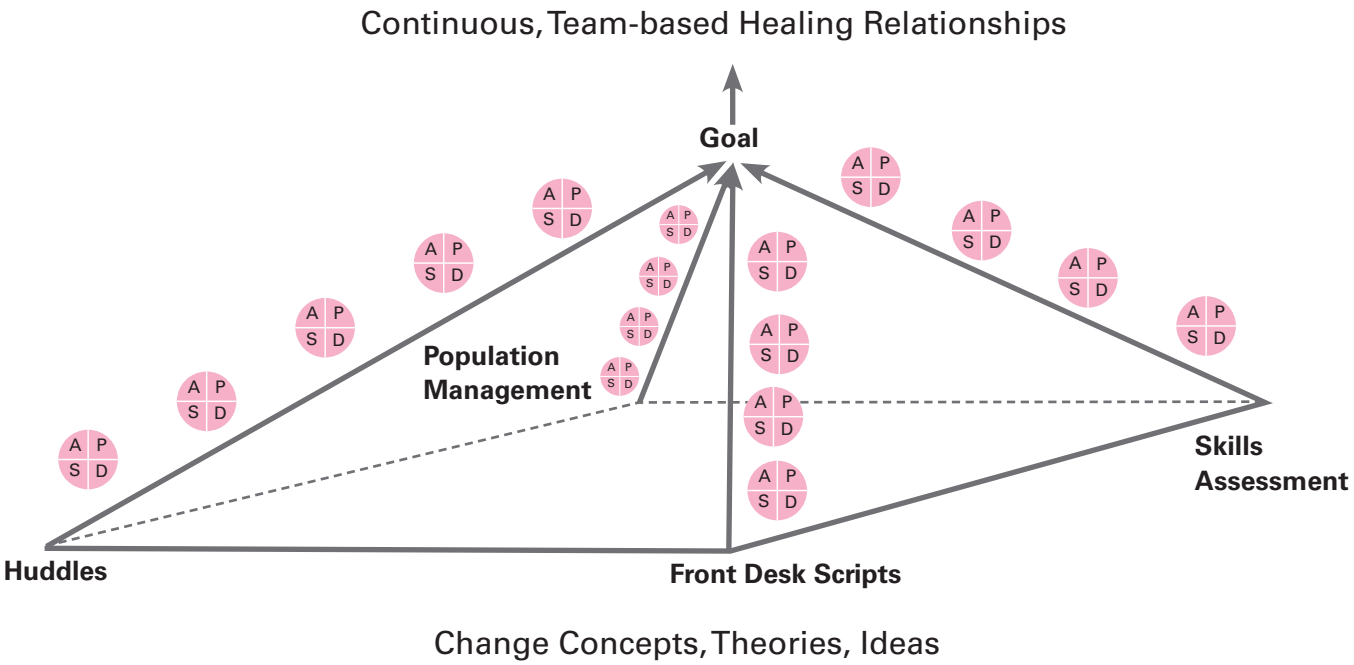
Multiple PDSA Cycles: Sequential Building of Knowledge—include a wide range of conditions in the sequence of tests before implementing the change.

This initial team will continue to test the huddle until they have a design that works well. They may engage other teams to begin testing huddles, to test pieces of this huddle process at the same time, or they may wait until they feel very confident in the huddle process and then have other teams test it as a whole. They want to make sure they have tested under a range of conditions, such as on all days of the week and with both the pediatric and family practice teams. Once they have had other teams test the process and feel confident that it will work for everyone, they will implement the change across their entire site.

Do you test only one change at a time?

No, sites can run multiple PDSA cycles at a given time. For example, as a site is trying to implement the key changes of Continuous and Team-Based Healing Relationships, they might be running PDSA cycles around the use of huddles, doing population management, using scripts with front desk staff on how to discuss the importance of continuity with patients when they call for an appointment, and addressing the skills and training needs of the MAs at the same time.

Figure 3: Multiple PDSA Cycles, Part 2



As an organization builds its experience with the use of QI, and the culture of the organization shifts, more staff can be enlisted to run PDSA cycles on different pieces of the work across different areas of the clinic.

Getting Started With Lean

Lean concepts are also frequently used in healthcare settings as a QI methodology. Lean focuses on driving out waste, maximizing value to the customer, implementing standard work, building in visual control, and locating QI responsibility at the front-line with active leadership support. This model has a number of similarities to the Model for Improvement, and indeed Lean projects can often begin with Aim statements and be conducted via rapid PDSA cycles of change.

Lean

Many healthcare practices use Lean because they are customer-focused and aim to improve processes by driving out "non-value-added" activities, usually referred to as "waste." "Non-value-added" activities are defined as those steps that do not bring value to the patient or to the staff, depending on the process, experience, or business bottom line. Exceptions to "non-value-added work" include steps required to meet regulatory or legal requirements. Common examples of waste are errors resulting in rework or wasted product (e.g., searching for patient education materials or medical supplies, patient wait-times, expired medications/over-production). The goals of Lean are to streamline processes and maximize efficiency and effectiveness in order to deliver care and services when the patient needs them and in the manner that patients request them.

The A3 Type Report Template is a Lean tool used for structured in-depth problem-solving that focuses on addressing the "root causes" of problems. More information on the A3 tool and process can be found here and here.

Lean can inform how organizations engage staff, patients, and families; manage workflows; and improve quality and reliability of processes and products to decrease time and cost.

