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GUIDE FOR

Quality Improvement in a Safety-Net Setting

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Introduction

We all strive to provide a high-quality health care delivery system that is seamless to the provider and, most importantly, to the patient. Change is inevitable, especially in the world of health care. We can either find ourselves constantly running to catch up with new requirements and regulations, or choose to stay ahead of the curve by creating quality improvement systems within our organizations.

The Primary Care Coalition (PCC) has developed a method to improve chronic condition management and preventive screening rates in safety-net clinics by building community-based collaboratives across the continuum of care. Our work, which focused on improving mammography screening rates, used the Model for Improvement, a theoretical framework development by Institute for Healthcare Improvement to improve processes at the micro system level, and system design theory to drive larger system changes.

This guide shares recommended interventions and successful strategies that have been tested and documented locally, drawing on formal quality improvement efforts from around the world. This approach can be used by any primary care practice interested in improving its care. While it was originally focused on breast health screening improvement, the step-by-step instructions, examples, and resources have been adapted to support process improvement programs for any type of rapid innovation in primary care. We encourage you to use these practices with any patient population, screening protocol, or chronic condition management guideline.

Why Does Quality Improvement Matter?

Quality Improvement (QI) programs can benefit your organization in a variety of ways:

- **Better patient health outcomes.** QI can aid in improving your site's process outcomes (e.g., frequency and quality of recommended screenings) which can lead to better health outcomes for your patients (e.g., decreased morbidity and mortality).
- **Avoid costs associated with process failures, errors, and poor outcomes.** Costs are incurred when inefficient systems increase errors and cause rework. Streamlined and reliable processes are less expensive to maintain. Additionally, an organization reduces waste and cost when processes and outcomes relate to high-priority health needs. QI processes are often budget-neutral, where the costs to make the changes are offset by the cost savings incurred.
- **Proactive processes anticipate and solve problems before they occur.** Organizations that commit to QI often develop a culture of improvement because errors are reported and readily addressed.
- **Credibility.** A demonstrated commitment to quality can shine a light on an organization's reputation, which may result in partnership and funding opportunities.

> "All organizations are perfectly designed to get the results they are now getting. If we want different results, we must change the way we do things."
> — Tom Northrup, Nationally Recognized Management Expert

How to Use This Guide

This guide is intended to help safety-net clinics review and redesign sustainable clinic practices which lead to more efficient outcomes. It can be used as a primer to introduce clinic staff to quality improvement. The package includes step-by-step instructions and evidence-based forms that will be useful in managing the project from launch through evaluation. Feel free to adapt the forms to best meet your goals. The package also includes references to delve deeper into quality improvement.

Preparing for Quality Improvement

As you begin a quality improvement plan, it is necessary for your organization to do a thorough evaluation of the needs and resources of the program targeted for improvement. The following steps are helpful in preparing for quality improvement.

STEP 1

Define the population impacted by your program

Before an organization can begin to improve systems of care for a target population, the organization needs to understand and define the population. Establishing the target population enables baseline measurement and goal setting necessary to accurately measure and assess the impact of the planned activities and drive progress.

STEP 2

Define program goals, objectives, and timeframes

Be able to answer the following questions about your program:

- What are you trying to do?
- What are the steps needed to get there?
- What is the timeframe to accomplish the goal, including an anticipated start date?

STEP 3

Identify the logistics necessary to implement the program

- Funding sources
- Potential costs
- Staffing
- Training

STEP 4

Engage stakeholders in the organization

Involve a broad group of stakeholders representing every level of the organization in the design of the improvement project.

STEP 5

Identify or clarify the program's evaluation methods

- Identify the project outcome measures and benchmarks specific to the program you wish to improve.
- Collect baseline data for each measure through chart review, electronic medical record reports, or billing.
- Develop a tracking tool to report outcome measures.
- Review outcome measures with the project team to evaluate progress and identify priorities for improvement.

The Model for Improvement: The Science of Quality Improvement

This guide is based on the Model for Improvement, a simple yet effective quality improvement tool developed by Associates in Process Improvement. The model is meant to accelerate improvement and can be used in conjunction with existing improvement models that may be in use at your site. The effectiveness of the Model for Improvement has been demonstrated in hundreds of health care settings around the world, helping organizations improve many different health care processes and outcomes.

The Model for Improvement consists of two parts:

PART 1: Asking three fundamental questions:

What are we trying to accomplish?

How will we know that a change is an improvement?

What changes can we make that will result in improvement?

PART 2: The Plan-Do-Study-Act (PDSA) cycle.

PDSA cycles guide the tests of a change in a work setting, allowing the team to observe and rapidly learn how changes work in their particular situation. Based on these observations, the team can modify and/or spread the changes to be successful and more impactful.

This guide will take you through the following steps:

Forming the Quality Improvement Team

Including the right people on a process improvement team is vital to your success. Teams vary in size and composition. Each organization builds teams to suit its own needs.

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Setting Improvement Aims

Improvement requires setting aims. The aim should be time-specific and measurable; it should also define the specific population of patients or other system that will be affected.

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Establishing Measures

Use quantitative measures to determine if a specific change actually leads to an improvement.

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Selecting Changes

Ideas for change may come from the insights of those who work in the system, from change concepts or other creative thinking techniques, or by borrowing from the experience of others who have successfully improved.

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Testing Changes

The Plan-Do-Study-Act (PDSA) cycle is shorthand for testing a change in the real work setting. Plan the change, try it, observe the results, and act on what is learned. This is the scientific method adapted for action-oriented learning.

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Implementing Changes

After testing and refining change on a small scale, the team may implement the change on a broader scale. For example, for an entire pilot population or on an entire unit.

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Spreading Changes

After successful implementation of a change or package of changes for a pilot population or unit, the team can spread the changes to other parts of the organization or in other organizations.

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Forming the Quality Improvement Team

The quality improvement (QI) team, or quality improvement committee (QIC), is the group of individuals within a practice tasked with carrying out improvement efforts. QI teams will vary in size and composition based on a practice's needs. The team meets regularly to review performance data, identify areas in need of improvement, and execute and monitor ongoing improvement efforts. For these activities, the teams will use many of the QI approaches and tools outlined in the later chapters of this guide.

The most effective QI teams include representatives from all areas of the practice that will be affected by the proposed improvement. Be sure that the team includes members familiar with all aspects of the process, including administrators, clinicians, front-line staff, and patients.

Additionally, each team should identify a "champion" within the practice who is committed to the success of the quality improvement project. This individual should have an interest in building capacity in the practice and implementing effective processes that will enable ongoing improvement. It is the QI team champion's role to ensure that the team functions effectively and fulfills its charter for the organization.

Who Should Be on a Quality Improvement Team?

Effective teams reflect different kinds of expertise within the organization. The Institute for Healthcare Improvement (IHI) recommends that every team include at least one member who has the following roles: clinical leadership, technical expertise, day-to-day leadership. There may be individuals on the team with expertise in more than one area, but all three areas should be represented in order to drive improvement successfully.

Clinical leader: This individual has the authority to test and implement suggested changes, as well as resolve the potential issues that arise during this process. This individual understands how the changes will affect clinical care and the residual effects on other parts of the organization. Most importantly, the clinical leader has earned the support and respect of other clinicians and clinical staff; they are trusted, and can motivate others to test changes.

Technical expertise: This individual has intimate knowledge of the processes or areas targeted for improvement. A team may need several technical experts. For example, a team implementing a QI project for patients with poorly controlled hypertension may need technical expertise in the clinic's electronic health record and the patient treatment protocols. An expert on QI methods can provide additional technical support by helping the team design their quality improvement plan and providing guidance on data collection, interpretation, and presentation.

Day-to-day leadership: This individual is the lead for the QI team and ensures completion of the team's tasks, such as data collection, analysis, and change implementation. This person must work closely with the other members of the team and understand the full impact of the team's activities on other parts of the organization as well as the area they are targeting. This individual is typically detail oriented and ensures that team decisions are documented and followed through to completion.

Project sponsor: In addition to the working members of the team, there should be a project sponsor with executive authority that serves as the liaison between the QI team and the organization's senior management. Although this individual may not participate on a daily basis with the team, he or she may join periodically to stay up-to-date on its progress. When needed, this individual supports the team by obtaining resources and overcoming organizational barriers encountered when implementing the improvement plan.

