2010

Quality Assessment and Performance Improvement (QAPI)

Developed by the Forum of ESRD Networks' Medical Advisory Council (MAC)

The Forum MAC has developed a series of QAPI toolkits to assist dialysis facilities in meeting the requirements of the Conditions for Coverage.

Tell us what you think!
Please take a moment to complete a short questionnaire about this Toolkit. We appreciate your insight and suggestions to make our resources better.
https://www.surveymonkey.com/r/ForumResEval

THE NATIONAL FORUM OF ESRD NETWORKS

Forum Medical Advisory Council (MAC)
The Forum of ESRD Networks
8/1/2010

This toolkit was developed by members of the Forum of ESRD Networks' Medical Advisory Council (MAC). The Council members who participated in this project are listed below.

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Note: Some tools contained in this toolkit were originally created by the ESRD Networks.

This Toolkit is a guide, created by experienced professionals using the available evidence, produced by the Medical Advisory Council (MAC) of the Forum of ESRD Networks. The details of the sections may change as technology and regulations change, and the MAC anticipates revisions and additions to the Toolkit over time. The Toolkit is meant as a resource and should not be referenced as a regulatory statement. As with other MAC Toolkits (Medical Director, Catheter Reduction, Medication Reconciliation, Vaccination and Assurance of Diabetes Care Coordination) this document is meant to help guide medical directors in meeting their obligations.

Table of Contents

QUALITY ASSESSMENT and PERFORMANCE IMPROVEMENT (QAPI)

INTRODUCTION

QAPI, formerly known as Continuous Quality Improvement (CQI) is a major focus of the new Conditions for Coverage and Interpretative Guidance. As outlined in the October 2008 Conditions for Coverage (494.110) "The dialysis facility must develop, implement, maintain, and evaluate an effective, data-driven, quality assessment and performance improvement program with participation by the professional members of the interdisciplinary team (IDT). The dialysis facility must maintain and demonstrate evidence of its quality improvement and performance improvement program for review by CMS".

The Medical Director holds operational responsibility for the QAPI program. The interdisciplinary team, composed, of at a minimum, a Nephrologist, Registered Nurse, Masters-prepared Social Worker, and a Registered Dietician must produce effective QAPI activities to positively influence their patient outcomes. Frequent review, with trending of outcomes and development of improvement plans when indicated, must be demonstrated in, but is not limited to, all of the following areas:

- adequacy of dialysis
- nutritional status
- mineral metabolism and renal bone disease
- anemia management
- vascular access
- medical injuries and medical error identification
- HD reuse
- pt satisfaction
- infection control

Formulating a QAPI program can seem overwhelming, given the multiple facets of tracking, trending, root cause analysis, and development of QI plans,. The following toolkit was designed to provide a foundation upon which to build and maintain an effective QAPI program for your facility. In addition, your regional Network can provide expertise in QI processes, data collection and analysis, education principles, and resource identification.

HOW TO USE THIS TOOLKIT

The enclosed Toolkit will assist the facility in designing a facility based QAPI program, with the ultimate goal of improving quality of care.
It is recognized that there are many different practice patterns, resources and non-facility factors that contribute to the complexity of any process of care in the dialysis facility. This

Toolkit can help the facility understand and improve its own particular processes. It is not meant to provide specific formulas for a facility to adopt; each facility will need to determine its own goals, challenges and solutions.

We start with a generic description of QAPI so facilities can define the scope of their projects as they identify opportunities for improvement. We also included reference materials that outline the duties of the major facility personnel. Note that the Medical Director is charged with the leadership role in quality improvement, and that all personnel have important roles and responsibilities.

Any materials can be downloaded, revised, printed and distributed without restriction to meet the needs of the facility.

QUALITY IMPROVEMENT

There is no single right way to do quality improvement. The steps which lead to quality improvement include, identification and accurate description of the problem(s), analysis of the causes, determination of available resources, brainstorming to develop and prioritize solutions, and finally implementation of a plan. Once the plan has been implemented, it is essential to then determine whether improvement actually occurred, quantitate it, and analyze the findings so that adjustments may be made to the plan if necessary. There are numerous templates that can be utilized. So called "rapid cycle change" seeks to simplify and accelerate the process, and asks three questions: What are we trying to accomplish?, What changes will bring about an improvement?, and How will we know a change is an improvement? It forgoes complex flow charts and step by step instructions in favor of small scale changes that can be implemented in stages, tested, and then revised.

