



Quality Improvement Activity Workbook



QIN-QIO

Quality Innovation Network -
Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES
QUALITY IMPROVEMENT & INNOVATION GROUP

This material was prepared by Alliant Quality, the quality improvement group of Alliant Health Solutions (AHS), the Medicare Quality Innovation Network - Quality Improvement Organization for Alabama, Florida, Georgia, Kentucky, Louisiana, North Carolina, and Tennessee, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. Publication No. 12SOW-AHSQIN-QIO-TO1-20-61

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The Model for Improvement

The Model for Improvement,* developed by Associates in Process Improvement, is a simple yet powerful tool for accelerating improvement. The model is not meant to replace change models that organizations may already be using, but rather to accelerate improvement. This model has been used very successfully by hundreds of health care organizations in many countries to improve many different health care processes and outcomes. Learn about the fundamentals of the Model for Improvement and testing changes on a small scale using Plan-Do-Study-Act (PDSA).

The model has two parts:

1. Three fundamental questions, which can be addressed in any order.
2. The Plan-Do-Study-Act (PDSA) cycle** to test changes in real work settings. The PDSA cycle guides the test of a change to determine if the change is an improvement.

Forming the Team

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

Setting Aims

The aim should be a sentence easily understood by the entire team. It should be time-specific, measurable, and should define the specific population of patients or other system that will be affected.

Establishing Measures

Teams use quantitative measures to determine if a specific change actually leads to an improvement. Measures can be quality or performance measures.

Selecting Changes

Ideas for change may come from those who work in the system or from the experience of others who have successfully improved.

Testing Changes

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

Implementing Changes

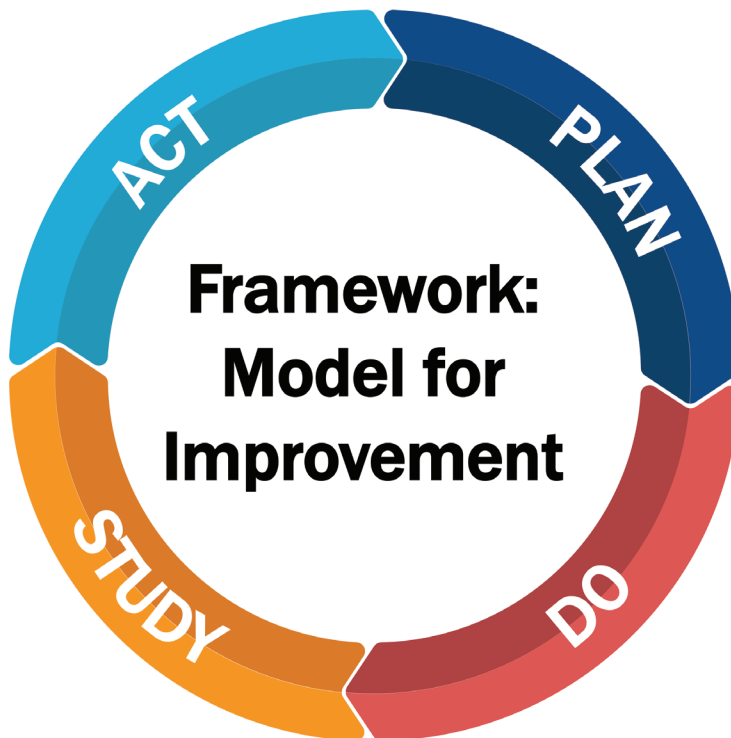
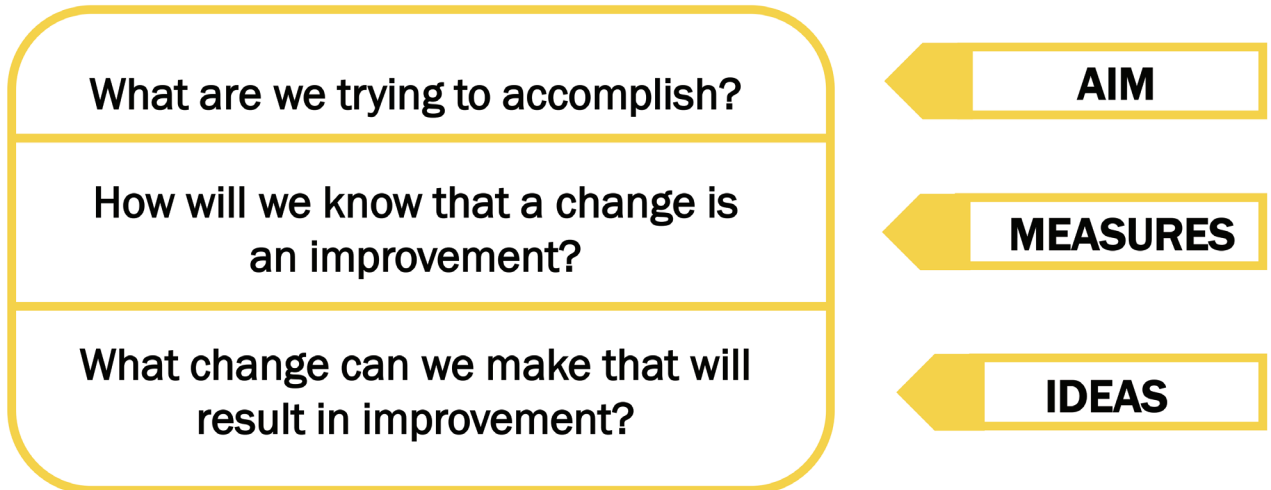
After testing a change on a small scale, learning from each test, and refining the change through several PDSA cycles, the team may implement the change on a broader scale — for example, for an entire pilot population or on an entire unit.