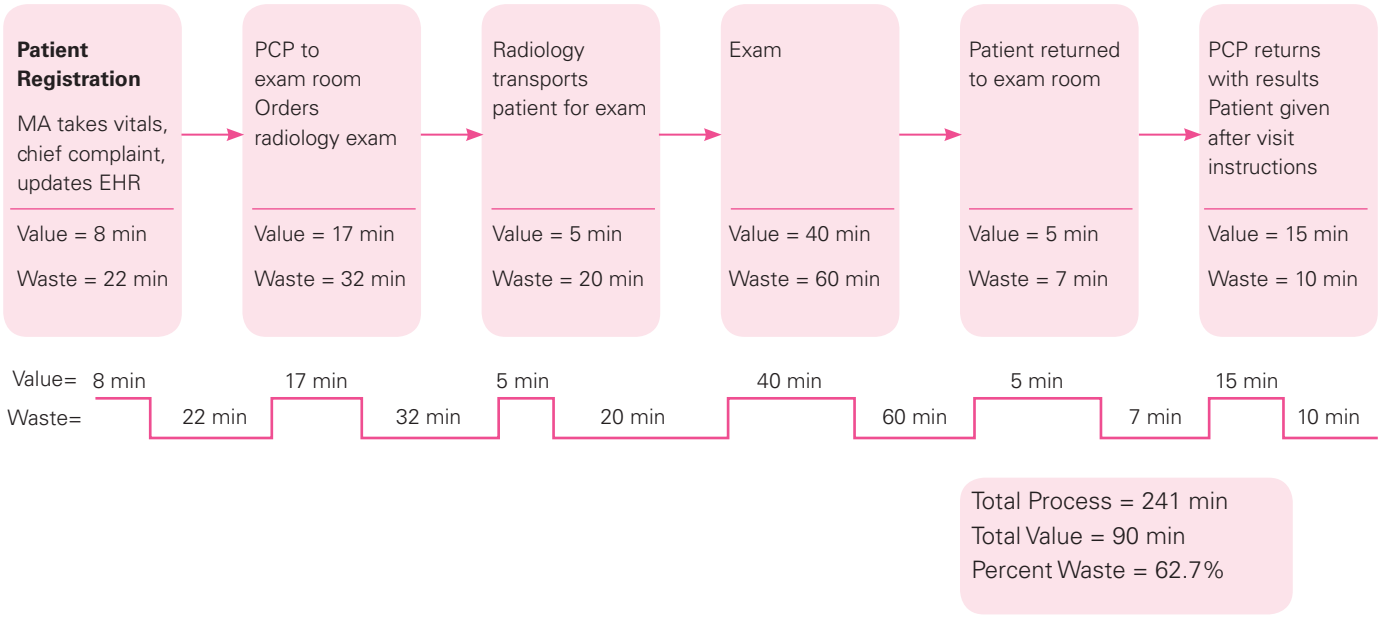
Key Lean Concepts

- **Waste Reduction**
  Waste is defined as time or energy spent doing things that don't ultimately benefit the end user. Eliminating waste is a major focus of Lean and is a powerful place to start, freeing up time and energy for staff to do new value-added work that is part of PCMH transformation. However, the healthcare industry has instances in which non-value added work is required due to regulatory or contract requirements. Although this work does not add value directly to patients, compliance with these requirements may add value in the form of continued funding, eligibility for demonstration projects, or better understanding of outcomes that are important to patient care and practice processes.

- **Value Stream Analysis**
  Value stream analysis is based on the idea that all practice processes consist of a sequence of activities, each of which is designed to add some value to the product or service as it moves toward the end user. Value stream analysis involves drawing a workflow for a specific process and asking if cost/waste or value is added at each stage (including stages between activities). This type of analysis may highlight unnecessary space used, distance travelled, re-work, or process inefficiencies such as wait time that occur within the existing process. Similar to using PDSA cycles, small rapid cycle improvements can be implemented to test improvement ideas.

  A sample Value Stream Map is shown in Figure 4: Sample Value Stream Map Diagram.

Figure 4: Sample Value Stream Map Diagram



- **Pull Systems**
  A pull system is a process in which an action takes place in response to a specific demand for a specific product or service. In a PCMH, examples include a patient requesting a same-day appointment or taking a prescription to a pharmacy to be filled. A pull system contrasts with examples such as maintaining a one-month supply of a medication on a shelf waiting to be requested. Designing pull systems is a way to eliminate the waste of handling, storing, and re-working tasks or processes, or eliminating process steps that are repeated because they are incomplete. The intention is to balance and control the flow of time and resources to a real-time, as-needed basis.

- **Visual Displays of Information**
  Data boards capture actionable, relevant data to guide work. Data boards are used both within individual care teams and by organization-wide improvement teams. Improvement teams create data boards to track selected measures across all elements of PCMH targeted improvements. For example, each morning improvement teams "huddle" around a data board to discuss data, ask questions, and brainstorm solutions when the data show that something is amiss or unexpected. Some data may come from automated sources, but in many cases data is collected by hand tally and posted on sticky notes. Typically, these boards emphasize simplicity. An example of a data board is shown in Figure 5: Sample Data Board.

Figure 5: Sample Data Board

Source: Group Health Cooperative, Seattle, WA; 2011

- **Rapid Process Improvement Workshops (RPIW)**
  An organization may identify a core process to be improved, gather detailed data about that process, and articulate a clear improvement goal for agreement by senior leadership, the board, and all affected staff. After detailed data is gathered as part of the "pre-work" for an RPIW, the staff—those involved in the process, such as physicians, nurses, medical assistants, front desk staff, and managers—come together for a multi-day RPIW, often with the goal of improving results by at least 50%. During these workshops, participants map their current work processes, identify waste and re-work loops, determine whether the waste is non-value added or required, and then map an ideal process designed to meet improvement goals. RPIW teams suggest the measures to capture on data boards, produce a clear explanation of new work to be performed, by whom, and identify associated staff training needs. The intention is that the newly improved process will be ready (or nearly ready) for implementation directly following the RPIW.

- **Standard Work**
  An organization committed to improving the patient interface focuses on understanding and standardizing its daily work. Standardized work is designed to reduce waste, a fundamental Lean principle. Teams make standard work possible by developing, documenting, and agreeing to follow defined processes (such as the output of an RPIW). The description of, or instructions for, a standardized process are key. These instructions are intended to minimize variation among staff involved in the process, and may include both documentation of expectations and visual cues to support understanding by all staff. Newly-standardized work may require changing job descriptions and training staff to support new processes. And development of standard work is not limited to new roles for providers, nurses, medical assistants, and front desk staff—managers also have standard work accountabilities such as regularly evaluating progress and providing ongoing training and staff support.

- **Leadership Rounding**
  Leaders play a key role in Lean implementation of the PCMH, beyond ensuring that staff is trained and using standard work. Lean leaders regularly monitor progress and help with problem solving when issues arise. When leaders round to visit teams, they may consider using a standard template for asking about progress and documenting next steps. Standardizing this leadership work makes sure that if a leader takes leave or moves, a new leader can step in without losing momentum.

Case Study: Using Lean Methods in PCMH Implementation

Group Health Cooperative, Seattle, WA (2010; Updated 2012)

If you ask Group Health (GH) employees about their experience implementing the PCMH Model of Care, you will hear a lot about Lean thinking. That is because Lean served as the organizing quality improvement strategy for developing, testing, implementing, refining, and spreading the PCMH Model of Care at Group Health, and as such, has had a strong influence on how staff experience the medical home.

This case study highlights selected Lean concepts that were especially instrumental in Group Health's journey. In a prototype deployed at one Group Health clinic (Factoria), the redesign was associated with improving patient experience and clinical quality, reducing provider burnout, and reducing cost.[7] Lean methods were then used to spread the key components of this redesign across the system to its other 25 clinics. This isn't intended to be a complete description of Lean methods, but only to point out how some of its features lend themselves well to the "epic re-imagination" required as part of PCMH transformation.[2]

Group Health began its collective journey with Lean in 2004 when the method was used to generate improvements in its Lab and Pharmacy departments to reduce cycle time, improve service, and engage staff in designing the improvements. This led to broader, cross-functional improvements in 2005 and 2006, which yielded bigger, organization-wide improvements in handling claims, ordering durable medical equipment, and supporting electronic medical records. In 2006, Lean became a tool for identified strategic priorities, leading to work in Sales and Product Administration and, later, in the spread of its PCMH Model of Care.

In 2007, Group Health implemented the PCMH Model of Care as a two-year pilot program at the Factoria Medical Center. The goals were to create a patient-centered care delivery model that met the needs of the whole population and delivered acute, preventive, and chronic care; resulted in measurable and demonstrable quality of care improvements; was sustainable and affordable over time; and improved staff satisfaction with their work and staffing outcomes.

Group Health also faced management cutbacks and executives were searching for a different way to meet their business goals. Toyota Production System's "Model Line" provided a real-life example of how to drive higher performance through a Lean-based management system, and "Affordable Excellence" became Group Health's "True North" statement.