The most important requirement is not the size of the QI team, but the diversity of perspectives represented by the members. It is important that the team include a variety of individuals representing different roles and perspectives about the processes under consideration for improvement. Whenever possible, this group should include input from the "end user" of health care, the patient.

Potential Members of a QI Team

- Chief executive officer
- Medical directors
- Physicians
- Nursing staff
- Physician assistants
- Medical assistants
- Patient representatives
- Operations manager/director
- Health educators
- Community health workers
- Community representatives
- Directors of clinical services
- Medical records staff
- Receptionists
- Lab technicians
- Pharmacy or dispensary staff
- Case managers
- Billing department staff
- Finance director
- Patients

Example: Improving Chronic Condition Care Delivery

Instructions: Using personnel at your practice, build a QI team to improve care delivery for your patients living with chronic conditions.

Members of the Quality Improvement Team:

- Technical Expert: _____, (e.g. physician)
- Day-to-Day Leader: _____, (e.g. registered nurse, clinic manager)
- Additional Team Members: (e.g. medical assistant, patient educator, clerk/scheduler, laboratory manager, quality expert):

_____

_____

_____

_____

_____

_____

- Sponsor: _____, (e.g. practice manager, board chair)

Working Effectively as a Team

Teams that are cohesive, productive, and efficient–and whose members enjoy doing their work and working together–don't happen by accident. No team exists without problems. However, those which have learned to counter negative team dynamics tend to be skilled at preventing many typical group problems. Achieving the very best version of your team depends on the mix of 10 essential ingredients.

Recipe for a Successful Team[1]

1 Clear Team Goals	Signs of Trouble	Trouble Tamers
The team should: • Agree on the team's mission and see the mission as narrow enough to be workable • Have a clear vision and be able to progress steadily toward the team's goals • Be clear about the large goals and about the purpose of individual steps, meetings, discussion, and decisions	• Frequent switches in directions; frequent arguments about what the team should do next • Feelings that the project is too big or inappropriate • Frustration at lack of progress • Excessive questioning of action taken	• If team members feel that they don't understand the goals, try using the **QI Team Charter Worksheet** (page 11) • Emphasize right of team members to ask questions • If charter is too broad, work with the Sponsor to simplify
2 Have a Plan	**Signs of Trouble**	**Trouble Tamers**
The team should develop a work plan that: • Helps the team determine what advice, assistance, training, materials, and other resources it may need • Guides the team in determining schedules and identifying milestones	• Uncertainty about the team's direction; when one step is completed, lack of clarity about what follows • Launching many activities without thinking about what each is supposed to do, hoping at least one will hit the target	• Seeking assistance from a Quality Improvement expert • Ask what resources you need to complete your charter • Ask Sponsor to review or, if necessary, help formulate plan
3 Clearly Defined Team Roles	**Signs of Trouble**	**Trouble Tamers**
The team should: • Formally designate roles so that all members know what is expected of everyone • Understand which roles belong to one person, which are shared, and how the shared roles are rotated • Use each member's talents, so that no one feels left out or taken advantage of	• Roles and duty assignments resulting from a pecking order • Confusion over who is responsible for what • People getting stuck with the same tedious chores	• Review both the team and meeting descriptions • The Team Leader should discuss the responsibilities and roles of all involved with the team • Reach consensus about roles within the team
4 Clear Communications	**Signs of Trouble**	**Trouble Tamers**
The team should: • Speak with clarity and directness • Avoid using questions to disguise statements • Be succinct, avoiding long anecdotes and examples • Listen actively; explore rather than debate each speaker's ideas • Avoid interrupting and talking when others are speaking • Share information on many levels	• Poor speaking skills (mumbling, rambling, little eye contact) • Members are unable to say what they really feel; lots of tentative, conditional statements • People's words do not match their tone of voice or mannerisms • "Plops"–statements receiving no acknowledgment or response • Bullying statements: "What you don't understand is ..."	• The Team Leader should lead a discussion on decision making in the team • Occasionally designate a team member or outsider to watch and give constructive feedback on how decisions are made

5 Beneficial Team Behaviors	Signs of Trouble	Trouble Tamers
The team should: • Act as gatekeepers by directing conversational traffic; avoid simultaneous conversations; make room for reserved talkers • Test for group consensus • Try to ease tensions in the group and work through difficult matters • Praise and correct others with equal fairness	• Failure to use discussion skills • Reliance on one person to manage the discussion • People repeating points, unsure of whether they were heard the first time • Inability to let go of one topic and move onto next • Discussions in the hallway are more relaxed and candid than those during the meeting	• Refer to the **Meeting Skills Checklist** (page 12) • Make sure feedback given is constructive • Team Leader can focus the team on developing effective discussion skills; e.g., team members can pick two or three skills for the whole team to practice at a meeting
6 Well-Defined Decision Procedures	**Signs of Trouble**	**Trouble Tamers**
The team should: • Have a plan for how the team makes decisions • Discuss how decisions will be made, such as when to take a poll and decide by consensus • Decide important issues by consensus (e.g., verbal or written polls), followed by a group confirmation of the consensus • Base decisions in data and facts	• Conceding to opinions presented as facts with no supporting data • Decisions made by one or two people in the group, without team members agreeing to defer to their expertise • Too frequent recourse to "majority rules" or other easy approaches that bypass strong disagreement • Silence interpreted as consent	• The Team Leader should lead a discussion on decision making in the team • Occasionally designate a team member or outsider to watch and give constructive feedback on how decisions are made
7 Balanced Participation	**Signs of Trouble**	**Trouble Tamers**
The team should: • Have open discussions regarding ground rules and what behaviors are acceptable/unacceptable • Openly state or acknowledge norms ("We all agreed to decide the issue this way")	• Some team members have too much influence; others, too little • Member participation depends on the subject being discussed, i.e., only those most knowledgeable are active; others don't even ask questions • Some members speak only about a certain topic	• Send meeting agendas to participants in advance • Use brainstorming to elicit input from all team members during discussions
8 Established Ground Rules	**Signs of Trouble**	**Trouble Tamers**
The team should: • Have open discussions regarding ground rules and what behaviors are acceptable/unacceptable • Openly state or acknowledge norms ("We all agreed to decide the issue this way")	• Certain important subjects are avoided or considered taboo; conversations that are irrelevant to the task and harmful to the group recur • No one acknowledges the norms; no one is able to say exactly what ground rules the team follows • Conflict over assumed norms or conflicting expectations	• At the beginning, teams must take time to discuss and agree on obvious group rules • From time to time, review the ground rules– adding, deleting, revising as needed • Particularly pay attention to current and possible ground rules during times of conflict

9 Awareness of the Group Process	Signs of Trouble	Trouble Tamers
Ideally all team members will be aware of the group process–how the team works together–and pay attention to the content of the meeting. Team members should: • See (be sensitive to nonverbal communication cues), hear, and feel the group dynamics • Contribute equally to group process and meeting content • When problems are identified, the team actively chooses to work on group process issues, e.g., occasionally designating a team member or outsider to observe and report on group interactions at a meeting	• Avoidance of existing issues, particularly when the group is having difficulty • Moving forward when there are nonverbal signs of resistance, confusion, disappointment • Ignoring obvious nonverbal clues and shifts in the group mood • Members attributing motives to nonverbal behavior ("You've been quiet for 30 minutes, so you're not interested") • Remarks discouraging another's behavior or contribution or group process issues ("Let's get on with the task and stop talking about that stuff")	• Designate a team member or coach to observe and evaluate how well the group handles problems, confusion, discussion, etc. • Encourage the team to have several "process checks"–designated times to assess how the meeting is going or express thoughts not otherwise covered by the agenda • Routinely include group process issues in meeting evaluations
10 Use a Scientific Approach	**Signs of Trouble**	**Trouble Tamers**
Using a scientific approach helps avoid team problems and disagreements because it insists that opinions be supported by, or at least defer to, data. Ideally, the team should: • Demand to see data before making decisions and question anyone trying to act on hunches alone • Use basic statistical tools to investigate problems and gather and analyze data • Dig for root causes of problems • Seek permanent solutions rather than rely on quick fixes	• Team members insist they don't need data because their intelligence and experience are enough to tell them what the problems and solutions are • Wild stabs at supposed solutions; jumping to conclusions; too many inferences and assumptions • Hasty action; a "ready, fire, aim" approach	• Ensure the team has access to an expert for training and guidance • Every team member should talk about the importance of using a scientific approach, especially when decisions or action are needed

[1] Table adapted from Chapter 6.4 of the Team Handbook 3rd Ed. By Peter R. Scholtes, Brian L. Joiner, Barbara J. Streibel

QI Team Charter Worksheet

Instructions: Use the table below to clarify your team's charter. Not all of the questions may be relevant to your improvement goals; however, the more questions you can answer, the more equipped your team will be.