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

**The Plan-Do-Study-Act (PDSA) cycle was originally developed by Walter A. Shewhart as the Plan-Do-Check-Act (PDCA) cycle. W. Edwards Deming modified Shewhart's cycle to PDSA, replacing "Check" with "Study." [See Deming WE. The New Economics for Industry, Government, and Education. Cambridge, MA: The MIT Press; 2000.]

<http://www.ihl.org/resources/Pages/HowtoImprove/ScienceofImprovementHowtoImprove.aspx>

Framework — Model for Improvement

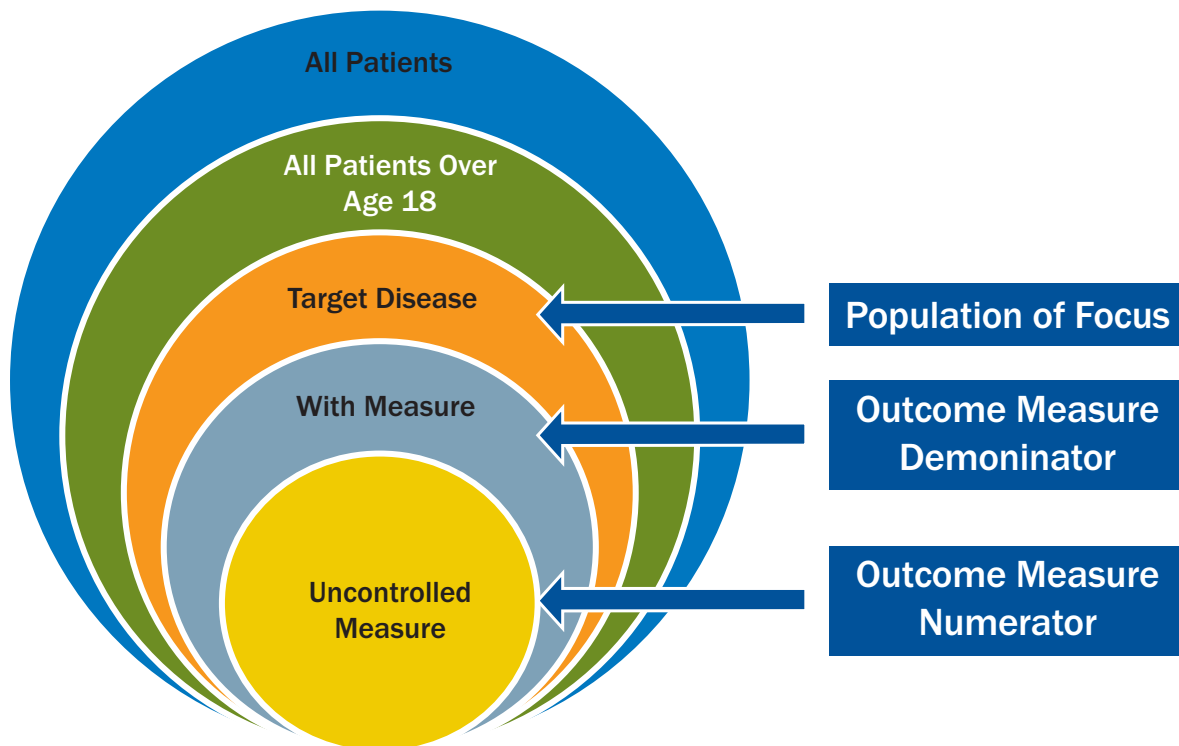


Population of Focus

The Population of Focus provides a visual description of the target group within the larger setting of a practice.

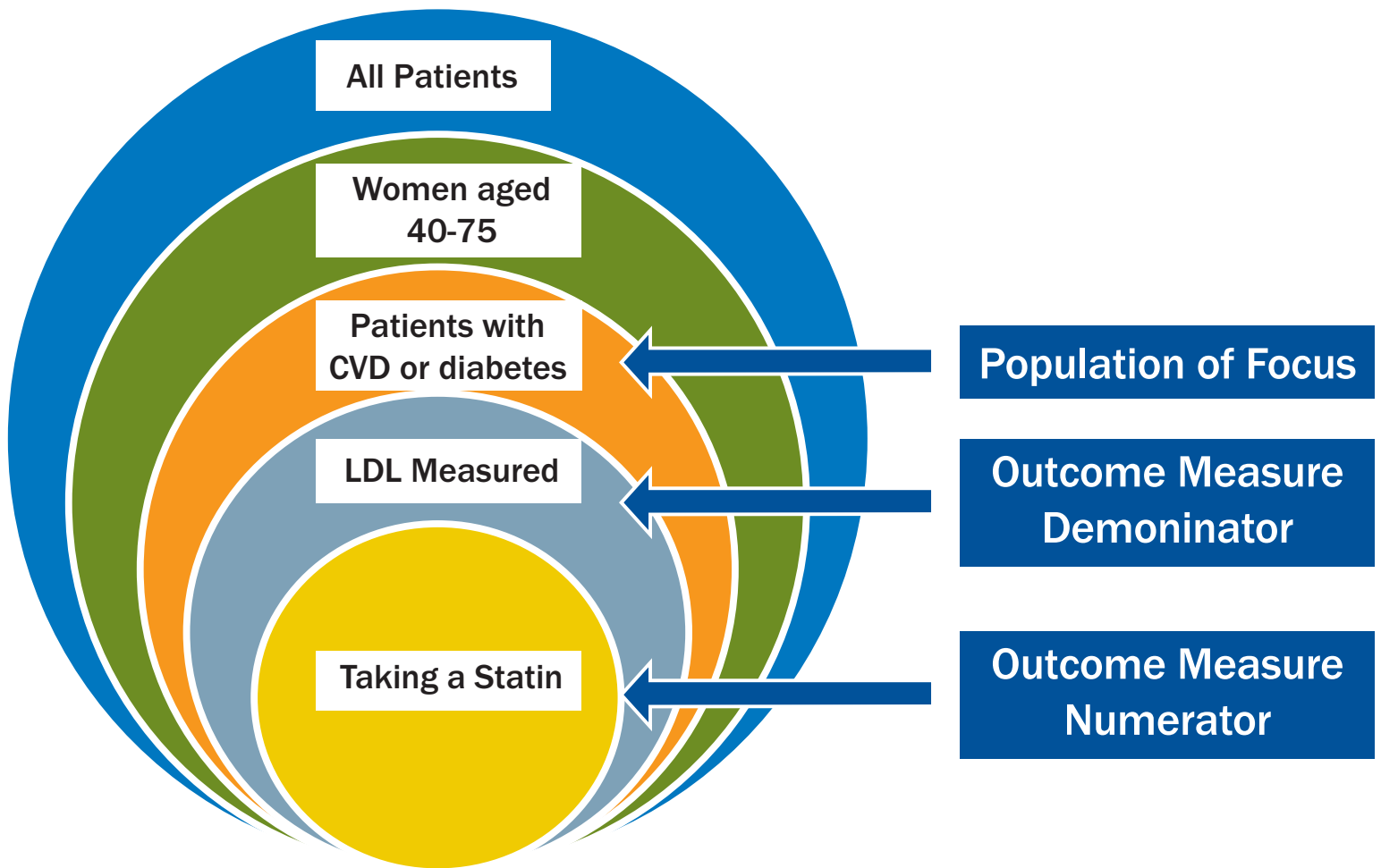
While not drawn to scale, the graphic depicts the impact of interventions on sub-populations within a group.