In 2008, Group Health began introducing the PCMH Model of Care in all 26 of its primary care clinics. The focus was on achieving business results, using a step-by-step planning, implementation, and review process for managed change at the organizational level; building leadership capability, with courses and follow-up work designed for executives and senior leaders; and creating a framework of the foundational principles of Lean at Group Health. They also supported leadership in learning Lean concepts, including waste reduction, workplace rounding, and the use of rapid process improvement workshops.

In 2009, the "Group Health Management System" was introduced at the annual leadership conference, building on a year's worth of experience with Lean concepts. Key components of a daily management system, manager standard work, and stabilization of key, day-to-day processes based on customer-requirements, were spread throughout the Group Health Plan and Group Practice and integrated into core management expectations. The system also established a Primary Care daily management system that included daily huddles, linked checking, manager standard work, and other elements.

Another iteration of strategy deployment occurred that spread real goals throughout the organization. These goals cascaded from senior leadership down to the front line. These goals also included reducing defects by 50%, standardizing one senior level process, reducing per member per month (PMPM) costs, and growing targeted lines of business.

Today, Group Health has intensified its focus on daily management systems. Group Health's 2010 Leadership Conference set the stage for leaders to understand the management system and how it would increase the pace of improvement. The foundational elements of the daily management system have become performance expectations for managers and supervisors.

QI Tools

There are numerous QI tools that may be helpful as your team identifies opportunities for improvement. Consider the following tools and online resources:

Control charts. The control chart is a graph used to study how a process changes over time. Members of a QI team plot data in time order. A control chart always has a central line for the average, an upper line for the upper control limit, and a lower line for the lower control limit, determined from historical data. By comparing current data to these lines, you can draw conclusions about whether your process variation is consistent (in control) or is unpredictable (out of control, affected by special causes of variation).

Fishbone diagrams (also known as cause and effect diagrams). The fishbone diagram helps teams identify multiple possible causes for an effect or problem. It can be used to structure a brainstorming session to quickly sort ideas into useful categories.

Histograms. A histogram is the most commonly used graph to show frequency distributions. A frequency distribution shows how often each different value in a set of data occurs. It looks very much like a bar chart, but there are important differences between them.

Pareto charts. A Pareto chart is a vertical bar graph whose heights reflect the frequency or impact of problems so one can determine which problems should get immediate attention. The bars on the graph are arranged in descending order of height from left to right. This means the categories represented by the tall bars on the left are more significant than the shorter bars on the right. An additional feature of Pareto charts is adding a cumulative sum of the percentage of each bar.

Run charts. Run charts are graphs of data over time and are one of the most important tools for assessing the effectiveness of change. They have a variety of benefits:

- They help improvement teams formulate aims by depicting how well (or poorly) a process is performing.
- They help in determining when changes are improvements by displaying a pattern of data that you can observe as you make changes.
- They give direction as you work on improvement and information about the value of particular changes.
- They are simple and easy to create. See the "Do It Yourself' Excel Run Chart Tool for an interactive tool to assist with creating run charts.

Scatter diagrams. The scatter diagram graphs pairs of numerical data, with one variable on each axis, to look for a relationship between them.

Both the Institute for Healthcare Improvement and the American Society for Quality websites are useful resources. A guidebook of basic quality improvement tools called the *Memory Jogger 2: A Pocket Guide of Tools for Continuous Quality Improvement and Effective Planning; 2nd edition* is an excellent starting place as well.

Measurement and Data in Quality Improvement

The ability to track progress is key to improvement efforts. (Recall the second question in the Model for Improvement: How will we know a change is an improvement?) The sections that follow provide helpful information about how to create a measurement system that will serve your needs as you progress toward PCMH transformation.

Measurement for Learning and Improvement

A measurement strategy provides feedback to staff, providers, leaders, board members, and patients about the organization's progress toward transformation and the outcomes of the care they provide or receive. Measurement is an essential part of PCMH transformation and is used to guide the work, regardless of the QI strategy that a practice chooses. Measurement data demonstrates progress, highlights areas for improvement, and engages the entire organization, including patients and families in its improvement efforts.

Roles in measurement:

- **Leaders** make the case about the need to improve, articulate a vision for a better future, and set the tone for change. Leaders also help staff understand how the measures the practice tracks tie to the organization's strategic goals.
- **Front-line administrative and clinical staff**, held accountable for improving measures, need to be trained in quality improvement methods and empowered to test small-scale changes that lead to improvements.
- **Dedicated QI staff** (when present) are responsible for working with teams to create balanced families of metrics for each aim; designing and implementing data collection strategies; working with analysts and others to analyze, report, and communicate results; and supporting staff through making changes in processes.
- **Assigned analytic/reporting/HIT staff** (when present) assist with gathering, analyzing, displaying, and interpreting data, and may also make changes to HIT systems to make data gathering simpler.
- **Others (such as clinical or support staff)** are responsible for using data in the most appropriate and actionable manner.

It is important to implement measurement strategies at multiple levels concurrently to supply your practice with data to meet its different needs:

- Global measures that are linked closely with the practice's strategic goals and special initiatives (like full PCMH transformation).
- Measures of sustainability or spread of improvements over time.
- Department- and/or team-specific measures that support opportunities for improvement and are related to the strategic goals of the practice site.
- PDSA cycle measures used to study small-scale tests of change.

"Measurement is the first step that leads to control and eventually to improvement. If you can't measure something, you can't understand it. If you can't understand it, you can't control it. If you can't control it, you can't improve it," *—H. James Harrington, MD.*

This section focuses on measures at the global level, but much of this content will apply to measures at all levels. The practice will need to identify a comprehensive set of measures that are tied to the strategic goals of the organization, to be reported monthly and shared frequently across the organization. In the case study example "Putting the Model for Improvement into Practice" (featured earlier in this guide), the global Aim statement is PCMH transformation. The more the measurement strategy is tied to the practice's strategic goals and integral to its workflow, the more sustainable this goal will be.

Select Measures

It is critical to **strategically** select what your practice will measure. Developing a specific measurement strategy ensures a clear approach to what the organization intends to change (what is being measured) and why. A clear measurement strategy provides opportunity for everyone to build a shared understanding about where the data come from (data sources), how measures are calculated (data definitions), the frequency of measurement, and the goals to be achieved. A clear strategy also ensures that measurement will take place consistently and efficiently over time. Click here for a measurement strategy template.

As practices work to identify relevant and meaningful measures, and build a measurement strategy, they should consider the following:

1. **Use nationally-endorsed, standardized data definitions whenever possible.**
   Some QI measures may be influenced by regulatory or legal requirements. Practices are often required to collect and report data to external entities for regulatory, quality, or cost purposes. For example, meaningful use measures are a good example of measures that can work for both QI and accountability with financial compensation currently tied to reporting. When possible, practices are encouraged to take advantage of data already collected for multiple purposes to reduce the overall data collection burden on the practice and its staff. Paying attention to external reporting requirements may also serve as an opportunity to qualify for increased reimbursement from state pay-for-performance programs or federally funded programs.

   Other examples of nationally-endorsed measures include NCQA's Healthcare Effectiveness Data and Information Set (HEDIS), which is collected annually through commercial and state-sponsored health plans and can provide national benchmarks. Federally Qualified Health Centers (FQHCs) have a required set of process and outcome measures identified in their Health Care Plans and Business Plans, the Uniform Data Set (UDS).

