



# Quality Management System Guide

## 2020-2022



The Executive Director approves, and the Governing Council and Board of Health authorize the QMS and adoption of this guide as noted by their review and signatures.

---

Mark Pfister  
Executive Director

---

Date

---

Melissa Withem-Voss  
Governing Council Chair

---

Date

---

Timothy Sashko  
Board of Health President

---

Date

## Contents

I.	Purpose	1
II.	Aim	1
III.	Objectives	1
IV.	Scope and Integration with Mission, Vision, and Values	1-2
V.	Governance and Organization	3-4
VI.	Quality Improvement Principles	4-5
VII.	Roles and Responsibilities	5-7
VIII.	Staffing and Administration Support	7
IX.	Budget and Resource Allocation	7
X.	Quality Improvement Training	7-8
XI.	Quality Improvement Goals, Objectives, and Measures	8
XII.	Data Collection, Visualization and Continuous Monitoring	8-9
XIII.	Initiation of Quality Improvement Efforts	9-10
XIV.	Customer Feedback, Results, and Actions Taken	10-11
XV.	Communication of Quality Improvement Activities	11
XVI.	Monitoring & Evaluation of Quality Management System	11

---

## Appendix

A.	Quality Improvement Project Guide	12-15
B.	Quality Improvement Project Form	16-18
C.	Key Quality Terms	19-20

---

## **I. Purpose**

The Lake County Health Department/Community Health Center (LCHD/CHC) Quality Management System (QMS) Guide is established to provide a context and framework for quality improvement activities to ensure that LCHD/CHC becomes a high-performing organization that provides safe, high-quality care and services in an effective and efficient manner. The QMS is a tool that helps measure and improve the work already being done by empowering staff at all levels of the organization to think critically, learn by doing, and share suggestions and ideas for improvement. The purpose is to promote a systematic approach to continuous quality improvement. This involves monitoring key quality measures and using this data to initiate rapid cycle improvement and sustain and spread the gains.

## **II. Aim**

The aim of the QMS is to continuously assess and improve the quality of care and service delivery to positively affect health outcomes in the Lake County community.

## **III. Objectives**

- To continuously improve processes to meet the needs of the Lake County community in a manner consistent with the organization's mission, vision, goals, and plans.
- To collect, analyze, visualize, and monitor data on an ongoing basis to assess performance and identify improvement opportunities, test changes that may lead to improvement, and to spread and sustain the gains.
- To educate staff regarding their responsibilities and ensure staff have the confidence, knowledge, skills, and abilities to effectively participate in quality improvement activities.
- To empower staff at all levels of the agency to think critically and to share suggestions for improvement.
- To create and foster a non-punitive culture of quality that encourages collaboration, learning, and innovation.

## **IV. Scope of QMS and Integration with Mission, Vision, and Values**

The activities and principles contained in the QMS guide apply to all staff and programming under the purview of LCHD/CHC. While the Quality Program facilitates the adoption of this guide, they are not solely responsible for carrying out the activities contained within. All staff contribute to the establishment of a culture of quality that will enable LCHD/CHC to actively achieve our mission to promote the health and well-being of all who live, work, and play in Lake County. The guide aligns to the mission, vision, and values through the following activities:

- I. Reviewing and monitoring of Key Performance Indicators (KPIs) and the overall quality of care and services delivered.
- II. Establishing a comprehensive approach to quality improvement when KPIs fall below target for two consecutive reporting periods.
- III. Utilizing comparative data to evaluate program processes and outcomes.
- IV. Reporting and communicating results.
- V. Recognizing quality initiatives that resulted in meaningful measurable improvements.

### Key Performance Indicators

KPIs align with the LCHD/CHC strategic plan, the Lake County community health improvement plan, accreditation standards, and Health Resources and Services Administration (HRSA) Uniform Data Set (UDS) clinical quality measures. Targets shall be established based upon national benchmarks whenever possible. If a national standard does not exist, then a state standard shall be used. If a national standard nor a state standard exists, then targets will be established based on baseline LCHD/CHC data. The Quality Program is responsible for ensuring accurate targets. Indicators are reviewed by program leaders at least quarterly, or more frequently depending on the interval the indicator is due. When KPIs fall below target for two consecutive reporting periods, a Program Leader will assemble a team to review and create a plan to address the KPI per Section **XIV**. Directors and Associate Directors are expected to review the KPIs of their direct reports monthly during their supervision meetings to ensure that quality improvement efforts are initiated when KPIs fall below target for two consecutive reporting periods. The Executive Team will be notified any time KPIs are below target and are not addressed through quality improvement.

### Standard Practice Guidelines

Standard practice guidelines (SPGs) have been established based upon the most current evidence-based or consensus-based clinical information. The Medical Director is ultimately responsible for ensuring that SPGs are followed. This framework seeks to improve the quality and consistency of care in specified clinical situations and promote the best outcomes for our patients. All LCHD/CHC healthcare providers are expected to review and adhere to SPGs.