- As a project focuses on improving a quality indicator, using this graphic depicts who should be included in the numerator and denominator for tracking purposes.
- Often it is required to dissect the population a number of times to actually determine the narrowest group that fits the desired data needs.
- If the numerator and denominator are incorrectly determined, data integrity is questionable.



In the example below, the desire is to determine the percentage of the Medicare beneficiaries who receive care at the clinic who have a diagnosis of diabetes, have their condition under control.

The graphic can be used for other quality measures including foot exams, retinopathy exams, blood pressure control, and BMI under 25, etc.



* Appendix 2 — Population of Focus

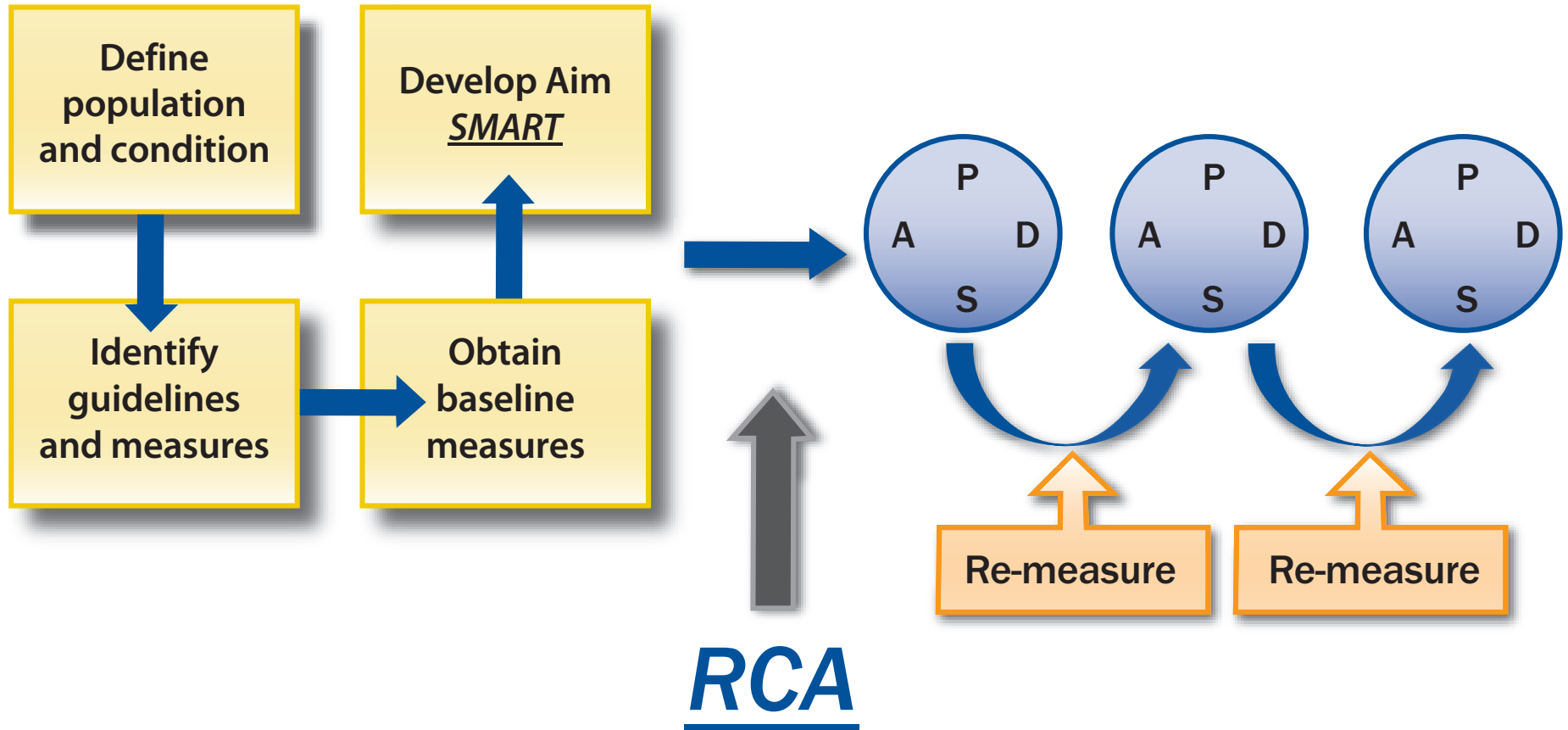
Project Flow

Understanding of Project Flow is necessary to promote effective and efficient change efforts. It is necessary to complete steps in order to prevent rework and confusion secondary to missing data or goals.