We have outlined the basic processes of a QAPI project below in narrative form. The facility should use its internal, interdisciplinary resources to "fill in the blanks" to design its own project. Importantly, the facility should start with a small piece of the identified problem, work through the QAPI process, then use the information and experience gained to tackle the next project.

Problem: Define the problem that needs to be addressed. It could be an outcome or a process.

Goal: State what you would like to see instead. The goal should be specific, measurable and obtainable. Important: Depending on the scope of the problem, this is often most effectively done in stages. You do not have to address all aspects of the problem in the first project.

GET STARTED

First, decide what data you need from patient charts, facility logs, etc.

Next, decide which persons at your facility should be included in the team effort. The team should be interdisciplinary, tailored to the problem.

To get started, consider what root causes and barriers prevent your facility from performing optimally. These may include personnel factors, patient factors, equipment or physical plant issues, lack of processes or ineffective processes, language barriers, financial or reimbursement problems, etc.

Decide on an "AIM" Statement; what are you trying to accomplish? Establish goals. For example, you may aim for 90% success in reaching an identified clinical goal, or may want to see a particular clinical process performed the same way 100% of the time. The goal should be specific, timely, measurable, and obtainable.

How will you measure improvement? This may require chart audits, review of logs, observation of practices in the facility, questionnaires or other means of assessing improvement.

Measurement: decide on a numerator and an appropriate denominator For example, the problem statement for this project is **high number of unused AVFs**. To measure, you will need to know what is the included population. This is the denominator. For this example, the denominator is **all patients with AVF in place on a specific date**. Then you will need to know the variable. This is the numerator. In this case, the numerator is **all unused AVFs on a specific date**.
Express the measurement as:
Numerator: Number of patients with AVF in use on the last dialysis of the month
Denominator: Number of patients with AVF in place on the last dialysis of the month

By looking at the data in this manner, there is a consistent measure. This allows for accurate trending of data over the course of the project.
When looking at this type of measurement, there should be a measurement at the start of the intervention (baseline), monthly measurements throughout the implementation of the measurement, and a final measurement at the end of the intervention (follow-up).

Brainstorm potential solutions based on barriers / root cause prioritized by your QI team. You can prioritize the root causes as well as the solutions. Prioritization will help you determine which root causes are most critical and significant. Potential solutions can be prioritized by how "doable" they are, as well as by their anticipated impact. Not all root causes or solutions need to be addressed in every QAPI project.

PLAN: Plan a specific intervention(s). Keep it simple and focused; do not over-reach. Your initial project may be quite limited; you may learn more than you think. You can use what you learn to determine what the next project should be.

Designate personnel and resources for each intervention.

Consider whether to target a specific subgroup for initial intervention.

Determine a timeline; when and how will you collect your follow-up information?

DO: Implement your intervention. Each intervention should have a timeframe and designated personnel.

Collect your follow-up data at the agreed-upon timeline.

Tabulate and/or graph your data, using numerators and denominators where appropriate. Calculate percent changes. **Document.**

STUDY: Examine your results and re-evaluate with your team. Is the process working? If not, why not? What is working well? If necessary, re-evaluate the root causes/barriers as well as your interventions.

Document your progress and findings and revisions in goals and interventions as appropriate.

ACT: If you have not met your goals, begin again with your new plan or a revision of the existing plan. If you met your goals, consider whether to expand to another aspect of the problem.

DO NOT HESITATE TO INVOLVE YOUR ESRD NETWORK AND MEDICAL REVIEW BOARD QI RESOURCES. The outline above is intentionally simplified. Your Network Quality Improvement Director will have expertise as well as additional resources and references for you.