SPGs are intended to:

- Improve the quality of patient care and healthcare outcomes
- Reduce inappropriate variation in practice
- Promote efficient use of resources
- Identify gaps in knowledge
- Support quality control, including audits of clinician's practices

### Peer Review

LCHD/CHC uses Peer Review as an opportunity to establish a culture of transparency, to foster personal growth and to improve quality of healthcare provided to its patients and thus to improve patient outcomes and reduce risk.

The peer review process will follow the current LCHD/CHC peer review policy.

## **V. Governance and Organization**

### Board of Health and Governing Council

The Lake County Health Department is governed by a 12-member Board of Health. Members are appointed by the Chairman of the County Board with approval of the Lake County Board and Lake County residents are preferred with various backgrounds as required by State Statute and Board of Health by-laws for a 3-year term.

The Lake County Health Department and Community Health Center Governing Council oversees the planning and operation of the health department's community health centers. To ensure the LCHD/CHC patient community is represented, a majority of Governing Council members shall be Community Health Center consumers as required by HRSA. Clinical quality indicators are reported to the Governing Council on a monthly basis.

The respective boards have the final authority and are ultimately responsible for the QMS, including approving this guide.

#### Quality, Informatics, and Technology Steering Committee

The Quality, Informatics, and Technology (QIT) Steering Committee will monitor and assess QI efforts and activities across the agency to improve the quality of care and services for our customers.

Responsibilities for the QIT Steering Committee include, but are not limited to the following:

- Promote an interdisciplinary and interdepartmental approach to QI
- Drive action when opportunities for improvement are identified
- Recognize and communicate achievements in accordance with the QI recognition program
- Receive bi-annual updates on the Quality Academy

#### Quality Improvement Sub-Committees

There are three Quality Improvement Sub-Committees that represent each of the major financial units in the agency - Physical Health, Behavioral Health and Prevention. These sub-committees meet monthly and are facilitated by a member of the Quality Program and report up through the QIT Steering committee. The purpose of each sub-committee is to develop a QI plan and monitor progress toward meeting the goals and objectives in each plan. Committee members will represent all program areas and will serve a two-year term, which may be extended or shortened based on agency need.

Responsibilities for the QI Sub-Committees include, but are not limited to the following:

- Develop an annual QI Plan
- Monitor and assess QI activities in accordance with the QI Plan
- Review customer and patient experience data and ensure improvements are being made when measures fall below targets
- Ensure QI efforts align with strategic goals and priorities

#### PHAB Accreditation Sub-Committee

The Public Health Accreditation Board (PHAB) Accreditation sub-committee will assure compliance with PHAB standards and measures and assure that all PHAB accredited programs are prepared for reaccreditation. This sub-committee meets Bi-annually and is facilitated by a member of the Quality Program. Sub-committee members will represent all PHAB accredited program areas and will serve a two-year term, which may be extended or shortened based on agency need.

### **VI. Quality Improvement Principles**

#### Customer Focus

Quality is the extent to which we met the needs and expectations of our customers. The customer is at the center of our work, and they drive our activities. The implementation of our quality improvement efforts must use customer feedback to assure we are addressing and meeting internal and external customer needs. This can be accomplished through customer experience surveys, focus groups, comment cards, and social media comments. Reducing waste and inefficiencies benefits internal customers by making their daily work simpler and easier, which in turn benefits external customers by allowing more time and resources to be focused on them.

#### Employee Engagement, Empowerment, and Teamwork

All levels of staff must be engaged in providing quality care and service to produce effective and efficient operations that help lead to the best possible outcome for the customer. All staff should feel empowered to make suggestions when something is not working well, and supervisors must support and encourage staff to do so. Engaged employees feel supported and empowered to make suggestions and to improve daily work. Teamwork is a cornerstone of quality improvement. All improvement efforts should involve team-based work to harness multiple diverse skill sets and perspectives. Front-line staff should be included, because the people closest to the work know the process best and can provide valuable insight into how the process functions and to potential improvements.

#### Leadership Involvement and Support

Strong leadership, direction and support of quality improvement activities by the LCHD/CHC executive team and governing bodies are key to reaching the department's strategic and operational goals. Leaders encourage and promote the use of rapid cycle improvement as a means of learning what works and what does not. Failure is a natural part of the learning process and should be expected at times and should not be a deterrent to testing new ideas.

#### Data Driven Decisions

Data is the backbone of sound decision-making. Successful improvement activities require valid data and subsequent analysis to drive quality improvement activities and maximize the resources available to accomplish program and department goals. Using accurate data accomplishes the following:

- Displays what is actually happening, as opposed to what people think is happening
- Helps establish a baseline for improvement
- Reduces the chance of ineffective solutions
- Allows monitoring of changes to ensure that improvements are sustained
- Tells us if a change resulted in an improvement
- Allows us to compare performance across sites or to other agencies

#### Application of Quality Improvement (QI) Tools

For continuous improvement efforts to be successful and sustainable, tools are available to foster knowledge and understanding of potential problems and improvement opportunities. A wide range of tools and resources are available on The Quality Toolbox, which is an LCHD/CHC employee SharePoint site. Common tools include run charts, cause and effect diagrams, flowcharts, Pareto charts, histograms, and control charts.