Project Flow is as follows:

1. Define population and condition- the Population of Focus model is helpful in defining the population to be impacted by the project.
2. Identify guidelines and measures. –Review of credible Evidence Based Practice (EBP) materials provides the opportunity to determine viable options for your practice setting while eliminating those shown by others to be less successful. These may be from National Practice Groups, Associations and agencies.
3. Obtain Baseline measurement – measurement of your internal status to gauge your position and allow the determination of ongoing progress throughout the project. This will also aid in development of Aim Statements and goals.
4. Development of AIM statements and SMART goals- based around internal climate as well as national and state benchmark data derived from EBP review.
5. Root Cause Analysis (RCA)- Allows us to determine causal factors preventing optimal performance.
6. Plan-Do-Study-Act (PDSA) - PDSA is a cyclic process in which small tests of change are completed. If multiple changes are made simultaneously, it may cloud understanding of outcomes. It is necessary to measure between PDSA cycles to determine success of changes made.

Project Flow



Quality Measure Tracking Tool

Effective data management plays an important role in improving the performance of an organization's health care system. Collecting data for specific performance measures allows health care professionals to identify where systems are falling short, to make corrective adjustments, and to track outcomes. This tool is designed to help users understand the relationship between quality improvement and data tracking for a specific performance measurement.

A Quality Measure Tracking Tool is a structured, prepared form for collecting and tracking data. This is a generic tool that can be adapted for a wide variety of purposes.

When to Use a Quality Measure Tracking Tool

- When data can be observed and collected repeatedly by the same person or at the same location.
- When collecting data on the frequency or patterns of events, problems, defects, defect location, defect causes, etc.

Quality Measure Tracking Tool Procedure

1. Decide what event or problem will be observed
2. Decide when data will be collected and for how long
3. Set it up so that data can be recorded simply by making check marks, Yes/No, or Xs or similar symbols and so that data do not have to be recopied for analysis.
4. Label all spaces on the form.
5. Test the check sheet for a short trial period to be sure it collects the appropriate data and is easy to use.
6. Each time the targeted event or problem occurs, record data on the check sheet.
7. Summarize the columns to determine the performance on each measure.
8. Compare performance against the goal.

Quality Measure Tracking Tool

The figure below shows a Quality Measure Tracking sheet used to collect data on Cardiac Measures.

CARDIAC HEALTH QUALITY MEASURE TRACKING TOOL				
Patient Population	AGES: ≤65 YEARS		State GA	
Reporting Timeframe:			01/2017 TO 04/2017	
Random Sample Participants	1 Aspirin Y or	BP Control < 140/90 Y or N (if N, include BP)	Current Tobacco User Y or N	Tobacco Cessation Counseling if N to #4 - N/A; if Y to #4 - Y or N
1	Y	Y	Y	Y
2	N	N	Y	
3	Y	Y	N	N
4				N/A
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
Totals	___ / 25	___ / 25	___ / 25	___ / # N in 4
Percent %				
1)				
2)				
3)				
4)				
Totals = full in the number or Y in that column divided by the number of charts (usually 25). Percent is the "total" multiplied by 100.				
Practice Level Input:				
Measure Definition Resources: http://qpp.cms.gov				

CMS Confidential

Bronchitis Tracking Tool

Identifier _____

Time Frame _____

Condition	Symptoms	Evaluation Criteria	Treatment
Acute uncomplicated Bronchitis	<ul style="list-style-type: none"> Cough is the most common symptom for which adult patients visit their primary care provider, and acute bronchitis is the most common diagnosis in these patients. 	<ul style="list-style-type: none"> Evaluation should focus on ruling out pneumonia, which is rare among otherwise healthy adults in the absence of abnormal vital signs (heart rate ≥ 100 beats/min, respiratory rate ≥ 24 breaths / min, or oral temperature $\geq 38^\circ\text{C}$) and abnormal lung examination findings (focal consolidation, egophony, fremitus). Colored sputum does not indicate bacterial infection. For most cases, chest radiography is not indicated. 	<p>Routine treatment of uncomplicated acute bronchitis with antibiotics is not recommended, regardless of cough duration.</p> <p>Options for symptomatic therapy include:</p> <ul style="list-style-type: none"> Cough suppressants (codeine, dextromethorphan); First-generation antihistamines (diphenhydramine); Decongestants (phenylephrine); and Beta agonists (albuterol)

Chart ID	Date	Age	Heart Rate \geq 100 bpm	Resp Rate \geq 24 breaths/min	Oral Temp \geq 38°C/104°F	Fremitus, egophony, focal consolidation	Chest X-ray needed?	Pneumonia (PN) ruled out?	If PN ruled out -symptom Tx utilized?	Penicillin Allergy Y/N	Rx give Y/N	Name of Antibiotic Prescribed	Strength and frequency	Length of treatment

Developing an Aim Statement

An Aim Statement is a concise, written statement describing what the team expects to accomplish through its Quality Improvement Initiative. It provides guidance for your team's specific improvement efforts and is time-specific and measurable. When setting your Aim, and to ensure support for your team's work, be sure to:

- ✓ **Align.** It is important to align your Aim Statement with your organization's strategic goals.
- ✓ **Involve senior leaders.** Senior leaders must provide personnel and resources from departments such as information systems, finance and reimbursement, medical affairs and operations.
- ✓ **Review your baseline data** for the required measures. Focus on making changes that matter in your clinic and personalize the Aim to fit your clinic.
- ✓ **Ensure that your Aim Statement is “SMART“**
 - S – Specific
 - M – Measurable
 - A – Attainable
 - R – Realistic
 - T – Timely