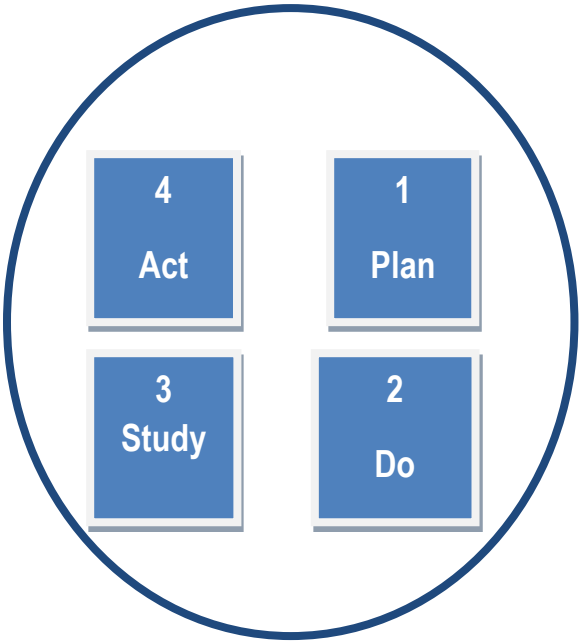
PDSA CYCLE

4-*ACT

-Adopt the change *or*

-Abandon it *or*

-Run through the cycle again, possibly under different environmental conditions



1-Plan a change or a test aimed at improvement

3- Study the results

What did we learn?

2-Carry it out

(Preferably on a small scale)

Begin a new PDSA Cycle!

QI PROJECT PHASES	ACTIVITIES	KEEP IN MIND
Plan	Make a plan for the change, collect baseline data, plan to carry out the cycle (who, what, where, when)	Brainstorming, motivating
Do	Carry out the plan, document problems and unexpected observations, continue to monitor data	Flowchart, run chart
Study	Complete the analysis of the data, compare data to predictions, summarize what was learned	Fishbone diagram, control chart, histogram
Act	What changes are necessary? Develop ongoing evaluation/monitoring, next cycle?	Flowchart, brainstorming

QUALITY IMPROVEMENT DOCUMENTATION

Topic Area:

Identified Opportunity for Improvement: *A brief description of the area or parameter you wish to improve.* For example; the patients and the facility staff are frequently unclear about which provider is responsible for managing diabetic medications.

QI Goal: *A specific goal for improvement-narrative (goal should be specific, measurable, achievable, realistic, and timed)* For example: identify the diabetic care manager for all diabetic patients of Dr. Jones by June 30, 2010

Date QI Process began: *Enter the date you began the QI process*

Date QI Process completed: *Enter the date the QI process was completed. If the process is ongoing, please state is as such.*

Date of QI Re-measurement (frequency): *Enter the frequency and date of re-measurement. You may want to consider having more frequent "check points" throughout your project to allow you to measure your progress and determine if your plan needs to be revised.*

Measurement:

Numerator: *The variable to be measured.*
Number of patients with unused AVFs on the last dialysis of the month.

Dominator: *What is the patient population being included.*
Number of patients with AVF in place on the last dialysis of the month.

Goal: *Enter the goal you expect to achieve (goal should be specific, measurable, achievable, realistic, and timed)*

Team Leader: *Person responsible for coordinating the project* For example; the dietician

Team Members: *People assisting with the project:* Nephrologist, admin assistant, RN's who do initial assessments

QI Outcome: *Measurement results*

ADDITIONAL INFORMATION AND SPECIFIC PROJECT TEMPLATES ARE AVAILABLE IN THESE TOOLKITS:

- Medication Reconciliation Toolkit
- Catheter reduction Toolkit
- Immunization Toolkit
- Assurance of Diabetes Care Coordination Toolkit

INSTRUCTIONAL RESOURCE

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Using QAPI to Improve Care: Putting it to Work in the Real World

Forum of ESRD Networks
Medical Advisory Council

What is quality care and why should I care?

Institute Of Medicine

- The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.
- Safe, Effective, Patient-centered, Timely, Efficient, and Equitable

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What is quality care and why should I care?

CMS Definition of Quality Is…

The Right Care for Every Patient Every Time

Improving Through Change

REMEMBER:

All improvement requires change

BUT

Not all change IS improvement!

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What is Change?

Change is a departure from an existing process or way of doing something, to a new process or a different way of doing the same thing

Change Management in Process Change
Volume 1, 2007

Why Do We Resist Change?

- Loss of control - I don't have enough information...
- Loss of identity - We've always done it this way...
- Loss of competence - I'm afraid I'll make a mistake...

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Process Change

- People
- Policy
- Procedure
- Equipment

Culture Change

Corporate culture

The total sum of the values, customs, traditions and meanings that make a company unique. Corporate culture is often called "the character of an organization"

The values of a corporate culture influence the ethical standards within a corporation, as well as managerial behavior.