### Culture of Continuous Improvement

A culture of quality requires that staff are empowered and continuously look for ways to do their job better through eliminating waste, improving process flows, and organizing staff activities to reach program and department goals and outcomes.

### Critical Thinking and Problem-Solving

Critical thinking and problem-solving skills across all levels of the organization are essential for improvement. We must fully understand the situation, focus on the root cause of problems, try out potential solutions, and sustain the gains. Staff are expected to foster a learning environment with open communication and are receptive to trying new ideas, taking small risks, and accepting that failure is a part of the learning process. Staff are expected and encouraged to share problems and potential solutions with their supervisor, so improvements can be implemented.

## **VII. Roles and Responsibilities**

All staff must be committed to providing the highest quality customer-focused care and service. This commitment must be at all levels of staff. The key activities of the QMS require a coordinated approach with defined roles and responsibilities of all staff to work together to advance the culture of quality. The following represents the roles and responsibilities of the various staff levels to reach that goal:

### The Executive Team

The executive team establishes the Health Department's commitment to quality, reviews the effectiveness of the QMS, and ensures that adequate resources are committed to reach organizational goals. The team will demonstrate leadership support for building our culture of quality through fostering an optimistic environment where failure is part of the learning process that leads to improvement. This shall include decreasing the fear of reprisal for reporting concerns or incidents. Other responsibilities include the following.

- Reviewing KPIs at the Executive Team meeting
- Discussing program-level KPIs and any current or potential QI projects with their direct reports monthly
- Reviewing patient safety concerns
- Ensuring adequate staff time and resources for QI
- Advocating for QI efforts

### Senior Leaders (Directors, Associate and Deputy Directors)

Senior leaders are expected to understand quality and quality improvement (definition, purpose, basic concepts). The primary role of this group of leaders is to support the adoption of a culture of quality. Other responsibilities include the following.

- Assessing and addressing QI training needs of staff and contacting the quality team to schedule training

- Identifying and initiating problem-solving processes that utilize QI tools and evidenced based practices
- Discussing program-level KPIs and current or potential QI projects with their direct reports monthly
- Overseeing QI projects in their area
- Participating in and/or sponsoring QI projects
- Scheduling staff time for QI projects
- Incorporating QI concepts into daily work
- Recognizing those who contribute to quality, efficiencies and improvement in programs

#### Program Leaders (Coordinators/Managers/Supervisors)

Program leaders are expected to understand quality and quality improvement (definition, purpose, basic concepts). This group is directly responsible for identifying and actively seeking opportunities for improvement based on KPIs and other relevant data to improve program outcomes (See Appendix D). Other responsibilities include the following.

- Assessing and addressing QI training needs of staff and contacting the quality team to schedule training
- Identifying and initiating problem-solving processes that utilize QI tools and evidenced based practices
- Using KPIs to manage the work of the programs they oversee
- Overseeing QI projects in their area
- Participating in QI projects
- Scheduling staff time for QI projects
- Incorporating QI concepts into daily work
- Recognizing those who contribute to quality, efficiencies and improvement in programs
- Identify and actively seek opportunities for improvement based on key indicators and other relevant data to improve program outcomes (See Appendix D)

#### All Staff

All employees are expected to continually look for ways to do their work better, share those ideas with their colleagues and supervisors, and to contribute and adapt to positive change. Other responsibilities include the following.

- Working with their supervisor to identify opportunities for improvement
- Participating in QI initiatives as requested by supervisors
- Collecting and reporting data for QI initiatives
- Developing an understanding of basic QI principles and tools by participating in QI training
- Incorporating QI concepts into daily work

#### The Quality Program

The Quality Program is administered by the Continuous Quality Improvement Coordinator and provides consultation, facilitation, and training for quality improvement efforts throughout the agency. Other responsibilities include the following.

- Facilitating the QI-Sub-committees and PHAB Reaccreditation Sub-Committee
- Developing, reviewing, and revising the QMS Guide
- Developing and implementing training programs
- Consulting or facilitating QI efforts across the agency
- Communicating QI activities
- Recognizing and rewarding QI successes

### **VIII. Staffing and Administration Support**

The Continuous Quality Improvement Coordinator is tasked with implementing organization-wide attempts to ensure that quality improvement (QI) efforts are developed and managed using a data driven focus that sets priorities for improvements aligned with strategic and programmatic priorities. This role maintains responsibility for the QMS and consulting on the planning and executing of quality improvement efforts.