Hypertension Aim Statement Examples

- A. We will improve the control of hypertension in our clinic patients. **(weak)**
- B. In three months, most patients will have their blood pressure under control. **(better)**
- C. By December 2014, 20% more patients diagnosed with hypertension will have a blood pressure <140/90. **(strong)**

* Appendix 3 — AIM Statement Worksheet

Aim Statement Worksheet

Practice Name: Main Street Medical

Date: 9/30/2017

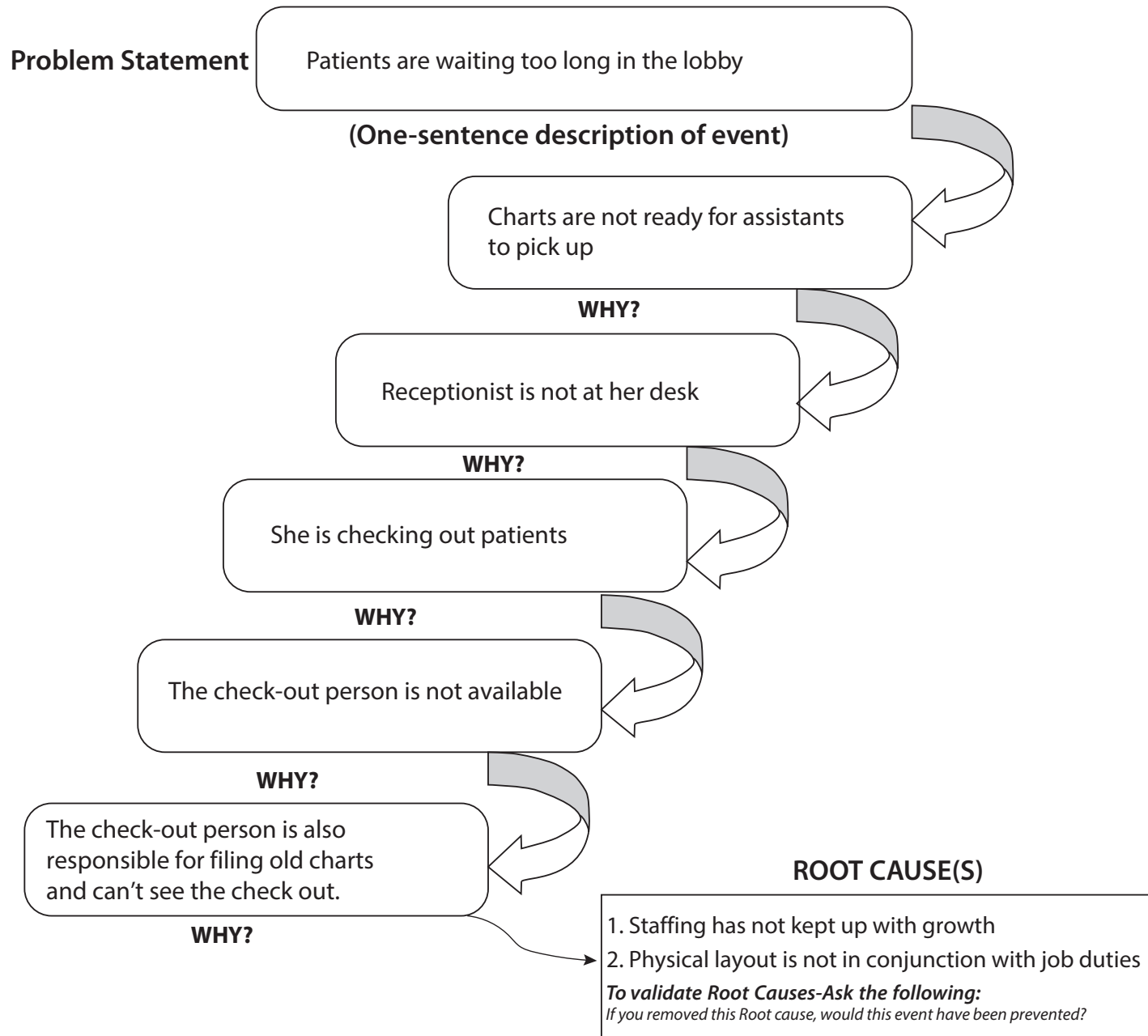
Aim Statement:

By the end of December 2017, we aim to: increase the number of patients with diabetes that receive A1c testing on a 6-month basis by 20%.

Key Points to Remember When Writing an Aim Statement

- ✓ Define and state your patient population and clinical measure to improve (include time frame)
- ✓ Detail your expectations or desired outcomes (realistic)
- ✓ Describe how you will achieve the goal

5 Whys Tool



Root Cause Analysis

In Root Cause Analysis, like in the 5 Whys, we will ask the same simple question repeatedly.

Though it may be a simple question, we often are required to dissect the answer a number of times to actually determine the root cause. In many instances there is more than one root cause.

You need to determine the root cause of an event in order to prevent recurrence. We often tackle process changes without truly understanding the root cause only to find that the same problem continues to occur.