A clear measurement strategy provides opportunity for everyone to build a shared understanding about where the data come from (data sources), how measures are calculated (data definitions), the frequency of measurement, and the goals to be achieved.

2. Balance the resources required to report the measure versus the value the results bring. Consider the resources that the staff and practice will need to devote to collecting and reporting on specific measures. Select measures that minimize the cost of maintaining them. This should be balanced with the organization's investment to have measures of value available to guide and drive improvements in care. Collaborate with IT staff to use health information technology to develop easy-to-produce reports on measures whenever possible.

3. Select a comprehensive measure set that fully reflects the work of PCMH transformation. PCMH transformation should touch all areas of a practice. It is important to select a set of measures that will allow you to see how PCMH changes are impacting all of these different areas: clinical quality (process and outcomes), practice transformation, provider and staff satisfaction, patient experience, and efficiency.

    - **Clinical quality measures** indicate the quality of care provided to a patient population based on evidence and care guidelines. These tools help measure and track clinical processes, health outcomes (e.g., HbA1c levels in diabetic patients), and clinical guideline compliance among others. Clinical quality measures are required as core meaningful use objectives for Medicare and Medicaid Electronic Health Record (EHR) Incentive Programs.

    - **Practice transformation measures** demonstrate that the care offered or delivered to patients, and the processes that support that care, are in fact patient-centered. These measures can include making sure that patients are satisfied with the care they receive, are developing strong relationships with their care team, and have access to their care teams.

    - **Provider and staff satisfaction measures** support teamwork and the practice site's most valuable asset: human capital. These measures are intended to gather information about the satisfaction of the workforce. Staff satisfaction surveys are a common tool used to gauge satisfaction (e.g., Primary Care Staff Satisfaction Survey from The Dartmouth Institute's Clinical Microsystems).

    - Patient experience measures help identify how the changes being made by the practice are impacting patients' experience of care (e.g., do patients believe they have ready access to their care team?). To learn more about measuring patient experience, see the Patient-Centered Interactions Implementation Guide. The Consumer Assessment of Healthcare Providers and Systems is a common survey tool for measuring patient experience and is recommended by NCQA's PCMH Recognition program.

    - **Efficiency measures** (e.g., emergency department utilization). Savings from patients treated at PCMHs are primarily the result of reduced ED utilization and reduced hospitalization or re-hospitalization. By demonstrating a reduction in avoidable ED visits or readmissions, practices can strengthen the case for higher reimbursement. To learn more about the business case for the PCMH Model of Care, see the Engaged Leadership Implementation Guide.

4. **Consider your audience.**
   It is also important to put some thought into how to make the data you collect relevant to the practice's different stakeholders. Audiences may include patients and their families, board members, leaders, providers, staff, payers, or the community at large. Different audiences want to know different things about the practice and the impact PCMH transformation is having on care delivery and care outcomes. For example, leaders and board members may be most interested in looking at the big picture (e.g., are all patients with diabetes getting all the appropriate care?) or more focused on measures that reflect patient outcomes than care delivery processes. Providers and staff may be most interested in detailed measures specific to their panel of patients. They likely want to identify and follow-up on preventive services that are overdue, ensure that patients with chronic conditions are getting the necessary planned visits including self-management goal follow-up, or assess how often their patients are able to see them when they present for care (measure of continuity).

   Finally, patients and their families may be more interested in measures reflecting whether they feel they were heard, whether they received a clear explanation of the changes to their medications and why, or how long or short their wait time was for their appointment. In other words, the focus is on the experience patients and families have with their care team during their visits.

   For a list of PCMH measures to consider using in your organization, click here.

Collect Data

Consider various data sources. A PCMH may use EHR reports to capture clinical quality measures while practice management systems provide reports on continuity. Often the easiest way to collect data is concurrently, as work occurs; this is facilitated when data collection is designed into workflows within your EHR. Make sure to engage information technology (IT) staff to collaborate with the transformation team once the measures have been selected and defined. IT staff can design automated monthly reports provided through the data stored in your EHR.

Appendix A offers recommendations for leveraging health information technology (HIT) to support your QI and measurement strategies. Additional information is provided in the Quality Improvement Strategy Part 2 Implementation Guide.

If patient registries or an EHR are not available, a practice can gather process and outcome data through manual chart review, although this can be resource intensive. For example, if a practice is interested in understanding staff compliance with protocols or standing orders, the practice could develop a simple data collection sheet that includes a checklist of actions to be performed during each visit. This data can be collected prior to the end of the visit and tallied each day, week, or month. A simple spreadsheet can be used to track the data over several months to see if improvement is occurring in staff compliance with the performance of each protocol or standing order.

Practice-administered surveys are another data source. Survey data may be collected through interviews (in-person or by phone), or through hand-written or online questionnaires. Surveys are ideal for capturing patients' experiences and provider and staff satisfaction.

Also consider sources of qualitative data such as patient complaints and compliments, videos or photographs from a clinic walk-through, or patient focus group responses to clinic changes as a result of PCMH implementation. There is also value in listening to the stories shared by the care team and patients as transformation occurs. Although these stories may be less easy to compare across time, they are often more compelling to key stakeholders like board members, staff, and patients to show why PCMH transformation is an important and worthwhile investment.

For more information about collecting and measuring data from patients see the Patient-Centered Interactions Implementation Guide.

Display Data

Once data for the selected measures is collected and accuracy of the results is confirmed, the practice should display the data. Graphic displays of data foster engagement of senior leaders, providers, staff, patients, and families. Run charts are the most common QI tool to display improvement data. Run charts (often known as line graphs) display performance over time, making it easy to tell at a glance if improvements are occurring. In a run chart, events, shown on the y-axis, are graphed against time on the x-axis. For example, a practice might use a monthly run chart to plot the percentage of children who received all of their immunizations by the age of two years. The results might show that immunization rates increased after implementing phone calls to parents whose children were identified as being or becoming overdue. Run charts can also be used to track improvements that have been put into place, checking to verify their sustained success. For more on tracking sustained changes, see "Making Change Stick."

See the 'Do It Yourself' Excel Run Chart Tool for an interactive tool to assist with creating run charts.

Consider the following when displaying data:

- Develop dashboards that display PCMH progress. Dashboards provide the "quick glimpse" of progress toward the Aim. Share these dashboard reports widely with leaders, providers, staff, and, when appropriate, patients and their families. Transparency is key in a true culture of quality. Ask staff to react to results and develop improvement plans with timelines. Hold staff accountable for executing improvement plans.
- Develop and maintain measurement walls or data boards. (For an example of a data board, see Group Health Cooperative's visual display.)
- Display measures by care team. Develop run charts for monthly measures specific to each care team's panel of patients. Making data transparent and personal further engages the care team in improvement efforts.
- Make annotations on charts indicating when changes were made. This can clarify the influence that changes are having on outcomes and can later be used to share the lessons learned and the data with other care teams that want to adopt this improvement.
- Collect stories from patients about their changing experiences, what they notice, what they like, and what is different about the emerging PCMH.
- Select a visible or easily accessible location to post data and update it often (depending on the measure, this can be done daily, weekly, monthly or quarterly).
- Put run charts for select measures in email messages to staff, newsletters, and on your website to reinforce successes, new initiatives, or areas of focus for future improvement efforts.