Purpose • What is wrong or not working? What problem is the team/ organization addressing? • What problems do patients have with the services they receive?	**Notes:**
Relevance • How will minimizing the problem affect: – Patients? – Staff? – Organization? • Is the timing of this project appropriate?	**Notes:**
Deliverables • What must be produced for the quality improvement to be considered a success? • How will we know when the work is done?	**Notes:**
Resources • What is the budget for this project? • To whom is the team accountable? • Who is the Sponsor? • Who are the key stakeholders? • Who will be the Team Leader? • Who can the team turn to for expert guidance and coaching on improvement?	**Notes:**

Meeting Skills Assessment

Instructions: Photocopy this page or create your own form. Have team members complete it individually and then review as a team.

Behavior During Team Meetings	Never	Sometimes	Often
I suggest processes for the group to follow or methods of organizing the task.	❑	❑	❑
I suggest new ideas, activities, problems, or courses of action.	❑	❑	❑
I attempt to help regroup when joking, personal stories, or tangents go on too long.	❑	❑	❑
When there is confusion, I suggest that the group organize a plan for completing the task.	❑	❑	❑
I initiate attempts to redefine goals, problems, or outcomes when the direction of discussion becomes confusing.	❑	❑	❑
I elaborate on ideas with relevant examples.	❑	❑	❑
I recommend resource people to contact and bring in materials.	❑	❑	❑
I explain the rationale behind my opinions.	❑	❑	❑
I ask for the significance and/or implications of contributed facts and opinions.	❑	❑	❑
I ask team members to explain the reasoning that led to a particular conclusion.	❑	❑	❑
I relate my comments to previous contributions to the discussion.	❑	❑	❑
I test to see if everyone agrees with, or understands, the issue being discussed or the decision being made.	❑	❑	❑
I encourage others to participate and try to politely involve quiet members.	❑	❑	❑
I vocally support others when I think their point of view is important.	❑	❑	❑
I try to find areas of agreement when conflicting viewpoints arise.	❑	❑	❑
I actively listen to others' contribution to the discussion.	❑	❑	❑
I summarize the progress the group has made.	❑	❑	❑

Setting Improvement Aims

Improvement requires setting aims. An aim statement is a written description of desired outcomes in a quality improvement project. While each organization should decide for itself what aims will most meaningfully improve its processes, the six overarching "Aims for Improvement" by the Institute of Medicine (IOM) may serve as inspiration during aim development:

- **Safe:** Avoid injuries to patients from the care that is intended to help them.
- **Effective:** Match care to science; avoid overuse of ineffective care and underuse of effective care.
- **Patient-Centered:** Honor the individual and respect choice.
- **Timely:** Reduce waiting for both patients and those who give care.
- **Efficient:** Reduce waste.
- **Equitable:** Close racial and ethnic gaps in health status.

> **"Some is not a number; soon is not a time." — Don Berwick, MD, health care quality leader**

Once an organization has decided on its general goal, define your **SMART** objectives to set those ideas into action. **SMART** stands for:

Specific: The goal must be unambiguously defined. It must explain specifically what has to be achieved and the type of outcome expected.

Measurable: Your team must be able to answer the question: "How will we know that our changes have resulted in improvement?" Quantitative measurement will be discussed later in this guide.

Attainable: This criterion emphasizes the importance of setting aims that are challenging for your team but nonetheless reachable against the existing constraints. This criterion also poses the question of the resources, authority, and means needed to accomplish the objective.

Relevant: The goal must be tied to the priorities of your patients and organization.

Time-bound: This criterion stresses the importance of specifying an appropriate timeframe for your improvement aims. During what time period do you hope to see the targeted improvement occur? What are the steps and critical milestones to accomplish it? What are the intermediate outcomes expected and by when?

Example Aim Statement

In response to the need to increase screening for colorectal cancer, ABCD Health Clinic formulated a strategy to educate patients on the benefits of early detection and refer patients for screening. To this end, ABCD Health Clinic devised this aim statement:

By June 30, 2017, 75 percent of eligible patients will receive information about colorectal cancer and be given a referral for a FIT test or colonoscopy.

This statement includes a specific population (patients eligible for colorectal screening), a specific target (75 percent), and an unambiguous deadline (June 30, 2017) to focus effort and by which the aim should be achieved.

Process Mapping

When a system is large and complex, it can be difficult to determine where quality improvement work should begin. Process mapping is a quality improvement exercise that creates a visual representation of an entire workflow process from beginning to end. Developing a process map can help to identify which steps in the journey are operating as they should and which steps may be repetitive, inefficient, or likely to fail. Process mapping often illustrates the full range of staff involved in a process and the roles that they play at each step. This global portrait can help staff members involved in only a handful of steps to see how their work contributes to a much larger process.

Planning the Process Mapping Session

There are several things to consider before the process mapping can begin. The most important is who will be involved in the process mapping. **It is important to involve individuals who, collectively, are knowledgeable about every single step of the process.** If there are gaps in the group knowledge, then the process map will be missing crucial elements. Be sure to solicit staff members from groups that might not appear to be as relevant, including administrative workers. These individuals can provide important perspectives on the patient's journey.

Consider the group dynamics. There may be certain staff that need extra preparation before the session so that they feel comfortable contributing. If the entire group has not worked together before, it may be wise to include an ice breaker at the beginning of the session, and agree on meeting norms (e.g., everyone has equal voice). If personalities may clash, it can be useful to invite a neutral facilitator to lead the discussion, and the group may agree on how differences will be resolved (e.g., consensus, majority, defer to designated person, etc.)

Think about the best time for the session to take place. Choose a time that will allow the entire team to participate. Allocate enough time for both process mapping and review. Schedule the follow-up meeting at the beginning of the initial process mapping session, so that a time is agreed to before the session adjourns.

Identify the location of the process mapping session. Choose a location that is central to all invited staff. The location should be large enough to comfortably accommodate the entire audience, allowing everyone to see and hear each other and to see the map as it is being developed.

Creating Your Process Map

Being sure to solicit the input of all staff groups at the session, use the following steps to create the process map:

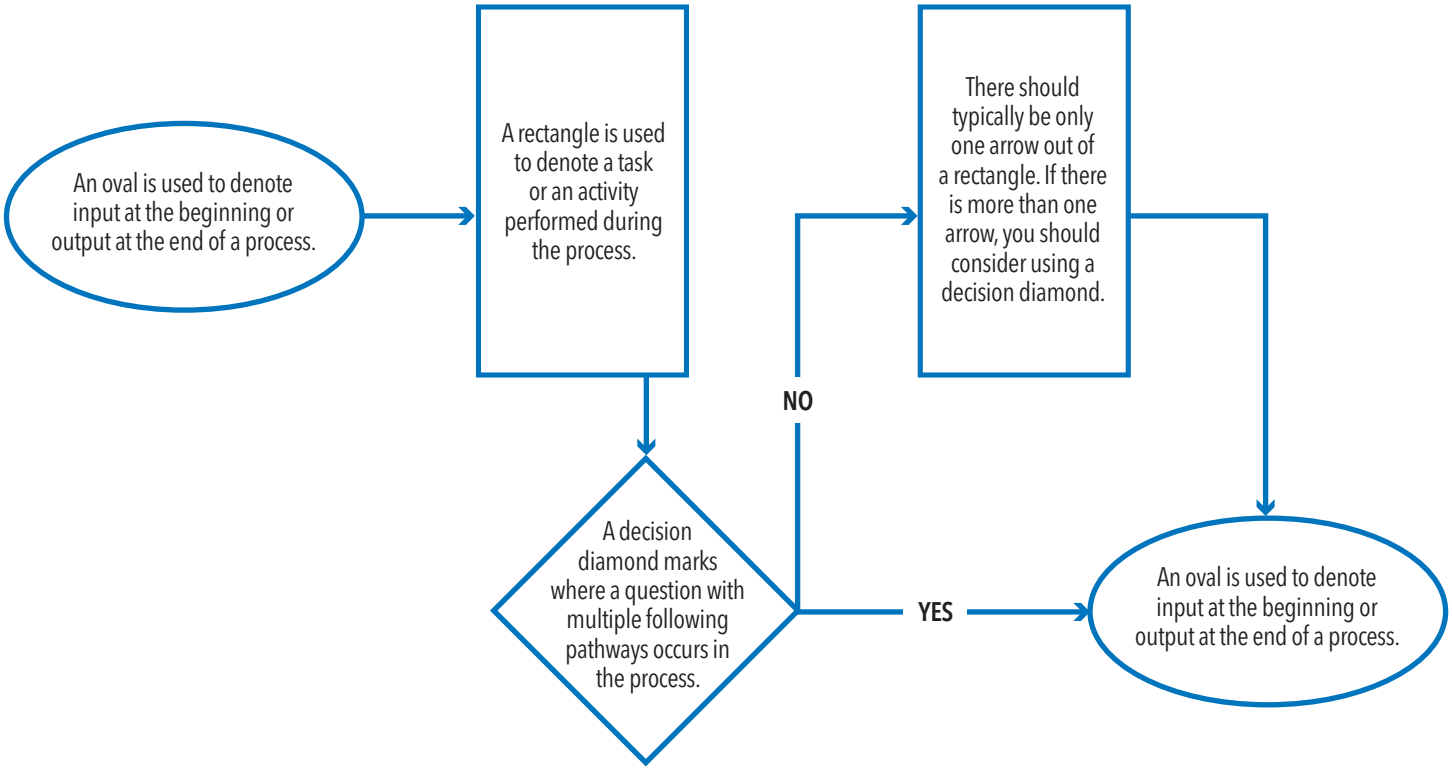
1. **Determine the boundaries.** Decide where the process begins and ends.