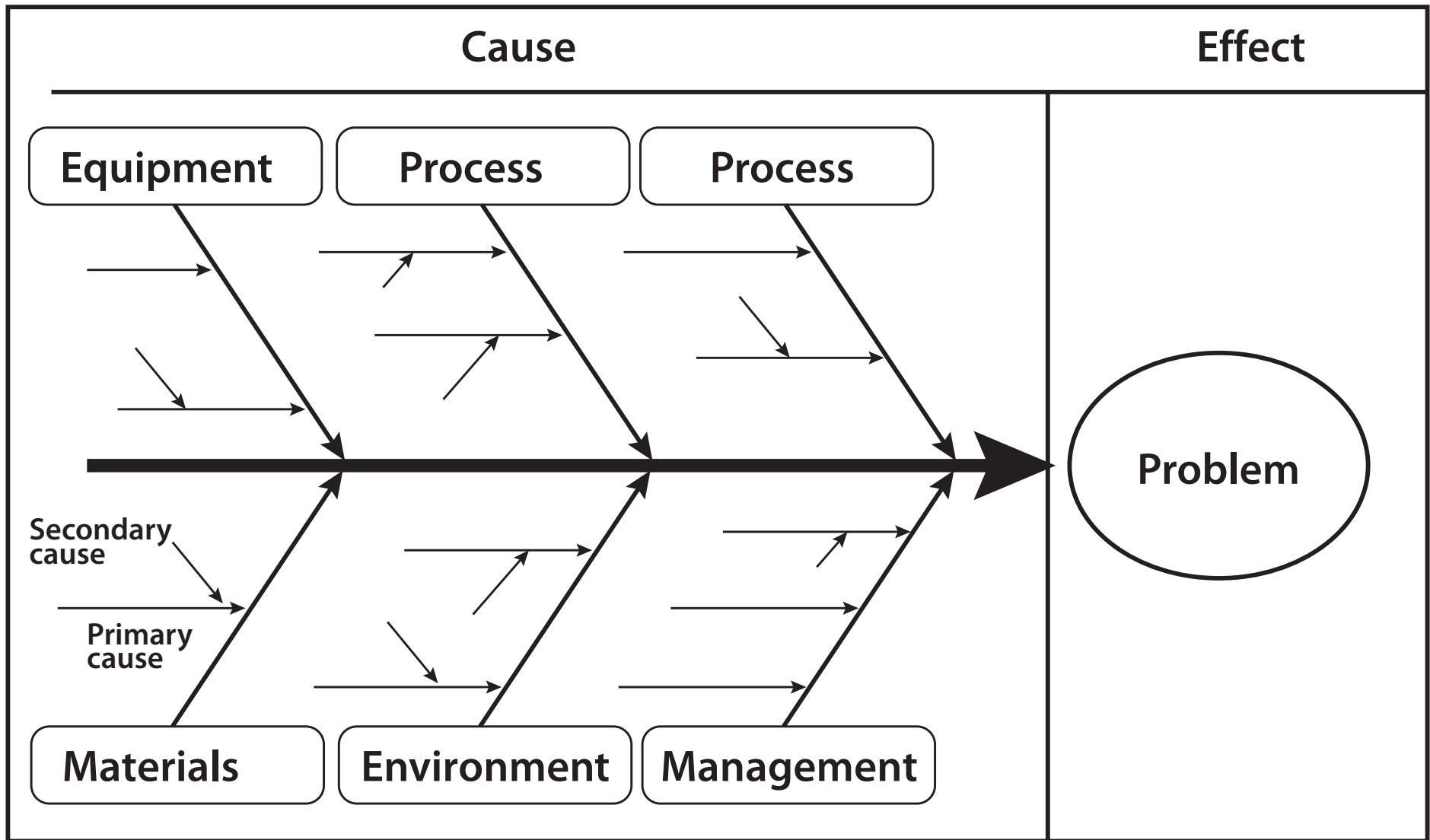
This may be achieved through use of various tools, but methods remain consistent in asking the primary question. Methods often include basic brainstorming for causal factors that are then grouped, prioritized and backfilled into the tool of choice.

The Ishikawa, or fishbone, diagram can be used to group like causes.

Root Cause Analysis Example

Aim Statement - LDL Performed	Aim Statement - Using a Statin
90% of Population of Focus will have an LDL within the next 6 months	By the end of December, 2017 the % of patients on a statin will be 80%
Baseline – 61%	Baseline – 29% out of control
Root Cause Analysis – LDL Performed	Root Cause Analysis – On a statin
Short Staff	Failure to keep appointments/take meds/follow diet
Availability of equipment	Transportation
Lack of standing orders	Provider inertia
Provider inconsistency	Family support – patient stubbornness
Patient compliance w/ going to lab	Compliance
Lack of training (MAs)	Lack of attendance at Cholesterol classes
Not maximizing the use of pt. alerts/ notifications	Lack of exercise
	Psychological – depression, anxiety
	Environmental
	Financial limitations
	Patient denial
	Personal habits – smoking/illicit drug use

Arrange list into logical categories on RCA diagram (fishbone)



* Appendix 5 — Ishikawa Fishbone (Cause and Effect) Diagram

Practice Summary Report

Practice Name: _____

Timely greeting*	Baseline (CY15)	3/31/2016	6/30/2016	9/30/2016	12/31/2016
Numerator	198	46	71	61	58
Denominator	404	101	120	98	112
Greeting %	49.01%	45.54%	59.17%	62.24%	51.79%

Payment Method**	Baseline (CY15)	3/31/2016	6/30/2016	9/30/2016	12/31/2016
Numerator	180	78	68	59	79
Denominator	404	101	120	98	112
Payment Method %	44.55%	77.23%	56.67%	60.20%	70.54%

Demographics***	Baseline (CY15)	3/31/2016	6/30/2016	9/30/2016	12/31/2016
Numerator	172	68	86	58	69
Denominator	404	101	120	98	112
Greeting %	42.57%	67.33%	71.67%	59.18%	61.61%

Chart to window****	Baseline (CY15)	3/31/2016	6/30/2016	9/30/2016	12/31/2016
Numerator	154	51	70	68	74
Denominator	404	101	120	98	112
Greeting %	38.12%	50.50%	58.33%	69.39%	66.07%