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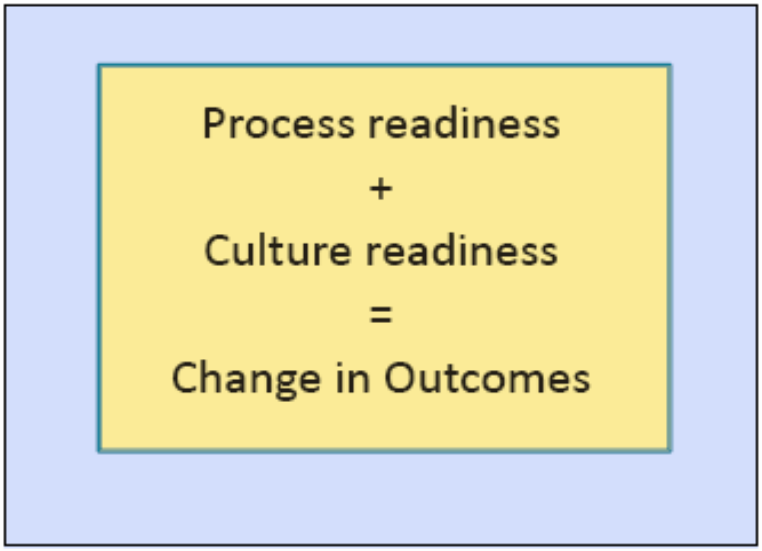

What is Change Readiness?

Category	10% Ready	50% Ready	90% Ready
Leading Change	No one in charge	Leadership clear, commitment clear in some areas	Clear management commitment
Shared Need	Most happy with status quo	Many think a change is needed	Everyone knows a change is needed
Vision	What vision?	Some consensus on what is needed, but also some apathy	Everyone knows the necessary outcome
Mobilizing commitment	A staffer might help someone	Some resources dedicated, more are needed	All needed resources are available
Monitoring Progress	Everyone has their own opinion	Some things are measured, but staff at times "gut feeling"	Clear measures and goals
Anchoring Change	Why does anything have to be done	Discussion has begun, but hasn't finished	Everyone knows what has to be done to embed change

Palmer 2004: Making Change Work: Practical Tools for Overcoming Human Resistance to Change

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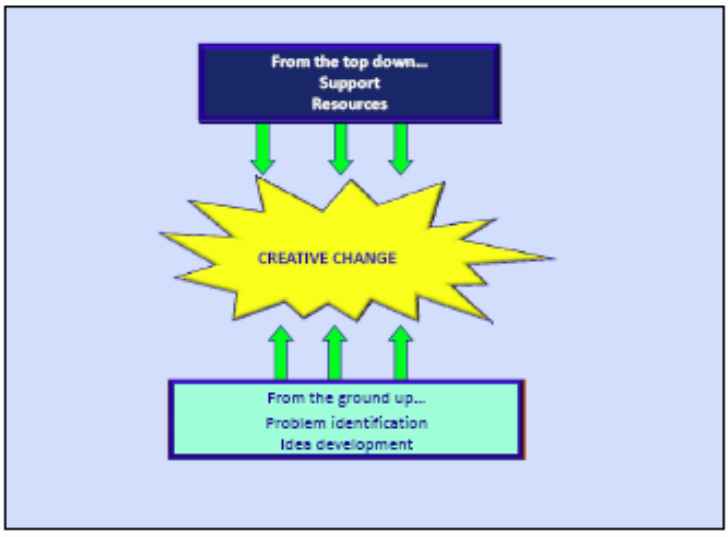
Creating Change

- Evaluate processes
  - People, Policy, Procedure, Equipment
- Determine barriers to change
- Identify ways to overcome barriers
- Seek out best practices
- Create environment of collaboration



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Using the Team to Drive Improvement

- Multidisciplinary
- Common Goal
- Day-to-Day Knowledge
- Physician Buy-in

The Composition of an Effective Team

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The Interdisciplinary Team

- Medical Director
- Nurse Manager
- Dietitian
- Social worker
- Biomed Tech
- Others
  - Other nephrologists(?)
  - Surgeon
  - Staff members including PCTs

Changes Need to be...

- Evidenced Based
- Patient Centered
- System Based

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So How Do We Get Started?

Why Should I Care About Quality Improvement?