### **IX. Budget and Resource Allocation**

Given available funds, LCHD/CHC receives an annual quality payment from HRSA. The supplemental funding is added to LCHD/CHC's overall Section 330 grant award and is based on performance with the previous year's Clinical Performance Indicators as recorded on the annual UDS report. Per the Notice of Award, funds should be used to "continue to strengthen quality improvement activities, including achieving new and/or maintaining existing patient centered medical home recognition." LCHD/CHC is required to report on activities completed with these funds as part of its annual Budget Period Renewal (BPR). The Quality Management Steering Committee recommends the use of these funds to the Executive Committee for approval. Historically, the annual amount has been between \$35k-\$105k depending on performance and amount of available funds at a federal level.

### **X. Quality Improvement Training/ Workforce Development**

LCHD/CHC is committed to implementing QI methods and tools throughout the agency to improve organizational performance, efficiency and effectiveness of processes, programs, and services. The purpose of quality training is to ensure that employees have the knowledge, skills, and abilities to integrate QI theories and tools into their daily work. Employees should feel supported and empowered to make suggestions and improve daily work. This training curriculum will be the foundation that moves LCHD/CHC towards cultivating a culture of quality and implementing the QMS across the agency.

#### New Employee Onboarding

During the new employee onboarding process, all newly hired LCHD staff will attend a presentation to introduce them to what quality means to the agency, their role, and our customers.

#### SnapComms

SnapComms are interactive screensavers that are used to communicate information to employees. The Quality team regularly publishes SnapComms highlighting key components of the QMS. This enables passive exposure to quality concepts to all LCHD/CHC employees.

#### Foundations of Quality 101

One agency-wide course will be required of all staff. The course consists of key quality terms, quality improvement theory and methodology, and staff roles and responsibilities. The course is an e-learning that will be assigned through BOSS and completed in Online Learning Management.

#### Quality Academy

The purpose of the Quality Academy is to provide in-depth quality training to agency leaders and disseminate a culture of quality throughout the organization. The Quality Academy includes core quality courses from the Institute for Healthcare Improvement (IHI) Open School. The Open School is a comprehensive quality curriculum with courses in quality, safety, leadership, the Triple Aim, and patient-centered care. Courses consist of mixed media to engage multiple learning styles, and include introductory and intermediate courses, as well as a project-based learning module. Participants will attend monthly meetings and complete a practicum. All completed practicum projects are posted on the Quality Toolbox. Those serving on the Quality Academy will be expected to mentor other LCHD/CHC staff in leading quality improvement initiatives during and after the program.

### **XI. Program-level Quality Improvement Goals, Objectives, and Measures**

The process to identify agency and program-level goals and objectives as part of the agency's QMS is ongoing throughout the year. Key quality indicators are documented and visualized by the Health Informatics team through dashboards that are available for all staff to view. These indicators are used to assess program performance and initiate quality improvement efforts when indicated.

Key quality indicators align to the LCHD/CHC strategic plan, the Lake County community health improvement plan, and other recognized performance standards, such as the Public Health Accreditation Board and Joint Commission standards and measures. Programs may also have indicators that are specific to the functions of that program. Key quality indicators for FQHC sites consist of the HRSA UDS Clinical Quality of Care and Health Outcomes and Disparities Indicators.

### **XII. Collection, Visualization and Continuous Monitoring of Data**

The organization collects and monitors data on an ongoing basis. Quality indicators include customer experience and clinical and non-clinical process and outcome measures. Decision making will be based upon collected data. Program leaders are responsible for monitoring data for their program or health center site, reporting this data out to staff, and initiating improvement efforts when indicated. Non-clinical program leaders are responsible for collecting and reporting their program's quality data, populating their KPI dashboards each month as indicated, monitoring program data, sharing data with staff, and initiating improvement efforts when indicated. Quality indicators are monitored periodically depending on the reporting period of the data for the indicator.

The purpose of measurement and assessment of quality indicators is to:

- Assess performance against national benchmarks, if available.
- Identify problems and opportunities to improve program outcomes
- Assess the outcome of services provided
- Evaluate whether a new or improved process meets performance expectations
- Recognize areas of high performance and celebrate strengths

When KPIs reflect that they are not progressing towards their desired targets, managers should use the Model for Improvement (see figure 1), which includes the Plan, Do, Study Act (PDSA) methodology, as the primary tool for quality improvement activities. The criteria for when programs will initiate quality improvement activities is based on their indicator measurement periods. At a minimum, when indicators fail to reach their targets for two reporting periods, then quality improvement efforts will be initiated.

### **XIII. Initiation of Quality Improvement Efforts**

Information from data analysis will be used to make changes that improve performance and customer satisfaction. All staff are responsible for looking for and sharing improvement opportunities. Program leaders are ultimately responsible for initiating quality improvement efforts based upon available data in coordination with their staff and submit their plan to their direct supervisor for review and support. All QI efforts shall be documented on the standardized QI Project Form (see Appendix B) and posted on the Quality Toolbox intranet site in the QI Efforts library. This library can be found on the QI efforts page in the Quality Toolbox.