2. **List the steps.** Use verbs to start the description of each step in the process. This can be very complex, especially when there are many staff members contributing.

3. **Reconcile differences between different versions of the process**. There may be multiple reconciliation sessions. Different staff members offer different perspectives, which may result in different "versions" of the process map. Work together to reconcile these differences, and recognize that this can present an opportunity for identifying inconsistencies, areas in need of improvement, and/or internal confusion.

4. **Sequence the steps.** Write the steps on post-it notes so they can be easily moved until the group decides on a final sequence.

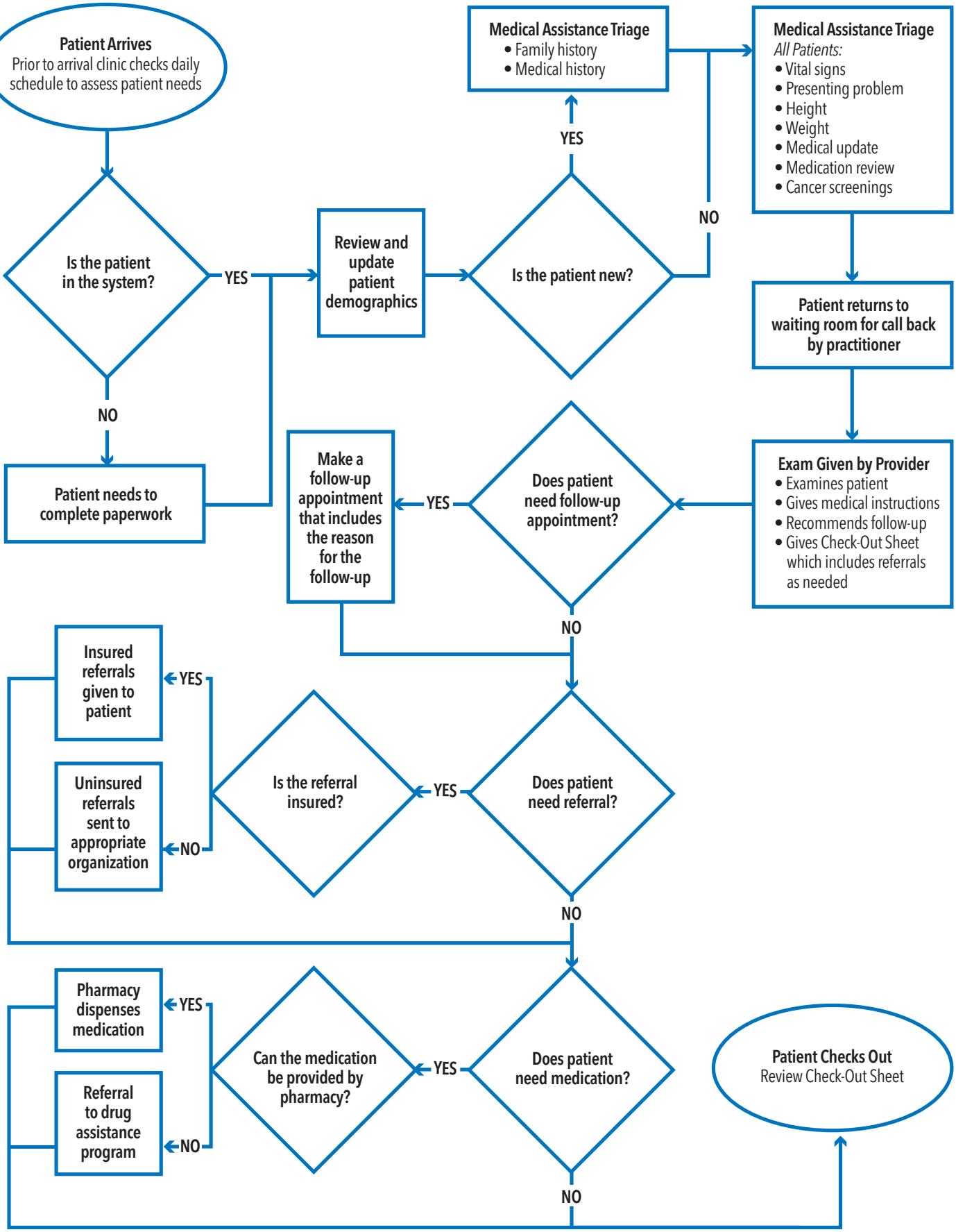
5. **Illustrate the process.** When recording the final process, it is helpful to use certain symbols to visually orient the viewer to the process. Process maps typically rely on arrows and the shapes from the figure below to represent the role of each step in the process.



6. **Check for completeness.** Make sure all pertinent chart information is present, including time and date for easy reference.

7. **Finalize the process map.** Confirm that the group has reached a consensus on the final process map. If not, retrace your steps and modify where necessary.

Example of a Completed Process Map



Analyzing Your Process Map

Analyzing your process map is just as important as creating it. In fact, it is the purpose of creating a process map! This is where the group will identify the steps that work well and the steps that require improvement. These decisions will guide future strategies for improvement. To identify what steps need attention, ask the following questions:

- How many handoffs are there, and are any of these unnecessary?
- Could some tasks be carried out by one person instead of several people?
- Is there any duplication of work?
- Is there any point of the process where there is too much congestion?
- What is the approximate time between each step?
- Which tasks help to achieve the purpose and which ones do not? Can tasks that do not add value to patients be removed?
- Are we doing the right things in the process?
- Are we doing things in the right order?
- Is the best person doing it?
- What information do we give patients? At what stage? Is the information useful?
- Should some tasks that are performed in another process be performed here?
- Are there inconsistencies or disagreements between staff on what the process currently is? What it should be?

After identifying the steps in the process that need improvement, it is time to redesign the process. Always keep the patient as the focus of all plans and consider the ripple effects that any changes will have. With these things in mind, it's time to start implementing and testing.

Establishing Measures

How do you know if your changes are resulting in improvement? Simple–you measure. Measurement in quality improvement allows the QI team to determine their program's baseline or current performance, set targets for future performance, and monitor the effects of changes over time. While it may seem intimidating, measurement does not have to be difficult, time-consuming, or resource-intensive. Picking the right measures allows the QI team to see results quickly and adapt their interventions accordingly, which reduces the amount of strain on resources and increases focus on outcomes. The measures should serve you, not the other way around.

The health sector typically uses three types of measurement: measurement for research purposes, measurement for comparison, and measurement for improvement. Health care providers are traditionally trained to look at research; however, measurement for improvement aims to bring new knowledge into daily practice.