Strategies for Using Measures Effectively

- **Develop a comprehensive measurement set.** A comprehensive measurement set may include clinical quality measures; practice transformation measures such as measures of continuity, access, and patient satisfaction; staff satisfaction measures; and cost, productivity, or efficiency measures.
- **Use clear data definitions.** Each measure will need to be clearly defined including the exact data sources for the numerator and denominator.
- **Ensure accuracy.** When beginning to collect numerators and denominators from automated reports/EHR reports, make time for double-checking the metric results with a manual chart review (10–20 charts). This will ensure the results are accurate. Presenting inaccurate data doesn't make a compelling case for the need to improve.
- **Set goals.** Every monthly measure should have a goal which is clearly marked on the graph. This goal should be set high enough to stretch or push the team, but realistic enough that it is not discouraging or decreases motivation. As results near the goal, adjust the goal to a higher level of performance or focus on a new goal. Bring national benchmarks on similar measures to meetings (when available) to assist in identifying reasonable goals.
- **Make measurement transparent.** Collect data on your measures monthly and report them on run charts displayed throughout the organization. These measures should be the foundation for routine discussions at various meetings. To illuminate improvement (or lack of it), data should be shared transparently with all stakeholders: staff, leadership, board members, and even with patients and families.
- **Display and share data.** Develop a "measurement wall" to display data. Select high-traffic areas such as patient waiting rooms, staff lounges, or even the back of bathroom stall doors. Dashboards are another great way to display data. See the Engaged Leadership Implementation Guide for an example of a dashboard.
- **Provide training for all staff.** Offer training to staff to help them better understand the organization's measurement goals, how to read and understand run charts and other measurement tools, and their role in quality improvement. Similar strategies can be offered to patients and families. The more they understand about quality improvement measures, the more able they will be to participate in improvement efforts. Resources on training for staff and patients include: Community Health Partners Measurement 101 (slides) and Measurement for New Employees (slides).
- **Engage staff in data collection, charting, and reporting on QI projects**. Encourage staff to lead PDSA cycles pertinent to their workflow and responsibilities.
- **Engage providers and staff.** Sharing data transparently helps engage all care team members in improvement. Sharing encourages "learning conversations" about successes, opportunities, and roles, and it allows all to learn how the PCMH transformation is progressing. Another way to engage providers and staff early on is to invite them to review the data definitions and data sources, or better yet, ask them be part of the team that decides on the set of measures. By providing input early and often, providers and staff are more likely to embrace the measures and use them to guide improvement efforts. Remember: to best leverage staff input, there needs to be opportunities for discussion about the meaning of the measures and the actions that staff propose to take to make improvements.
- **Engage leaders and supporters.** Share data with leaders and board members proactively and consistently. "Data packets" and dashboards can help keep board members up-to-date, and when reviewed monthly at meetings with dedicated time on the agenda provide an important opportunity for engagement. Take time to present progress, opportunities, resources needed for larger scale changes, and to let the board ask questions. To learn more about board engagement, see the Engaged Leadership Supplement: How Health Center Board Members Can Support PCMH Transformation Implementation Guide.

Making Change Stick

Defining Sustainability

SUSTAIN, verb

1. To keep in existence; maintain.
2. To support; keep from falling or sinking.

Sustaining Change

Strategies for Sustaining Change

Imagine you have tested multiple changes using small-scale, rapid PDSA cycles from the Model for Improvement. Some of those tests resulted in the implementation of a successful new process or way of working. How do you effectively sustain the new way of carrying out the work? Follow these steps based on the work from Health Quality Ontario's Sustainability Planner:

- Ensure the change is ready to be implemented and sustained.
  - Ensure there is enough time for experimentation, since that provides freedom to work the wrinkles out of a new process—building support among practice teams and helping them understand how the new method is better.
  - Have staff involved in the work identify which features of the innovation are essential and find ways to make sure they are done consistently as part of new "standard work." (More on standard work below.)
- Clarify what change(s) you are sustaining.
- Engage your leaders and get support to anchor the changes.
  - Know what matters to your leaders. In what ways will these changes and improvements contribute to strategic organizational goals?
  - Share the data and stories and staff feedback; connect to what matters.
  - Be able to tell leaders what you need to sustain the changes (e.g., dedicated time and resources for training, coaching, and monitoring).
  - Begin to talk about how you will spread this beyond the test unit, department, or population, including describing what resources you will need.
- Involve and support front-line staff.
- Communicate the benefits of the improved process.
- Build in on-going measurement.
- Embed the improved process to make it permanent.
  - Provide clear workflow maps, process descriptions and tools (e.g., scripts, checklists, forms, maybe even new policies and procedures) to facilitate using the new process.
  - Train staff to use the new process; coach, monitor processes and data, and give feedback.
  - Make the old way unavailable; make the new way unavoidable.

Make the New Way Unavoidable With Standardized Work Processes

Standardizing work processes is a key way to sustain improvements. Standardization is a Lean tool that your practice can use to sustain improvement effort, even if you have not focused on using Lean.

When everyone is allowed to create their own method or sequence in which they do the same activity, quality and efficiency are not optimized. Standardized work includes detailed, documented visual systems where staff develop, agree to, and follow a defined process. The description or instructions of a standardized process are critical. These instructions should be clear in order to minimize unnecessary variation among staff involved in the process. This reduces waste. The instructions for standard work should not only be documented (written), but should also include visual cues to support understanding by all staff. For example, a process or flow map or checklist might aid staff in understanding every step in the appropriate sequence. Photographs or diagrams are also helpful.

To demonstrate the usefulness of visual cues, try this exercise at a staff or transformation team meeting.

Steps for Designing Standardized Work Processes

1. Define the boundaries of the process for which you are creating standard work (e.g., starts at… ends at…). Include those who are accountable for using the standard process (e.g., all staff doing the same job will use the same standard work process).
2. Determine the appropriate elements that will define the standard work:
   - Name of process.
   - Author.
   - Revision date.
   - Process name.
   - Sequence of the work.
   - Tools to support the work (e.g., checklist).
   - Time allotted or time expected for process to be completed.
3. Ask staff most involved in this process to gather best practices on how this work should be completed. Observing multiple people doing the same work is a good way to let everyone see how much variation there is from person to person.
4. Document the standardized work process and include visual cues.
5. Train the supervisor on the standard work. The supervisor is accountable for ensuring staff do the work as described.
6. Train all pertinent staff on how to do the standard work, and confirm they can demonstrate competence with the process.
7. Run the process and observe the results. This is the time to look for improvements and any training needs.
8. Make adjustments and modifications to the standard work as improvements are identified.

Spreading Change

Defining Spread

SPREAD, verb

1. To distribute widely.
2. To increase in range of occurrence.

Spread can refer to any of the following: spread from **one care team to another** in the same clinic, spread from **one clinic to another** in the same organization, or spread from **one clinic to another not in** the same organization.