When an opportunity for improvement is identified, the following steps shall occur:

- Form a team that is representative of all staff integral to the service/issue to be improved.
- Identify the team leader. The leader is usually a program leader and is responsible for ensuring implementation and results of the QI effort. The team leader ensures that the effort is documented on the QI Project Form and is posted on the Quality Toolbox.
- Identify a team sponsor. The team sponsor is a director or associate/deputy director who supports the effort and will allocate time and resources to the team.
- Designate each team member's responsibilities.
- Develop a timeline for reporting findings and improvement strategies.

Once the team is formed, the following steps shall occur:

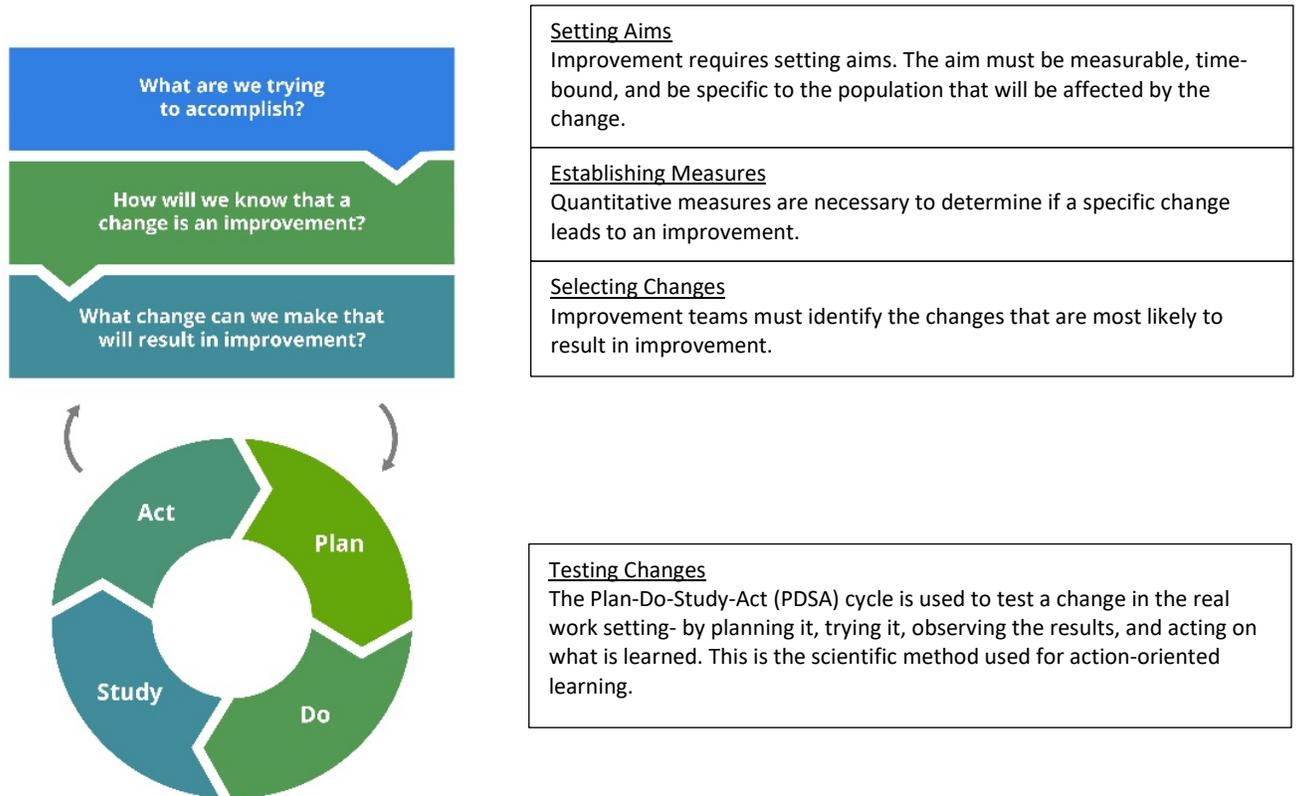
- Fully understand and clarify the problem using QI tools such as process mapping and root cause analysis.
- Recommend steps needed for improvement.
- Pilot test proposed changes to the process using iterative PDSA cycles.
- Standardize the new process once the aim is reached and there is confidence that the process will be successful on a larger scale.
- Spread the new processes throughout the department as appropriate.

The PDSA Guide (See Appendix A), and QI Project Form (See Appendix B) shall be used to help teams document and implement improvement efforts.

To effectively and efficiently utilize resources, the following shall be considered when prioritizing quality improvement efforts:

- Facilitates achievement of the strategic plan and/or the community health improvement plan.
- Addresses improvement of customer service or organizational efficiencies.
- Enough capacity and resources are available to support the project.
- Focuses on a current issue or process that is not in compliance with a funder or an accreditation or regulatory agency.