Comparing and Contrasting Measurement Perspectives

Measurement Perspective	Research	Comparison	Quality Improvement
Purpose of the Test	To contribute to generalizable knowledge	To compare, reassure, spur change	To bring new knowledge into daily practice for the site
Testing Method	One large blind test	Comparison of outcomes over a fixed time period	Many sequential, observable tests
Accounting for Biases in Test	Control for as many biases as possible	No testing, just comparison of outcomes over fixed time period	Stabilize the biases from test to test
Data Collection	Gather as much data as possible, "just in case"	Gather all available relevant data for comparison	Gather "just enough" data to learn and complete another cycle
Duration of the Test	Can take long periods of time to obtain results	No test; retroactive analysis over specified time period	Small tests of significant changes accelerate improvement

Outcome, Process, and Balancing Measures

Improvement efforts require a balanced set of three different types of measures: outcomes measures, process measures, and balancing measures. The following are just illustrative; you'll want to create a set of measures appropriate to your own goals and practice.

Outcome Measures
How does the system impact the patients, their health, and wellbeing? What is the impact on other stakeholders, e.g., the employees, the community, or payers?
For diabetes: Track average hemoglobin A1c level for population of patients with diabetes
For access: Track number of days to third next available appointment

Process Measures
Are the various components of the system performing as planned? Are we on track to reach our improvement goals?
For diabetes: Track percentage of patients with annual A1c testing
For access: Track average number of daily appointments available

Balancing Measures
Are changes designed to improve one part of the system causing new problems in other parts of the system?
For diabetes: *Track injuries to make sure increasing physical activity isn't leading to an increase in injuries*
For access: *Track patient satisfaction to guard against patients feeling rushed*

Selecting Changes

All changes do not lead to improvement, yet all improvement requires change. The ability to develop, test, and implement changes is essential for any individual, group, or organization that wants to continuously improve. Through repeatedly testing small changes over time, quality improvement teams can refine changes to have the maximum impact. There are many kinds of changes that will lead to improvement, but specific changes are developed from a limited number of change concepts.

A change concept is a general notion or approach to change that has proven useful in developing specific ideas for changes that lead to improvement. Creatively combining change concepts with knowledge about specific subjects can help generate ideas for tests of change that will result in the desired effect on the established measures. Read through the list of change concepts and think about the where changes you want to make may fit. Does this list give you other ideas for improvement?

Examples of Change Concepts[2]

- **Eliminate Waste**
  Look for ways to eliminate any activity or resource that does not add value to the patient experience.
- **Change the Work Environment**
  Changing the work environment itself can be a high-leverage opportunity for making all other process changes more effective.
- **Clinic-Patient Relationship**
  To appreciate improvements in quality of services, the patient must recognize and understand the improvements.
- **Manage Time**
  An organization can gain a competitive advantage by reducing the time to develop new products, waiting times for services, lead times for orders and deliveries, and cycle times for all functions in the organization.
- **Focus on Variation**
  Reducing variation makes outcomes more predictable and helps reduce the frequency of poor results.
- **Error Proofing**
  Redesign the system to make it less likely for people in the system to make errors. One way to error proof a system is to make the information necessary to perform a task available in the external world, and not just in one's memory, by writing it down or by actually making it inherent in the product or process.
- **Focus on the Product or Service**
  Although many organizations focus on ways to improve processes, it is also important to address improvement of products and services.

After generating ideas, select the ideas you'd like to test. You'll do this by running Plan-Do-Study-Act (PDSA) cycles to test a change or group of changes on a small scale to see if they result in improvement. If they do, expand the tests and gradually incorporate larger and larger samples until you are confident that the changes should be adopted more widely. PDSA cycles are described in the next section.

[2] *The Improvement Guide* (Langley GJ, Nolan KM, Nolan TW, Norman CL, Provost LP. San Francisco: Jossey-Bass Publishers, Inc.; 2009)

Testing Changes: Plan-Do-Study-Act Cycles

After establishing a team, setting aims, and deciding on which measures to establish, it is time to put the plan into action. The Plan-Do-Study-Act (PDSA) cycle is a part of Institute for Healthcare Improvement's Model for Improvement. It's an effective tool for testing changes on a small scale in a real-world setting. A PDSA cycle involves planning change, trying it, studying the results, and then acting in response to what was learned. The PDSA cycle is an adaptation of the scientific method that has special focus on action and reaction.

Why Test Changes?

- To provide evidence that the change will result in improvement
- To collect information on which of the proposed changes will be the most effective
- To determine how much of an impact a change will have
- To determine if the change operates well in the actual work environment
- To determine if combining multiple changes will have an even greater impact
- To observe a change's effects on cost and social networks, as well as any other side effects
- To create support for the future transition from testing to implementation

Steps in the PDSA Cycle

1 Plan

- Determine the goal of the test
- Make predictions about the change's impacts, being sure to include the reasoning for each prediction
- Create a comprehensive plan for testing the change. Make sure the plan addresses:
  - Who will be testing the change
  - What specifically the change will be
  - When the change will occur
  - Where the change will occur
  - How all relevant data will be collected

2 Do

- Try the change on a small scale
- Observe and record any problems or surprising effects
- Collect all data that is relevant to the established measures

3 Study

- Analyze all data and observations
- Compare results to earlier predictions
- Summarize findings and reflect on lessons learned

4 Act

- Review the findings and determine what modifications are necessary
- Begin planning for next PDSA cycle

Example of a Test of Change (Plan-Do-Study-Act Cycle)

Diabetes: Planned visits for blood sugar management.

Cycle 1

Plan: Ask the first patient of the day if he or she would be interested in a planned visit to learn more about how to manage his or her blood sugar
Do: Dr. L. asked his first patient with diabetes on Monday
Study: Patient indicated interest; Dr. L. appreciated the patient's positive response
Act: Dr. L. will ask the first five patients of the day, and the staff will set up appointments for those who indicate interest

Cycle 2

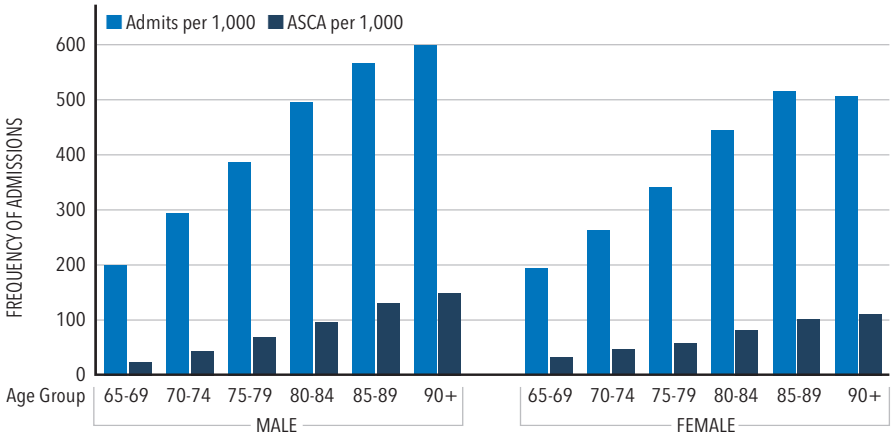
Plan: Dr. L. will ask the first five patients of the day
Do: Dr. L. attempts to ask, but sometimes he runs out of time or forgets to ask
Study: Team suggests that another staff member could assume responsibility for asking, such as the Medical Assistant
Act: Dr. L's Medical Assistant will ask the first five patients of the day

Data Visualization and Analysis

Now that your quality improvement measures have been established, you will determine whether a change has had a real effect by analyzing the data associated with those measures. An important component of data analysis is graphing the results. Charts and graphs visually convey ideas and patterns that might not be readily apparent when the data is in text form. There are several different types of graphs you can use to present your data. Two of the simplest are the histogram and the pie chart. These present data as it is at a particular point in time.

The **histogram** is useful for determining whether the values of your data set are clumped together or relatively spread out. Histograms are frequency graphs, meaning they show how often a particular value of the variable occurs. Higher rectangles indicate a higher frequency.