"A key factor in closing the gap between best practice and common practice is the ability of health care providers and their organizations to rapidly spread innovations and new ideas."[8]

—Institute for Healthcare Improvement

Variation in the Ability to Spread Ideas

Some ideas or products spread faster than others. In his study of the uptake of new ideas and products by populations, Everett Rogers identified five attributes that help increase the spread of ideas or influence an individual's decision to adopt or reject an innovation.[9] These attributes include:

- **Relative advantage compared to current state.** How improved (or not) an innovation is over the previous way of doing things.
- **Compatibility with organizational values and goals.** The level of compatibility an innovation has with the existing values, experiences, beliefs, and needs.
- **Trialability.** The degree to which an innovation can be tested on a small scale.
- **Complexity (or simplicity) of change and transition.** How difficult (or easy) an innovation is to understand and use.
- **Observability.** The change and the results it produces can be observed by those who should consider adopting it as the new way of doing things.

A Strategy for Spread

Your change is ready to be spread throughout the practice or to other parts of the organization/other organizations when you:

- Can demonstrate success with evidence including measures of results (outcomes and stories).
- Have champions within the staff who tested initial changes and are prepared to help with spread—to communicate, influence, and train others.
- Have the interest and support of key leader(s).
- Have a "Spread Plan" to guide the spread process. (Consider using IHI's Spread Planner as a tool to assist you in developing your spread plan.)

"When people can see a vision and simultaneously recognize what can be done step-by-step in a concrete way to achieve it, they will begin to feel encouragement and enthusiasm instead of fright." *—Erich Fromm, To Have or To Be?*[10]

Components of a Great Spread Plan

- **Communication:** A plan for widespread transmission of the change.
  - Think of a communication campaign. Use multiple modes of contact and exchange of information.
  - Create a compelling message.
  - Use data and stories to share results.
  - Use champions to communicate the benefits and results to other staff. Give leaders a clearly defined role.
- **Training and coaching:** Develop a training and coaching plan and devote resources to support it.
  - How will you train and coach staff in the site/team/department to carry out the new process?
    - Share key ideas and concepts identifying the benefits of this new change.
    - Share results of testing (use data and feedback from patient, family, caregivers, and staff).
    - Train staff on skills and execution (e.g., how to use the new process or forms).
    - Show and explain how the new element works (coaching).
    - Share your own enthusiasm.
    - Address all questions and concerns thoughtfully.
  - Share data, show methods, and coach others as they do it; use data for monitoring and feedback.
  - Have a plan to deal with resistance. Use principles for overcoming resistance to change.[11]
    - It is natural and inevitable: **Expect it.**
    - It doesn't always show its face: **Find it.**
    - It has many motivations: **Understand it.**
    - Deal with people's concerns rather than their arguments: **Confront it.**
    - There's no one way to deal with resistance: **Manage it.**
  - Make trainings interactive and have the staff that have tested and implemented the change first provide the training.
  - Include training on change management and communication as part of this work.
  - Hold provider-only training sessions.
  - After initial training and implementation at the new location, continue coaching through collaborative meetings (e.g., bring staff from multiple locations together to discuss how implementation of the new change is working).
- **Leadership:** Help leaders support change by sharing the results of improvement across and throughout the organization.
  - Share results transparently.
  - Help leaders and managers keep the work on their radar: on meeting agendas, board reports.
  - Make it the expectation and design accountability into the system of management.
  - Keep seeking feedback from patients, families, caregivers, and staff.
  - Recognize and celebrate success.
- **Measurement:** Identify a set of spread measures to demonstrate progress.
  - Select clinical quality and practice transformation metrics.
  - Measure the rate of spread throughout your organization.
  - Develop an approach to how often, to whom, and where these results will be shared.
  - Examples from spread measures from IHI's Rate of Spread:
    - An example of a key process change to support improvement in the care for patients with diabetes at the local level is the use of a flagging system to identify patients needing an HbA1c or LDL at their visit. In this example, the spread project could measure number of targeted sites using a process for flagging charts of patients needing an HbA1c or LDL prior to the patient visit.
    - Spreading same-day access to all primary care clinics in a medical group will require that all targeted sites eliminate the backlog of appointments scheduled into the future. A rate of spread measure for an access project in primary care could be the percentage of targeted sites actively engaged in working down the backlog.

Tips for Successful Spread

- Have staff share their experiences often. Establish dedicated time for staff from the initial implementation site to meet with staff from all spread sites to exchange knowledge/learning.
- Define standard work. Identify those top **few** things that everyone in the organization needs to do the same way to make the new process or way of working successful. Clearly outline what the standard work/process is and how it is to be accomplished. For example, ensure rooms are stocked in accordance with the supply checklist on a weekly basis. Establish a monitoring process to reinforce the importance of standard work and the new and consistent way of doing things. Monitoring and auditing also provide opportunities for coaching and re-training if necessary.
- Keep things flexible to allow for site differences.
- Track and advertise new improvements that occur as various locations adopt and adapt the change.
- Celebrate successes, even the small ones. Share stories with data in email and newsletters, post on bulletin boards, waiting rooms, and share in meetings.

Conclusion

Using a formal QI strategy helps practices achieve the goals of PCMH transformation. This Guide reviewed two of the most commonly used strategies for implementing and sustaining change in primary care practice: the Model for Improvement and Lean. Measurement is a core component of all QI models, but for measurement to guide and drive improvement, providers and staff must understand measurement data, trust it, and use it. Health information technology (HIT) can help collect and display data to support QI. To learn more about the role of HIT in QI, refer to Appendix A: Quality Improvement Strategy and Health Information Technology and to the Quality Improvement Strategy Part 2 Implementation Guide.

Additional Resources

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Appendix A:
Quality Improvement Strategy and Health Information Technology

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Qualis Health

This addendum is supplemental to the primary Quality Improvement Strategy Implementation Guide.

Health information technology (HIT) makes it easier for organizations to assemble and use data to support quality improvement (QI) in a number of ways. First, it allows an organization to be very specific in setting quality goals and identifying gaps. Second, HIT makes it easier to monitor process metrics and intermediate outcomes. This helps QI teams determine more rapidly whether a change is an improvement. Third, HIT reduces the cost of identifying individual patients needing specific interventions that will help close a gap in care.

The Role of Information Technology in QI Strategy

"Meaningful use" of an electronic health record (EHR) is defined by the Centers for Medicare & Medicaid Services (CMS). Meaningful use criteria are intended to promote improved quality of care and the adoption of robust HIT systems. "Meaningful use" largely describes the information management requirements for a PCMH. To learn more about meaningful use criteria, see the Quality Improvement Strategy Part 2 Implementation Guide.

All aspects of how information flows within an EHR have important implications for QI in a PCMH setting.

- The way that information is gathered and entered into the EHR determines its reliability and availability for use in measuring and improving quality.
- The way information in the EHR is organized and presented to users will determine how well it is able to support the processes by which care is delivered and by which quality is improved.
- The way information is used for quality reporting will determine what is known about performance gaps, and will guide efforts to close them.
- The health information tools available to a PCMH in an EHR can be organized according to these key steps in data flow (data entry, information management/use, and reporting). Understanding these parts of the data flow is a critical part of the strategy for creating a culture of quality.