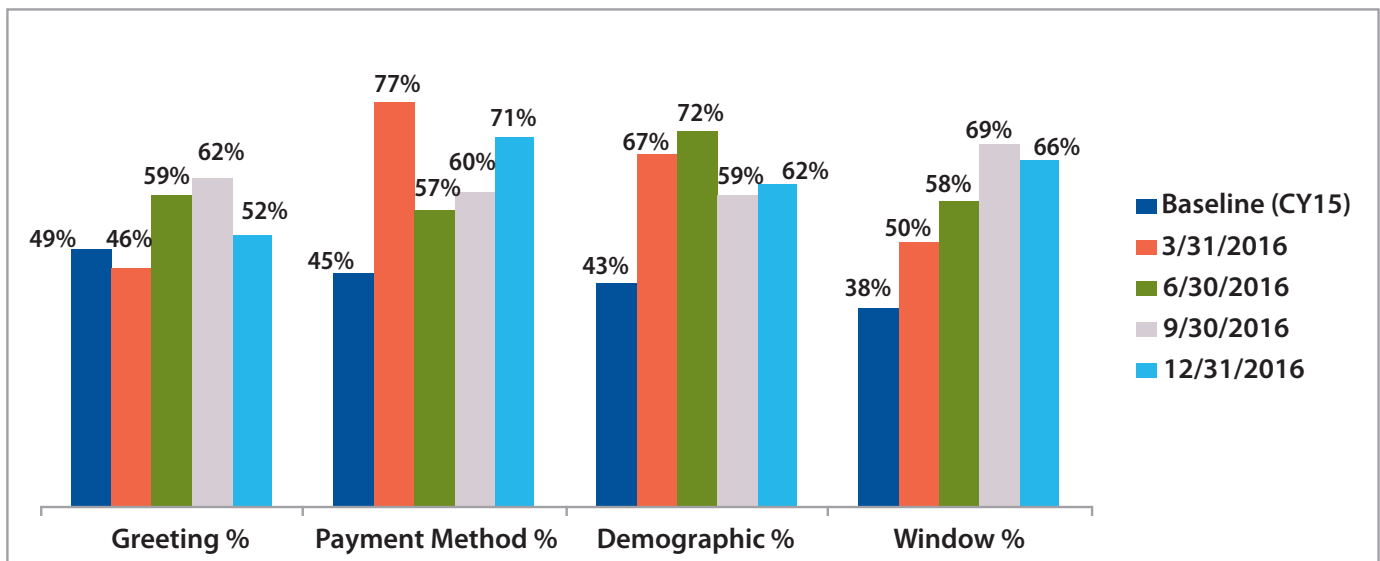
Notes:

* Greeting patient within 5 minutes of entry

** Payment method copied and verified

*** Name, address and phone number verified

**** Secondary verification of Name, address and phone number verified by clinical staff



Action Plan Worksheet

The Action Plan Worksheet is a tool designed to assist meeting facilitators in the management of task assignments made during meetings and following up on these items.

The worksheet has columns for the facilitator to complete to ensure someone is designated to complete the task, each task is documented, a target due date is assigned, and any follow-up activity can be noted. In addition to adding the task, the facilitator should note any relevant information about the action item so the team will know what the next steps are upon its completion.

To manage action items using this worksheet, facilitators are able to capture information on tasks assigned during the meeting as well as review the worksheet at the outset of each meeting to discuss progress on tasks assigned during previous meetings.

* Appendix 7 — Action Plan

Action Plan Example: Implementing Diabetes Self-Management Forms

Item	Person (WHO)	Action (What)	Target Date (WHEN)	Follow-up
Create Form	Office Assistant	Format our choice of a diabetes self- management form into 1 page form easy to read by user	Week of Nov. 1, 2017	Complete
Approve Form	Our provider champion and lead nurse	Review and proof after formatting	Week of Nov. 8, 2017	Delayed: provider away for CME, approval as of Nov.12
Acquire Forms	Office Manager	Send out for printing	Nov. 11	
Print small volume of forms for training	Office Assistant	Print and make 20 copies for training	Week of Nov. 15	
Train Staff	Lead Nurse, Office Manager	Create training for staff regarding handout, use of and how to input into record	Week of Nov. 15	
Place in Exam Rooms	Office Assistant	Check weekly during Friday afternoon work period to ensure that adequate amount of forms are located in exam rooms	Week of Nov. 18	
Track number of returned forms	Lead Nurse	Report at monthly staff meeting	ongoing	
Input into Chart	Medical Office Assistant	Input into record as a component of triage	ongoing	



Appendix 1 — Worksheet for Testing Change

Worksheet for Testing Change

GOAL:

Practice: _____

Date: _____

Every goal will require multiple smaller tests of change

Plan

Describe your first (or next) test of change	Person Responsible	When to be done	Where to be done

List the tasks needed to set up this test of change	Person Responsible	When to be done	Where to be done
1. 2. 3. 4. 5.			

Predict what will happen when the test is carried out	Person Responsible	When to be done	Where to be done
1. 2. 3. 4.	1. 2. 3. 4.		

Do Describe what actually happened when you ran the test of change

Study Describe the measured results and how they compare to the predicted results

Act Describe what changes to the plan will be made for the next cycle from what you learned



Appendix 2 — Population of Focus



Population of Focus

**Outcome Measure
Demoninator**

**Outcome Measure
Numerator**



Appendix 3 — Aim Statement Worksheet

Practice Name: _____

Date: _____

Aim Statement:

By the end of _____, we aim to:

Key Points to Remember When Writing an Aim Statement

- ✓ Define and state your patient population and clinical measure to improve (include time frame)
- ✓ Detail your expectations or desired outcomes (realistic)
- ✓ Describe how you will achieve the goal



Appendix 4 — 5 Whys Tool

Problem Statement

[Empty rounded rectangular box for the problem statement]

(One-sentence description of event)

[Empty rounded rectangular box for the first 'why?' question]

WHY?

[Empty rounded rectangular box for the second 'why?' question]

WHY?

[Empty rounded rectangular box for the third 'why?' question]

WHY?