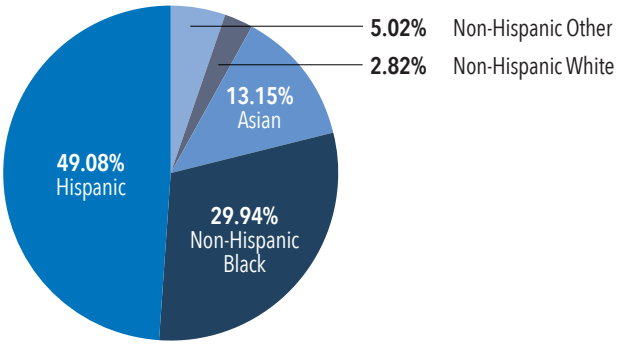
Incidence of Hospital Admissions and ASCA by Demographic Group



Data sources: Milliman analysis of Medicare 5% sample data, 2006; AHRQ Prevention Quality Indicators, version 3.2.

The **pie chart** is useful for determining the distribution of a categorical data set. Like histograms, pie charts show how often a value occurs. The frequency of a value is shown by the size of the "wedge" in the "pie."

Patient Population Race/Ethnicity



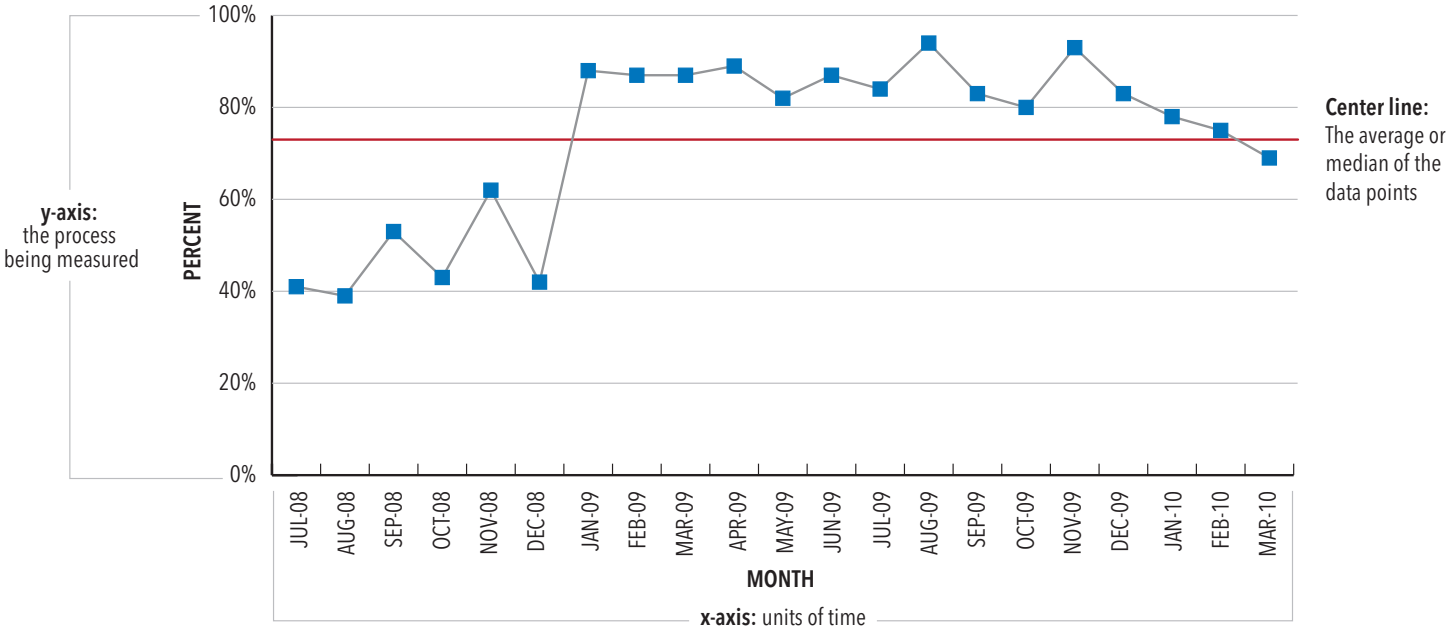
Graphing Data Over Time

Histograms and pie charts are useful for analyzing data at a point in time; however, in order to determine whether a change had a real effect on your chosen measures, you need to examine how that measure changes over time. To do this, graph the data using a run chart.

A **run chart** displays change in the measure over time. The horizontal axis is units of time and the vertical axis is values of the measure. To construct a run chart, follow these steps:

1. Obtain a set of 15 or more data points in their natural time sequence (e.g. minutes, weeks, days, etc.).
2. Draw the vertical and horizontal axes, leaving room on all sides to title and label the graph.
3. Label the vertical (Y) axis with the name of the variable being measured (e.g., Percent of Births by C-section, Number of Days to Third Next Available Appointment, etc.).
4. Label the horizontal (X) axis with the unit of time or sequence in which the numbers were collected (e.g., April, May, June, etc., or Quarter 1, Quarter 2, etc.).
5. Determine the scale of the vertical axis. The scale should extend from a number 20 percent larger than the largest value to a number 20 percent smaller than the smallest value. Label the axis in equal intervals between these two numbers.
6. Plot the data values in the sequence in which they occurred.
7. Draw lines to connect the points on the graph.
8. Calculate the mean (the average) or the median (the midpoint of the data distribution) of the plotted numbers and draw the line on the graph. In cases where it is suspected that the data are asymmetrical, the median may be a more appropriate measure of the true middle of the data because the median is less sensitive to extreme values.
9. Title the chart, and note the goal line and the sample size.
10. Annotate the chart, indicating when tests of change were initiated, so that it is easy to see the effect of changes on the measure. Also indicate any external events that may have affected the performance of the process.

Example Run Chart: Percentage of Women Referred that Completed Mammogram by Month



Reading a Run Chart

Graphs of data over time can clearly show patterns or trends in the data, which in turn may indicate whether a change has resulted in a real effect.

For a run chart, you may determine whether there has been a real change if you observe one of these patterns:

- **Shift:** Six or more consecutive points above or below the mean/median line. Note that any values that fall directly on the median neither count toward the shift nor break it; simply skip these points and keep counting. If the shift occurs above the median, then the measure is generally increasing.
- **Trend:** Five or more consecutively increasing or decreasing points. Note that if the value of two consecutive points is exactly the same, then skip one of these points and keep counting.
- **Astronomical point:** A dramatically different value. While there is no concrete rule for what makes a value "astronomical," in general it is a point that anyone looking at the chart would agree is unusual.
- **Too many or too few runs:** A run is a series of consecutive data points either above or below the mean/median. Consult the Run Chart Interpretation Table below to determine the range of a normal number of runs for your data set.

Run Chart Interpretation Table

Number of Data Points *(Don't count points that lie on the median)*	Lower Limit for Number of Runs *(Lower than this number is too few runs)*	Upper Limit for Number of Runs *(Higher than this number is too many runs)*	Number of Data Points *(Don't count points that lie on the median)*	Lower Limit for Number of Runs *(Lower than this number is too few runs)*	Upper Limit for Number of Runs *(Higher than this number is too many runs)*
10	3	9	31	11	22
11	3	10	32	11	23
12	3	11	33	12	23
13	4	11	34	12	24
14	4	12	35	12	24
15	5	12	36	13	25
16	5	13	37	13	25
17	5	13	38	14	26
18	6	14	39	14	26
19	6	15	40	15	27
20	6	16	41	15	27
21	7	16	42	16	28
22	7	17	43	16	28
23	7	17	44	17	29
24	8	18	45	17	30
25	8	18	46	17	31
26	9	19	47	18	31
27	10	19	48	18	32
28	10	20	49	19	32
29	10	20	50	19	33
30	11	21	51	20	33

If any one of these trends is present, then you can determine that a change occurred in the data. To determine what caused this change, refer back to your run chart. Are the patterns in the data preceded by the initiation of process improvement efforts? If so, then it is likely your process changes had a real effect on your measure.

Knowing what kind of effect (if any) your process improvement efforts had on your established measures will shape your next steps. If your process change did have the desired effect, then you know you are on the right track. However, if your process change had no effect or an undesired effect, then either modify the previous change or test a new change.

Implementing Changes

After testing a change on a small scale, learning from each test, and refining the change through several PDSA cycles, the change is ready for implementation on a broader scale, such as for an entire pilot population or on an entire unit.

Implementation involves building the change into the organization's culture and processes so that the improvement is permanent. It may affect documentation, written policies, hiring, training, compensation, and aspects of the organization's infrastructure that are not heavily engaged in the testing phase. Implementation also requires the use of the PDSA cycle.