## MODEL FOR IMPROVEMENT



**Figure 1: The Model for Improvement**

### XIV. Customer Feedback, Results, and Actions Taken

#### Customer Experience Surveys

All programs and business units have customer-focused quality indicators that are measured using a survey tool. Programs and business units may use different survey tools and reporting to meet individual program needs. In general, surveys are implemented continuously, with results generally reported quarterly. Program leaders are responsible for reviewing customer experience data and initiating improvement efforts.

## **XV. Communication of Quality Management System Activities**

The Quality Toolbox is an employee SharePoint site that is used to share KPI quality improvement tools and resources, and to communicate quality improvement efforts across the agency. Key QMS activities, such as progress toward quality indicators and meaningful QI efforts, are shared at key staff meetings and with our Governing Council monthly and Board of Health as appropriate. Leadership and staff meetings shall include quality as a standing agenda item.

## **XVI. Monitoring & Evaluation of QMS**

The overall effectiveness of the QMS will be evaluated annually by the Steering Committee. In addition, each QI Sub-Committee will perform periodic assessments of QI activities. Progress toward established goals and objectives will be assessed through KPI dashboards, customer experience surveys, and strategic plan measures. Data from these reports will be used to ensure the effectiveness of the QMS. All quality related activities will be evaluated by the following means.

1. A review of the process and progress toward achieving goals and objectives.
2. A summary of quality improvement projects and results, and lessons learned.
3. Progress on meeting KPI targets.
4. Effectiveness of the KPI system.
5. Effectiveness of QI training curriculum.

## Quality Improvement Project Guide

### What is a PDSA?

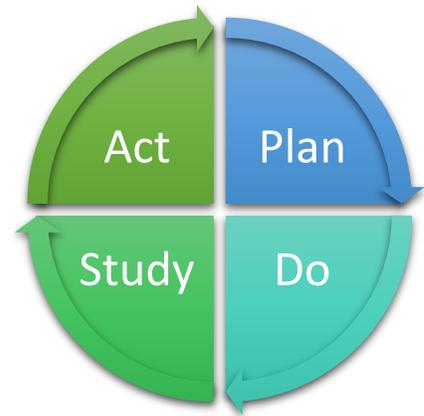
PDSA, or Plan-Do-Study-Act, is an iterative, four-stage problem-solving model used for improving a process or carrying out change. Several tools are available to help you during the PDSA process. Click [here](#) to select the template(s) that work best for you.

Key Performance Indicators (KPI) are a great starting point to determine the most important areas to focus efforts. This may include KPIs that are farthest from the target, consistently below target, or aligned with the strategic plan.

When using the PDSA cycle, it's important to include internal and/or external customers, because they can provide feedback about what works and what doesn't. The customer defines quality, so it would make sense to also involve them in the process when appropriate or feasible, to increase acceptance of the end result.

In applying PDSA, ask yourself three questions:

1. What are we trying to accomplish?
2. How will we know that a change is an improvement?
3. What changes can we make that will result in an improvement?



### Stage 1: Plan

- A. Getting Started
  - a. Identify problem or opportunity for improvement
  - b. Estimate and obtain needed resources
  - c. Share your idea with your direct supervisor for feedback and support
- B. Recruit a Team
 

Assemble a team that has knowledge of the problem or opportunity for improvement. Involve staff most closely involved in the process. Consider the strengths each team member brings—look for engaged, forward-thinking staff.

After recruiting team members, identify roles and responsibilities, set timelines, and establish a meeting schedule.
- C. Draft an Aim Statement
 

Describe what you want to accomplish in an aim statement. Make it SMART- specific, measurable, attainable, relevant and time bound! Refer back to these three fundamental questions:

  1. What are we trying to accomplish?
  2. How will we know that a change is an improvement?

### 3. What change can we make that will result in improvement?

#### D. Describe Current Context and Process

Examine your current process through brainstorming. Start by asking the team these basic questions:

- What are we doing now?
- How do we do it?
- What are the major steps in the process?
- Who is involved?
- What do they do?
- What is done well?
- What could be done better?

Map the current state, using a [flowchart](#), to visually describe your process. Creating a process flow or at least depicting the current process can be very useful. If your team runs into roadblocks, you might have found where the problem is occurring—or maybe the right person for identifying a missing step is not at the table.

Gather More Detail-

Once the general structure is completed, these can be some more helpful questions to ask:

- How long does the process currently take? Each step?
- Is there variation in the way the process is currently completed?

Add these details to the flowchart.

Collect, analyze, and display baseline data

Make a plan for data collection that will be carried out during the “Do” phase

#### E. Describe the Problem

Using the aim statement created in Step B, state your desired accomplishments, or future state, and use data and information to measure how your organization meets/does not meet those accomplishments.

For example: If your objective is to maximize your staff's quality of work life, you might find evidence by surveying employees on workplace stressors.