Entering Reliable Information

The integration of information technology into human workflows is challenging because unlike humans, computers require that information be **structured** data in order to process it. This means humans must enter the information they want the computer to process, either as numbers or in a limited number of discrete choices. Once this is done, however, HIT becomes a powerhouse for QI. To realize the full potential of health IT for QI, a PCMH must understand and optimize how information is entered.

- **Data interfaces:** Laboratory, pathology, and radiology interfaces play a key role in auto-populating data into discrete fields for quality reporting in chronic conditions and preventive screening. Once these interfaces are tested and operational, they are a source of reliable data for QI.
- **Information from patient encounters:** Workflows in which structured data is entered into the EHR should be standardized, especially for core processes. Examples include demographics, primary care provider attribution, problem list, vital signs, medication lists, and smoking status—all of which are essential to most chronic disease quality initiatives. Standardization ensures that information is gathered the same way across the organization and entered as structured data into the same fields using data delimiters to reduce errors.
- **Other sources:** Not all data useful for QI will come from an EHR. Web-based satisfaction surveys can be accessed electronically via an EHR portal for patients and through email for staff.

Organizing Information in the EHR

For information to be of use to the care team, it must be easy to find and formatted in a way that makes it easy to understand before, during, and after a patient visit. Tools that assist in this include:

- Data displays. These include graphs, dashboards, and flow sheets.
- Gap in care alerts. Alerts for preventive and chronic care are triggered by patient demographics, problem list entries, and orders. They range from passive highlighting of a care gap to active "pop-up" alerts that fill the screen, demanding action.
- Order sets. Orders can be grouped to prompt care team members to include easily overlooked components of complex orders.
- Charting templates. Templates can prompt care team members to organize their thinking and ask easily overlooked questions.

When clinical decision support tools are used to guide specific decisions, it's essential they be configured to present the right information (too much information is often worse than no information at all) to the right person (someone whose job it is to act on the information) at precisely the right moment in the workflow so that the alert serves its purpose and isn't a distraction. Alerts also must use the right medium (a colored arrow pointing to a care gap is often more effective than a screen filling pop-up) and be formatted in a way that makes it easy to do the right thing and difficult to do the wrong thing.

Reporting Clinical Information out of an EHR for QI

HIT is not a panacea. Reporting out of an EHR can be a complex challenge, requiring major investments in hardware, software, and skills. But using an EHR to collect and report data is more reliable, scalable, and sustainable than trying to create the same reports without an EHR.

Hardware. The most important caveat in reporting is that generating reports directly from an EHR during clinic hours can impact the performance or speed of the EHR for current users. This means an organization needs access to its data in a reporting relational database, which can be onsite or hosted remotely. Small practices without a reporting database can report out of their production server if they limit reporting to times when it is not in use for patient care.

Software. There are two types of software required for reporting:

- A relational database (the data from the EHR will be organized in a relational database that is updated periodically from the production EHR).
- Report-writing software to build and run queries out of the relational database and combine them into reports.

Report writing. Writing reports is a complex task requiring 1) translating clinical concepts into data definitions, and 2) construction of queries using those data definitions to generate lists of patients meeting the query specifications. The queries are then combined to produce the reports and the statistics on which QI work depends. This requires a team with a combined skill-set that crosses the knowledge domains of clinical care, QI, biostatistics, and database analytics.

Report validation. Clinical reports are seldom valid on the first iteration. The complexities of the process are such that the report writing team must go through the output of each new report, comparing it line-by-line to information in the EHR to find errors, most of which cannot be predicted. Errors will be found in the report logic as well as in the EHR data. This process can be supplemented by writing "complementary reports" using a different logic to identify patients who should be in the report but are not.

Tips for effective reporting

- **Registry functionality.** Many practices started population management programs for chronic conditions such as diabetes before installing an EHR. EHR reports can be designed so that they will provide the same information as a registry. Rather than try to maintain both an EHR and a stand-alone registry, priority should be given to building a reporting structure that supports ongoing QI work that may have been started using registries before EHR implementation.
- **Return on investment.** Not all reports can be leveraged directly for increased revenue, but in settings where revenue is a rate-limiting resource, reports that support revenue streams such as the CMS EHR Incentives program, or the Physician Quality and Reporting System (PQRS) should be prioritized.
- **Ad hoc reports.** QI projects based on the Model for Improvement invariably require custom reports to track process metrics, often using time/date stamp data to determine whether a change is an improvement long before a change will be detectable in the clinical outcome goal. It is important to plan for this as part of every QI initiative.
- **Interpreting reports.** Many people working in healthcare, including clinicians, are not accustomed to looking at reports and may not see or understand the intended message in a report. Because successful QI strategy usually requires front-line staff to be involved in workflow redesign efforts, it is important to find ways to ensure that everyone involved in a QI project has the basic skills needed to look at reports and understand the information they contain.
- **Engage care teams.** One of the purposes of testing a future-state work flow on a small scale is to find and process errors before spreading the change throughout the organization. When a practice is trying to spread a successful innovation, it is much easier to enlist care teams in altering their workflows to improve the care their patients receive than it is to get them excited about closing a reported gap in their quality that is largely due to information management problems.

Health IT, and particularly an EHR, can be the source of a wealth of information for QI efforts. However, for this information to be useful, it needs to be accessible, accurate, and usable. The investment required to realize the potential of this information is considerable. Hardware, software, and staff training all require a financial investment. However, the benefits of this investment provide value for all facets of PCMH transformation, because when well used, EHRs help power clinical workflows and contribute to building a culture of quality improvement.

Appendix B:
Quality Improvement Program Description

I. Scope and Structure

A. Mission & Scope

Quality improvement (QI) is an integrative process that brings together knowledge, structures, processes, and outcomes to increase quality throughout the organization. The QI council's mission is as follows:

To improve and support the health of patients served by ensuring efficient and effective processes and programs through on-going review of performance measurements.

This mission statement describes the fundamental reason for the existence of the QI council. Actions and decisions by the QI council will be compared against the mission statement to evaluate if those actions and decisions are consistent with the intent of this stated responsibility.

The QI program will include the activities detailed in Section II. The QI council will guide and evaluate the QI program by:

- Identifying, monitoring, reviewing results from, and making recommendations on rapid cycle improvement (QI) projects.
- Reviewing department-level performance measures during QI council meetings, reviewing program-level performance measures with program staff outside of QI council meetings, and providing brief updates during meetings.
- Reviewing department performance evaluation reports.
- Reviewing and revising the QI plan annually based on its annual evaluation.

B. Organizational Structure

The CEO has charged the QI council with carrying out the purpose and scope of the QI program. Management team members are responsible for conducting QI efforts and for promoting, training, challenging, and empowering organization employees to participate in the processes of QI.

The QI council is composed of senior management and staff, including:

- CEO.
- Medical director.
- Department managers, including the QI manager.
- QI staff.
- Four front-line staff (including MAs, MSWs, front office, RNs).
- Patient and/or family member(s).

The QI council meets on the 1st Tuesday of each month at 10:00 am and maintains records and minutes of all meetings; these minutes are presented for review and acceptance by QI council members. Quarterly, the QI council will provide a report of the QI program to the Board of Directors.

QI council members will make every effort to come to consensus on issues requiring a decision. However, if consensus cannot be reached, the QI council will make decisions by a majority vote.