Example

Testing a change:
Three nurses on different shifts use a new medication reconciliation and order form.

Implementing a change:
All 30 nurses on the pilot unit begin using the new medication reconciliation and order form.

Spreading Changes

Spread is the process of taking a successful implementation process from a pilot unit or pilot population and replicating that change or package of changes in other parts of the organization or other organizations.

During implementation, teams learn valuable lessons necessary for successful spread, including key infrastructure issues, optimal sequencing of tasks, and working with people to help them adopt and adapt a change.

Spread efforts will benefit from the use of the PDSA cycle. Units adopting the change need to plan how best to adapt the change to their unit and to determine if the change resulted in the predicted improvement.

Example

Testing a change:
Three nurses on different shifts use a new medication reconciliation and order form.

Implementing a change:
All 30 nurses on the pilot unit begin using the new medication reconciliation and order form.

Spreading a change:
All nurses in the entire hospital begin using the new medication reconciliation and order form.

Managing Change and Transition

By definition, quality improvement is a change from the way things are currently done. The organization's leaders play an important role in the process. When an organization is experiencing several changes at once, leadership must take care to pace and manage the transition throughout the organization. This section will help leaders and managers think about and manage their roles in the change process, particularly when a group or organization is going through significant, non-incremental change.

Change models, change, and transition are distinct from one another.

Although **change models** are often displayed in a step-by-step fashion, change is a dynamic process, and some steps happen simultaneously. The model is intended to inform and stimulate thinking, prompt discussion, and guide actions. In planning any change, be sure to build in frequent opportunities to give and receive feedback and information among all stakeholders.

Change is situational and focuses on the outcome or the result. Change is the new site, the new policy, or the new structure.

Transition is the psychological process people go through when coming to terms with the new situation. Transition is a process with a focus on the inner experience, not on the outcome or results.

Most change activities fail because managers fail to manage the transitions. Here we provide information to support quality improvement leaders and managers in successfully managing both change and transition. This is done in three major phases.

Phase 1 – Prepare

Leaders clarify the reason and the vision for the change. Build a case for change that engages both the head and the heart. Be clear on why the change is needed, what the future will look like after the change, and what the plan is to achieve the change. In planning communication, consider doing the following:

Develop a compelling story	• Provide a context for the change • Focus on the why, why now, what, and how • Develop a high-level message that captures the gist of the comprehensive vision
Repeat, repeat, repeat	• Use every opportunity to link day-to-day business activities and decisions with the vision • Continue to reinforce the message throughout the entire change process
Use many different forums	• Make it a habit to refer to elements of the vision in every communication; formal and informal • Continue to reinforce the message throughout the entire change process

Leaders create the team. At this stage, it is important to engage the right people; assemble a team representing diverse yet relevant skills and perspectives. Establish clear goals for the team, and agree on team roles. Typically a change team includes champions to help others embrace the change, so include key individuals who have the respect of their peers, and people who can empathize while staying motivated and committed to the change. The change team/project team may function as the QI team if they are charged with designing the change, not just implementing it.

Change teams have the following roles. Small teams may have individuals serving in multiple roles.

Team Role	Description and Responsibility
Sponsor	• Ultimately responsible for the change • Provides executive-level support and resources to drive the change effort
Senior Steering Group	• Individuals have sufficient influence and authority in their areas to make decisions and assemble resources/ support to make the change succeed • Group assembles at the very beginning and is responsible for developing the vision, engaging and guiding the organization during the change process, and managing the change initiative to its successful completion • Group sets the strategy, provides resources, removes roadblocks, clarifies priorities, communicates with stake-holders, builds support, and resolves conflicts
Change Team(s)/ Project Team(s)	• Individuals who can ensure that tasks are completed properly and on time and can provide assistance in the design and deployment of the change • Change team is formed when the tasks associated with the change have been determined

Phase 2 – Implement

Leaders engage staff for action and support the change team to generate short-term wins. In this phase leadership is highly visible. This is the phase in which it is important to identify and understand stakeholders, and build a critical mass of people who support the change.

- Actively involve those who will be impacted by the change
- Establish communication principles and processes
- Encourage risk taking and innovation
- Learn from, do not punish, mistakes
- Review change goals as necessary based on what you learn

This is also the phase in which leaders must manage the transitions – the psychological process that staff are working through. William Bridges, an internationally recognized authority on managing change in the workplace, developed "The Bridges' Transition Model" to describe three phases of transition:

Ending, Losing, and Letting Go	The Neutral Zone	The New Beginning
Recognition of the need to disengage from old approaches, structures, relationships, roles, and accept moving on	Uncertainty and possible fear about what the future holds; mixed feelings	Clarity about the future, feeling positive, re-energized, renewed sense of purpose

The "Ending, Losing, and Letting Go" stage is often a time of opposition and disorientation because staff are being forced to let go of old and familiar routines. Those impacted by the change need to accept that something is ending before they can begin to embrace the new. If the emotions of staff are not acknowledged during this time, you'll likely encounter resistance throughout the entire change process. Once it is accepted that they need to let go of the old way of doing things but have yet to embrace the new approach, they have moved into "The Neutral Zone."

Emotionally, the process is similar to a grieving process. The manager's role is to maintain communication and support people moving along their personal journeys to move out of the earlier stages into "The New Beginning." In planning communication through this emotional transition, consider these tips:

Address "Ending/Letting Go" directly	• Before you can begin something new, you often need to end what used to be • Note that it may not be the change that people resist, but the losses and ending that go with it, so it's important to deal directly with these
Identify what is actually ending and who is losing what	• Explain what will be different–what will people be asked to let go of/give up (relationships, current methods, values, etc.) • Be as specific as possible and avoid vague terms
Accept the reality and importance of subjective loss	• Don't argue–this isn't the time to convince people • Recognize that loss is a subjective experience
Don't be surprised at "over-reaction"	• Remember people are likely reacting to the prospect of loss, not the change • Some people may be reacting from negative past experience with change
Acknowledge the losses openly and sympathetically	• Talk openly – E.g., "I'm sorry we're cutting our numbers, we're losing some good people." – This approach gives people permission to express their feelings.
Expect and accept the signs of grieving	• May involve denial, sadness, bargaining (to try and change the situation), depression, etc. • Express your own feelings (gives permission to others to do the same), provide empathy and reassurance (but not with unrealistic suggestions of hope) • Do what you can to restore people's sense of having some control over the situation
Define what's changed and what hasn't	• Rumors may abound, so be clear about what's changed and what hasn't
Treat the past with respect	• Don't denigrate the past • If possible, honor the past for what it has accomplished • If possible, let people take a bit of the old ways with them, even if only symbolically

Phase 3 – Sustain

Leaders take concrete actions to sustain the change. In this phase, the change has been made and is well established as the new routine. Intentional planning allows for changes that improve the quality of care to be sustained. Quality improvements that are not sustained are a waste of resources. Reverting back to less effective processes and practices is a drain of resources that may increase resistance to future quality improvement efforts.

Sustainability of a process improvement project should be considered from the beginning. Although finance is a large part of sustainability, it is not the only factor to be considered. You should take into account the feelings of your staff, your organization's capacity, program evaluation findings, and stakeholder feedback about your program.

Program Sustainability Assessment Tool[3]

The Program Sustainability Tool was developed by the Center for Public Health Systems Science at the Washington University in St. Louis. This tool will enable you to assess your program's current capacity for sustainability across a range of specific organizational and contextual factors. Your responses will identify sustainability strengths and challenges. You can then use results to guide sustainability action planning for your program.

Helpful definitions

This tool has been designed for use with a wide variety of programs, both large and small, across different settings. Given this flexibility, it is important for you to think through how you are defining your program, organization, and community before starting the assessment.

Below are a few definitions of terms that are frequently used throughout the tool.

- **Program.** The set of formal organized activities that you want to sustain over time. Activities may occur at the local, state, national, or international level and in a variety of settings.
- **Organization.** All the parent organizations or agencies in which the program is housed. Depending on your program, the organization may refer to a national, state, or local department, a nonprofit organization, a hospital, etc.
- **Community.** The stakeholders who may benefit from or who may guide the program. This could include local residents, organizational leaders, decision makers, etc. Community does not refer to a specific town or neighborhood.