Map the future state process using a [flowchart](#). Compare the current and future state process maps and determine how best to move from current to future state, during Step E.

Write a problem statement to clearly summarize your team's consensus on the problem. You may find it helpful to prioritize problems, if your team has identified more than one, and/or include a justification of why you chose your problem(s).

#### F. Identify Causes and Alternatives

Analyze Causes-

For the problem in your problem statement, work to identify causes of the problem using tools such as control charts, [fishbones](#), and work flow process maps (e.g., flowcharts, swim lane maps). The end of the cause analysis should summarize the cause analysis by describing and justifying the root causes.

Examine your process, and ask:

Is this process efficient? What is the cost (including money, time, or other resources)?

Are we doing the right steps in the right way?

Does someone else do this same process in a different way?

Identify Potential Solutions-

Choose a solution (or a few alternatives) that you believe will best help you reach your objective and maximize your resources.

Make a prediction on what you think will happen when you test the chosen solution(s).

Develop an improvement theory by completing the statement,

"If we do \_\_\_\_\_, then \_\_\_\_\_ will happen."

Develop an action plan, including necessary staff/resources and a timeline.

Consider these factors:

- What will be tested? How? When? By Whom?
- Who needs to know about the test?

Try to account for risks you might face as you implement your action plan.

### **Stage 2: Do**

Test the theory.

Begin implementing your action plan.

Carry out the test on a small scale.

Be sure to collect data as you go, to help you evaluate your plan in Stage 3: Study.

Your team might find it helpful to use a [check sheet](#), [flowchart](#), swim lane map, or [run chart](#) to capture data/occurrences as they happen or over time.

Your team should also document problems, unexpected effects, unintended side effects, and general observations.

### **Stage 3: Study**

Using the aim statement drafted in Stage 1: Plan, and data gathered during Stage 2: Do, determine:

- Compare baseline data with measures of success written into the aim statement.
- Did your plan result in an improvement? By how much/little?
- Did the results match the theory/prediction?
- Was the action worth the investment?
- Do you see trends?
- Were there unintended side effects?
- Do you need to test the theory under other conditions?
- Describe and report what you learned from the test cycle.

You can use a number of different tools to visually review and evaluate an improvement, like a Pareto chart, control chart, or run chart.

#### **Stage 4: Act**

##### Reflect on Plan and Outcomes

- If the test was successful on a small scale, test it again on a broader scale.
- If your team determined the plan resulted in success, standardize the improvement and begin to use it regularly. After some time, return to Stage 1: Plan and re-examine the process to learn where it can be further improved.
- If your team believes a different approach would be more successful, return to Stage 1: Plan, and develop a new and different plan that might result in success.
- Continue to test changes using the PDSA cycle until you reach your aim statement.

The PDSA cycle is ongoing, and programs will become more efficient as they intuitively adopt PDSA into their planning. PDSAs are used for learning and making rapid improvements.

##### Celebrate Improvements and Lessons Learned

- Communicate your successes when you reach your aim statement
- Take steps to preserve your gains and sustain your accomplishments

##### Make long-term plans for additional improvements

### Quality Improvement Project Form

Complete this form throughout the improvement process. Store this working document on the Quality Toolbox in the [QI Project library](#) labeled "QI Project in progress". Once complete, move the document to the QI Project library labeled "Completed QI Project".

P L A N	Employee/Team Name		Program/Clinic Name	
	Describe the problem you would like to solve and/or the process you would like to improve.			
	Why is this important?			
	What are you trying to accomplish?			
	What changes will you make to try to fix the problem?			
When do you expect to see a change?				
How will you measure success of this project?				
What kind of improvement will result? (Check all that apply)				
<input type="checkbox"/> Increased Efficiency		<input type="checkbox"/> Improved Teamwork & Communications		
<input type="checkbox"/> Improved Safety		<input type="checkbox"/> Improved Working Conditions & Employee Morale		
<input type="checkbox"/> Improved Quality of Service		<input type="checkbox"/> Enhanced Employee Performance		
<input type="checkbox"/> Improved Use of Resources		<input type="checkbox"/> Satisfied Clients/Patients		
<input type="checkbox"/> Reduced Waste		<input type="checkbox"/> Reduced Cost		

P L A N	<input type="radio"/> Other: Please Describe	
	What is your aim statement? Make it SMART-specific, measurable, attainable, relevant, and time bound. <i>Example: Decrease no-show rate for tobacco cessation clients from 40% to 25% by October 1<sup>st</sup>, 2018</i>	
	Who will benefit? (Check all that apply)	
	<input type="radio"/> Department	<input type="radio"/> Community
	<input type="radio"/> Customer/Patient/Client	<input type="radio"/> Employees
	<input type="radio"/> Other: Describe	
	List staff involved in the project and their role	
	Start Date	Intended End Date
	Estimated Project timeline	
What resources (human, financial, other) are needed to complete the project?		