QI and other QI project teams are convened by the QI council as required for specific initiatives. These teams are accountable to the QI council and report activities and results on an ongoing basis.

C. Dedicated Resources

The QI department provides administrative and analytical support to the QI council. This support includes:

- Maintaining concurrent records/meeting minutes.
- Developing and distributing the monthly QI council agenda.
- Tracking and trending of performance data.
- Providing technical assistance and consultation regarding the development of systems for the identification and monitoring of improvement projects.
- Providing staff training in QI philosophies and methodology.
- Providing analytical support for QI projects; serving as a QI team member.

D. Roles and Responsibilities

CEO or designee:

- Provides vision and direction for the QI program.
- Convenes and serves as a voting member of the QI council.
- Allocates resources for QI programs and activities.
- Reports on QI activities to the Board of Directors.
- Requests the review of specific activities or the implementation of QI projects.

Department managers:

- Implement QI projects and report activities and results to the QI council.
- Identify appropriate staff to participate in QI projects as needed.
- Report to the QI council on evaluation activities and the monitoring of goals/objectives in the organization's annual work plan that fall within their departments.
- Serve as voting members of the QI council.
- Encourage staff to incorporate QI concepts into daily work.

QI manager:

- Directs the analytical support and technical consultation to the QI council.
- Oversees the development of the annual QI plan and QI program evaluation.
- Provides training to QI teams and the QI council as needed.
- Serve as a voting member of the QI council.
- Encourage staff to incorporate QI concepts into daily work.

Other managers:
- As members of the senior staff, provide guidance to the organization's QI program.
- Report to the QI council on evaluation activities and the monitoring of goals/objectives in the organization's annual work plan that fall within their areas.
- Serve as voting members of the QI council.
    - Encourage staff to incorporate QI concepts into daily work.

QI Staff:
- Provide analytical support and technical consultation for the following:
    - QI teams.
    - Evaluation activities.
    - Reporting performance measures for goals and objectives in the organization's annual work plan.
    - Other data analysis involved in QI activities.

Administrative Support:
- Maintain minutes of QI council meetings.
- Support QI activities as needed.

Other Staff:
- Participate in QI projects, as requested by department managers.
- Collect and report data for department level performance measures; use data to identify areas needing improvement.
- Participate in QI training.
- Incorporate QI concepts into daily work.

E. Approval of QI Plan and Annual Evaluation

The QI plan is revised annually to reflect program enhancements and revisions. Activities listed in the annual QI calendar are developed based on the recommendations from the annual QI program evaluation. The QI plan and program evaluation are approved annually by the QI council.

In addition, QI council members evaluate each QI council meeting at its end. Periodic summaries of these evaluations are provided to QI council members, and revisions to meetings are made accordingly based on QI council member feedback.

II. Quality Improvement Activities

QI activities include review and improvement of processes that have a direct or indirect influence on the health of patients. The following QI activities will be implemented and reported to the QI council:

A. Quality Improvement (QI) Projects
At least xx QI projects will be conducted annually to assess and continuously improve the quality of the organization's processes and services. Within each QI project, the project team will 1) establish an Aim statement for improvement that focuses the group effort, 2) use data to evaluate and understand the impact of changes designed to meet the aim, and 3) conduct multiple Plan Do Study Act cycles to discover what is an effective and efficient way to improve a process. The department manager conducting the QI project will report the mid-term and final results of the project to the QI council. After review and approval by the QI council, a QI project report may be provided to the Board of Directors. Results will also be shared with staff at all-staff meetings, by displaying a storyboard poster in a common area and/or in employee newsletters.

Any member of the QI council may request the implementation of a QI project by completing the "QI project proposal" form and submitting it to the council. QI proposals will be discussed at a subsequent QI council meeting during the agenda item for new business/QI proposals.

In addition to the new QI projects conducted, performance data from previously conducted QI projects will continue to be periodically monitored to ensure sustained improvements. If improvements are not sustained, the appropriate department manager will notify the QI council and make recommendations for further actions.

B. Performance Measures
The selection and measurement of performance measures enables the QI council to understand a) if the organization is improving the health of patients and b) if departments are implementing efficient and effective processes and programs. Performance measures will be developed at two levels: department and organization.

Organization-Level Measures
QI council members will annually identify [xx] performance measures for the organization that will be included in the QI dashboard. Criteria for organization-level performance measures:
- Are meaningful to the leadership team, medical executive committee, and the Board of Directors.
- Reflect how well the organization is working toward enhancing the health of our patients (our mission).
- Measure work from multiple departments, with an emphasis toward cross-functional processes.
- Include a valid benchmark or target to measure data against.

The organization-level performance measures tie to the strategic plan, which outlines the vision and mission, through the success measures for the purpose (mission).

Measures are based on the following categories:
- High risk.
- High volume.
- Problem-prone.
- Relate to patient outcomes.
- Relate to patient, family/significant other, customer, and/or staff satisfaction.
- Relate to compliance with regulatory/contractual requirements.
- Relate to financial resources and utilization of services.

QI staff will collect data for organization-level measures and report it. Persons identified as responsible for reporting data will monitor and report the progress of the performance measures toward reaching the organization's mission. Depending on the availability of data, some measures will be reported quarterly while others will be reported annually. Annually and after review by the QI council, a summary of the data including a QI dashboard documenting progress toward the organization-level performance measures will be provided to the Board of Directors on a regular basis.

Department-Level Measures

Managers and staff will develop 10–20 performance measures that:

Address a) how well business processes are working (efficiency), b) how well short-term/ intermediate outcomes are being met (effectiveness), or c) how well the department is moving toward its long-term outcomes (impact).

- Compare what actually happened to what was planned or intended (i.e., tie to a goal or objective).
- Include a valid benchmark or target to measure data against.
- Are written with the intent of using the data to improve processes and interventions, not just to collect data.
- Reflect the department's priorities.

C. Department Summary Reports

Department-level reports will be reviewed monthly within the department with a roll-up quarterly report prepared and presented to the QI council. Any improvement opportunities identified out of these reviews will be integrated into the monthly and quarterly reports at the beginning of the next quarter. Each quarterly report will include quarterly data for the four previous quarters so that trends can more easily be identified.

D. QI Training and Recognition

At the end of each QI council meeting, council members will recommend opportunities for recognition of staff participating in QI efforts. Recognition can include thank you letters signed by QI council members, articles in employee newsletters, announcing successful QI projects at monthly all-staff meetings, updating and posting the QI dashboard in multiple public places throughout the clinic, or placing a storyboard in the lobby.

Appendix C:
Sample Quality Improvement Committee Agenda

Friday, June xx, 201x
8:30-9:45 am

8:30 am Check-in and update on June yy meeting (5 minutes).

8:35 am Review of monthly dashboard (20 minutes).
- Report on Action Items from last month's review.
- New Action Items for follow-up.
- Summary of progress and pending.

8:55 am Revisions to eligibility process: design how to most effectively gather current financial information every six months (30 minutes).

9:25 am Final review of uninsured/underinsured work flow (10 minutes).
- Review of Aim statement.
- Any revisions needed based on pilot results?
- Where/whether work flow for insured patients would be different?

9:35 am Next steps and evaluation (10 minutes).
- Next Meeting Agenda:
  - Review of monthly dashboard.

9:45 am Adjourn.

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