[Empty rounded rectangular box for the fourth 'why?' question]

WHY?

[Empty rounded rectangular box for the fifth 'why?' question]

WHY?

ROOT CAUSE(S)

1.
2.
To validate Root Causes-Ask the following:
If you removed this Root cause, would this event have been prevented?



Appendix 5 — Ishikawa Fishbone (Cause and Effect) Diagram

Cause

Effect

Equipment

Process

Process

Problem

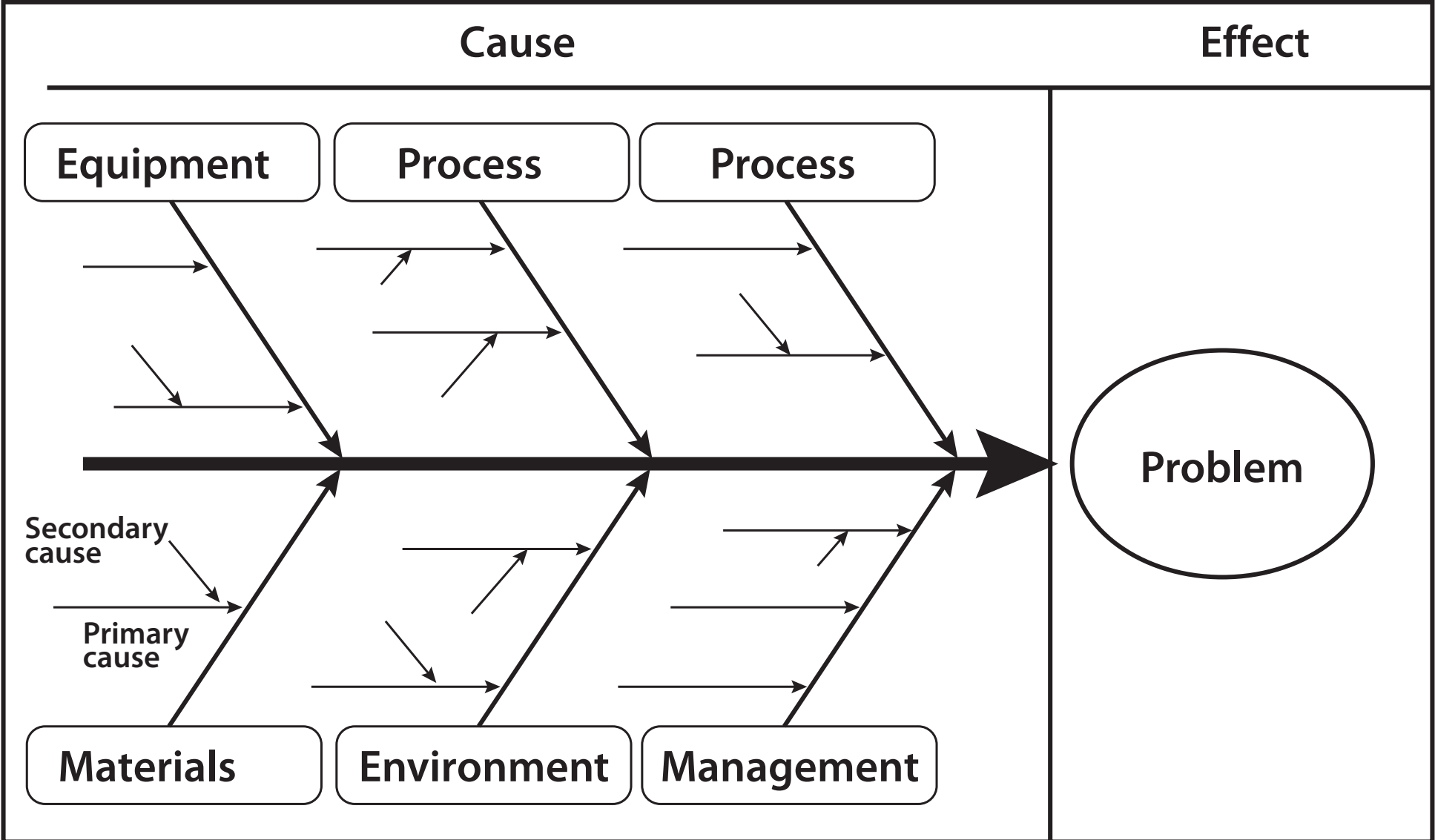
Secondary cause

Primary cause

Materials

Environment

Management





Appendix 6 — Practice Summary Report

Practice Name:

	Baseline (xxxx)	MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY
Numerator					
Denominator					
Rate					

	Baseline (xxxx)	MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY
Numerator					
Denominator					
Rate					

	Baseline (xxxx)	MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY
Numerator					
Denominator					
Rate					

	Baseline (xxxx)	MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY
Numerator					
Denominator					
Rate					

This format may be used in hard copy. An electronic copy may be found on the Alliant QIN-QIO website.

<https://quality.allianthealth.org/>



Appendix 7 — Action Plan

About Alliant Quality

Alliant Quality is a health care consulting organization dedicated to improving the quality, safety and integrity of health care. Since 1970, Alliant Quality has provided a broad array of services to public and private organizations to increase the value, effectiveness and accessibility of health care.

A key component of our corporate identity involves forming partnerships with other professional organizations to extend our reach and effectiveness. In fact, our collaborative relationships with providers, practitioners, employers and community groups help define the way we do business.

Alliant Quality is the quality improvement group of Alliant Health Solutions (AHS), the Medicare Quality Innovation Network - Quality Improvement Organization (QIN-QIO) for Alabama, Florida, Georgia, Kentucky, Louisiana, North Carolina, and Tennessee, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The QIN-QIO is responsible for work to improve access and quality of healthcare for Medicare beneficiaries.

Materials may be downloaded from the Alliant QIN-QIO website:
<https://quality.allianthealth.org/>