Test Cycle #1	
<b>D</b>	Describe your test cycle. <i>What, when, where, how will you test? Who will be affected?</i>
<b>O</b>	Carry out the change (test). What data did you collect? <i>Record when completed, observations, problems encountered, and special circumstances.</i>
<b>S</b>	Analyze and summarize data (quantitative and qualitative). <i>Include any graphs, charts or visual aids.</i>
	What went well?
<b>T</b>	What could be improved?
<b>U</b>	
<b>D</b>	
<b>Y</b>	
<b>A</b>	Did you reach your aim, or do you need to run another test? <i>Multiple tests of change are usually needed in an improvement project.</i>
<b>C</b>	If you run another test, what will you do differently in the next test cycle?
<b>T</b>	If you reached your aim, how will you sustain the improvement?
	If you reached your aim, how will you spread the improvement to other programs, departments, or clinics (as applicable)?

## V. Key Quality Terms

Aim-The goal you want to accomplish for a project or an initiative. The aim must be specific, measurable, achievable, realistic, and time-bound (SMART).

Balancing measures- measures that assess whether the changes designed to improve one part of the system are introducing problems elsewhere.

Baseline measurement-Used to determine the process parameters prior to any improvement effort; the basis against which change is measured.

Continuous Quality Improvement (CQI)- A customer-driven philosophy and positive attitude for analyzing processes and improving them repeatedly to prevent problems and maximize quality of care and service; systematic and continuous actions that lead to measurable improvement in health care and population health services.

Goal- Something you are trying to do or achieve.

Just-in-time- Providing training just before it is needed to protect against information loss.

Key Performance Indicator- A quantitative tool that provides information about the performance of a process, service, or outcome.

Measure- An indication of something; how you determine if a change lead to an improvement.

Model for Improvement- The Model for Improvement was developed by a group called Associated for Process Improvement. It is an improvement framework that involves asking three key questions, and then testing change ideas using Plan Do Study Act (PDSA) cycles.

Outcome-Something that happens because of an activity.

Outcome measures- are the expected, desired, or actual results from the outputs of the activities of a service or agency and shows whether you made progress in reaching your ultimate goal. (Example: Percentage of children who are fully immunized by age 2).

Performance management- What is done with the information that is learned and knowledge gained from measuring performance. Performance management is an ongoing, systematic approach to improving results through evidence-based decision-making, continuous organizational learning, and a focus on accountability.

Performance measurement- The selection and use of quantitative measures of capacities, processes, and outcomes to develop information about critical aspects of activities, including their effect on the public. It is the regular collection and reporting of data to track work produced and results achieved. It is what we do to determine if we are making progress toward our objectives.

Plan Do Study Act (PDSA)- An iterative, four-stage problem solving model used to improve a process or carry out change.

Program Leaders- Practice managers, program managers, coordinators, supervisors and other delegated program leads.

## Appendix C

Process Improvement- Seeking to learn what causes things to happen in a process and to use this knowledge to reduce variation, remove waste, and improve customer satisfaction.

Process Measures- The steps or activities in producing a product or service that tell us how well we are performing. (Example: Number of days between a request for service and an actual meeting with a service provider).

Quality- The extent to which we meet or exceed the customer's expectations.

Quality Academy- Hands on, experiential training for agency leaders comprised of the Institute for Healthcare Improvement's Open School curriculum and monthly in person meetings.

Quality Assurance- Ensuring services meet specific standards. Examples- checking that equipment works, running controls on point of care tests.

Quality Improvement- Formal approach to measuring current performance and determining what changes to make to do our work better.

Quality Improvement Project- A time-limited effort to improve an existing process regarding a specific quantitatively defined problem such as error frequency, cycle-time, etc. A quality improvement project typically hands-off to operations for the control and on-going improvement of the process. QI is also known as process improvement.

Quality Improvement Tools- Tools used to assist a team when solving a problem or throughout the process of implementing a quality improvement initiative. Various tools can be used in different stages of quality improvement and can be accessed on the Quality Toolbox SharePoint page.

Quality Planning Project- A time-limited effort to design a new process or service. A quality planning project differs from other planning efforts in that it is focused on customer requirements and utilizes quality design principles to prevent failure. A quality planning project typically hands-off to operations for the on-going control and improvement of the newly developed process.

Quality Toolbox- An employee SharePoint site that houses all quality related data and information including quality KPI dashboards, quality improvement tools and resources, and a place to share quality improvement initiatives.

Value- Providing what the customer wants, when they want it, in the right amount or frequency, at the right price.

Variation- A departure from a former or normal condition or action or amount or from a standard or type and the amount by which this occurs.

Voice of the Customer (VOC)- Listening to customers to focus on what is important to them and to improve processes.

Waste- Activities that use resources, but don't add value; activities for which the customer would not be willing to pay or desire. Seven common wastes include overproduction; unnecessary transportation; inventory; motion; defects; over-processing; and waiting.