[3] Copyright 2013. The Program Sustainability Assessment Tool v2 is a copyrighted instrument of Washington University in St Louis and is licensed under a Creative Commons Attribution-Noncommercial-Share Alike 3.0. All rights reserved. If you would like more information about the framework or its sustainability assessment tool, visit http://www.sustaintool.org.

Program Sustainability Assessment Tool

The name of the program or set of activities I am assessing is:

_____

In the following questions, you will rate your program across a range of specific factors that affect sustainability. Please respond to as many items as possible. If you truly feel you are not able to answer an item, you may select "NA." **For each statement, circle the number that best indicates the extent to which your program has or does the following things.**

Environmental Support: Having a supportive internal and external climate for your program

	To little or no extent						To a very great extent	Not able to answer
1. Champions exist who strongly support the program.	1	2	3	4	5	6	7	NA
2. The program has strong champions with the ability to garner resources.	1	2	3	4	5	6	7	NA
3. The program has leadership support from within the larger organization.	1	2	3	4	5	6	7	NA
4. The program has leadership support from outside of the organization.	1	2	3	4	5	6	7	NA
5. The program has strong public support.	1	2	3	4	5	6	7	NA

Funding Stability: Establishing a consistent financial base for your program

	To little or no extent						To a very great extent	Not able to answer
1. The program exists in a supportive state economic climate.	1	2	3	4	5	6	7	NA
2. The program implements policies to help ensure sustained funding.	1	2	3	4	5	6	7	NA
3. The program is funded through a variety of sources.	1	2	3	4	5	6	7	NA
4. The program has a combination of stable and flexible funding.	1	2	3	4	5	6	7	NA
5. The program has sustained funding.	1	2	3	4	5	6	7	NA

Partnerships: Cultivating connections between your program and its stakeholders

	To little or no extent						To a very great extent	Not able to answer
1. Diverse community organizations are invested in the success of the program.	1	2	3	4	5	6	7	NA
2. The program communicates with community leaders.	1	2	3	4	5	6	7	NA
3. Community leaders are involved with the program.	1	2	3	4	5	6	7	NA
4. Community members are passionately committed to the program.	1	2	3	4	5	6	7	NA
5. The community is engaged in the developmentn of program goals.	1	2	3	4	5	6	7	NA

For each statement, circle the number that best indicates the extent to which your program has or does the following things.

Organizational Capacity:
Having the internal support and resources needed to effectively manage your program and its activities

	To little or no extent						To a very great extent	Not able to answer
1. The program is well integrated into the operations of the organization.	1	2	3	4	5	6	7	NA
2. Organizational systems are in place to support the various program needs.	1	2	3	4	5	6	7	NA
3. Leadership effectively articulates the vision of the program to external partners.	1	2	3	4	5	6	7	NA
4. Leadership efficiently manages staff and other resources.	1	2	3	4	5	6	7	NA
5. The program has adequate staff to complete the program's goals.	1	2	3	4	5	6	7	NA

Program Evaluation: Assessing your program to inform planning and document results

	To little or no extent						To a very great extent	Not able to answer
1. The program has the capacity for quality program evaluation.	1	2	3	4	5	6	7	NA
2. The program reports short-term and intermediate outcomes.	1	2	3	4	5	6	7	NA
3. Evaluation results inform program planning and implementation.	1	2	3	4	5	6	7	NA
4. Program evaluation results are used to demonstrate successes to funders and other key stakeholders.	1	2	3	4	5	6	7	NA
5. The program provides strong evidence to the public that the program works.	1	2	3	4	5	6	7	NA

Program Adaptation: Taking actions that adapt your program to ensure its ongoing effectiveness

	To little or no extent						To a very great extent	Not able to answer
1. The program periodically reviews the evidence base.	1	2	3	4	5	6	7	NA
2. The program adapts strategies as needed.	1	2	3	4	5	6	7	NA
3. The program adapts to new science.	1	2	3	4	5	6	7	NA
4. The program proactively adapts to changes in the environment.	1	2	3	4	5	6	7	NA
5. The program makes decisions about which components are ineffective and should not continue.	1	2	3	4	5	6	7	NA

For each statement, circle the number that best indicates the extent to which your program has or does the following things.

Communications: Strategic communication with stakeholders and the public about your program

	To little or no extent						To a very great extent	Not able to answer
1. The program has communication strategies to secure and maintain public support.	1	2	3	4	5	6	7	NA
2. Program staff communicate the need for the program to the public.	1	2	3	4	5	6	7	NA
3. The program is marketed in a way that generates interest.	1	2	3	4	5	6	7	NA
4. The program increases community awareness of the issue.	1	2	3	4	5	6	7	NA
5. The program demonstrates its value to the public.	1	2	3	4	5	6	7	NA

Strategic Planning: Using processes that guide your program's direction, goals, and strategies

	To little or no extent						To a very great extent	Not able to answer
1. The program plans for future resource needs.	1	2	3	4	5	6	7	NA
2. The program has a long-term financial plan.	1	2	3	4	5	6	7	NA
3. The program has a sustainability plan.	1	2	3	4	5	6	7	NA
4. The program's goals are understood by all stakeholders.	1	2	3	4	5	6	7	NA
5. The program clearly outlines roles and responsibilities for all stakeholders.	1	2	3	4	5	6	7	NA

Program Sustainability Assessment Tool Rating Instructions

Once you have completed the Program Sustainability Assessment Tool, transfer your responses to this rating sheet to calculate your average scores. Please record the score for each item (1-7), or write "NA" if you were not able to answer.

	ITEM	Environmental Support	Funding Stability	Partnerships	Organizational Capacity	Program Evaluation	Program Adaptation	Communi-cations	Strategic Planning
	1.								
	2.								
	3.								
	4.								
	5.								
Add up your scores in each column. Exclude "NA".	**Domain Total:**								
Divide the domain total by the total number of items with a score. Exclude "NA"	**Average Score for Domain:**								
Average together all the domain scores	**Overall Score:**								

Use these results to guide sustainability action planning for your program. The domains with lower average scores indicate areas where your program's capacity for sustainability could be improved.

Conclusion

Successfully implementing system changes does not signal the end of your quality improvement journey, but the beginning. To keep from slipping back to old ways, all changes must be made with sustainability in mind. This can be done by making quality improvement a part of your organization's culture, cross-training staff on essential clinical and administrative skills, sharing responsibilities among multiple staff, creative grant writing and fundraising, and many other strategies. While you should pause to celebrate your success, remember to keep moving forward and ensure that your changes are both impactful and long lasting.

Through systematic, consistent testing paired with thoughtful responses, a QI team can affect real change in a health care setting. This success can only be reached through collaboration. Learn from and share with your colleagues at your own organization as well as with your colleagues at other organizations facing similar challenges. We are all in this together!

Resources for Additional Study

Institute for Healthcare Improvement Resources Page
http://www.ihi.org/resources/Pages/default.aspx
IHI's website offers a variety of tools, change ideas, measures to guide improvement, white papers, audio and video, improvement stories, and more.

The Improvement Guide: A Practical Approach to Enhancing Organizational Performance, 2nd Edition by Gerald J. Langley, Ronald D. Moen, Kevin M. Nolan, Thomas W. Nolan, Clifford L. Norman, and Lloyd P. Provost.
Authored by the creators of the Model for Improvement framework, this guide offers a deeper exploration of its ability to deliver quick and substantial process improvement results in diverse organizational settings.

The Team Handbook, 3rd Edition by Peter R. Scholtes, Brian L. Joiner, and Barbara J. Streibel
This best-selling, comprehensive resource book provides in-depth guidance to create high-performing teams.

Managing Transitions: Making the Most of Change by William Bridges
This guide provides step-by-step strategies for minimizing the disruptions caused by workplace change.

Run Charts: A Simple and Powerful Tool for Process Improvement by Carl Berardinelli
https://www.isixsigma.com/tools-templates/control-charts/run-charts-a-simple-and-powerful-tool-for-process-improvement/
This article takes the reader through the benefits of a run chart as well as how to correctly create and analyze one.

Notes

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- Montgomery County Cancer Crusade
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- Proyecto Salud Clinic
- Mercy Health Clinic
- Catholic Charities Medical Clinic at McCarrick Center
- Mansfield Kaseman Clinic
- Muslim Community Clinic
- Holy Cross Health
- CCI Health & Wellness Services
- Prevent Cancer Foundation
- The People's Community Wellness Center
- Community of Hope
- Community Health Care Network
- Greater Baden Medical Services