- Improved patient outcomes
- Improved patient safety
- Increased customer satisfaction
- Improved staff morale
- Reduction of rework
- Cost savings

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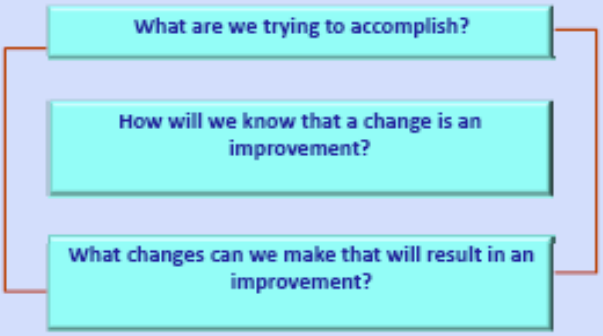
And so…

- Our approach to quality improvement in healthcare needs to be focused on identifying areas for change, creating change, and measuring change.

IHI Model for Improvement



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Developing a Goal Statement

- Where are we currently – why is this a problem?
  - What does our data show?
  - What is our trend?
- Where do we want to be?
  - What knowledge do we have?
  - What is our goal?

QAPI: Using Knowledge to Improve

- Improvement comes from the application of knowledge
- Any approach to improvement must be based on building and applying knowledge
- Significant, long-term, positive impact only occur when someone takes the initiative

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Setting Goals

- Be realistic
- Be specific
- Understanding CMS or Network-set goals vs. facility or corporate-set goals
- Set both short term and long term
  - In order to reach our long term goal, what do we need to accomplish monthly, quarterly, etc.
- Remember "how to eat an elephant"

What Are We Trying to Accomplish? Goal/Aim Statement

- Our rate for catheters >90 days is 35%
- KDOQI states that the 90 day catheter rate should be < 10%
- We will have a 25% catheter rate in 6 months

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How will we know a change is an improvement? Collect and trend data

- Identify sources of data
- Review and trend data monthly
- Analyze by various characteristics
- Draw conclusions with the team

Data Sources

- Data is NOT a four letter word!
- Data is:
  - Your observations – what you hear and what you see
  - Your measurements – what you keep track of
  - How you report your observations and measurements
- What is the benchmark?
  - What data sources do you have?

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Your Observations – Subjective Data

- Is there an opportunity for improvement?
  - Too many catheters?
  - Too many access infections?
  - Patient safety issues?
- Is there something that everyone is complaining about?
- Is there a process that is too cumbersome?
  - Medication errors?

Your Measurement – Objective Data

- Begin to collect information about your problem, your observation
  - Collect simple points of information at regular intervals over time
  - KISS – counting the number of days between episodes of infections might be simpler and more meaningful that collecting every episode of access infection
  - What is the trend?

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How Will We Know a Change is an Improvement?

- We will collect baseline 90 day catheter rates at the beginning of the project
- We will collect 90 day catheter data each month and trend
- We will collect 90 days catheter data at the end of 6 months to evaluate the success of the project: Our catheter rate will be 25% or less

What changes will result in an improvement: finding root causes

- Don't stop with surface issues – go deeper
- Brainstorming to discover all root causes
  - All disciplines – all team members
- Use a root cause tool
  - Fishbone diagram
  - 5 Whys
  - Other tools

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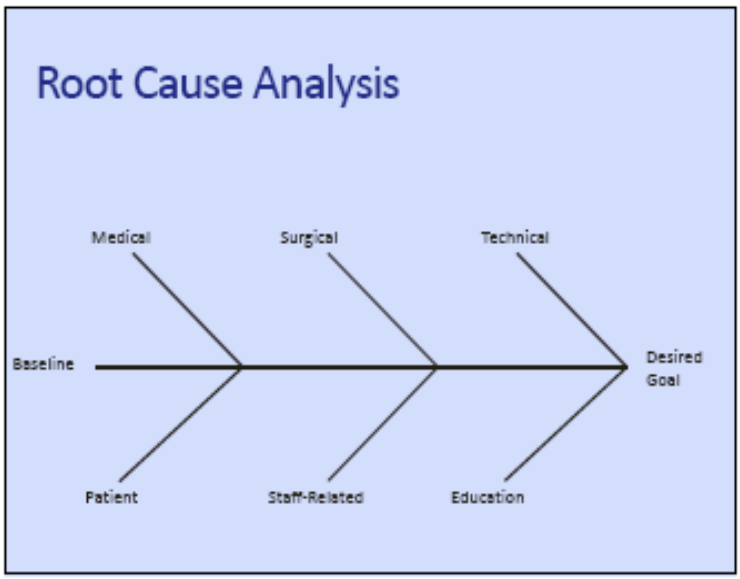

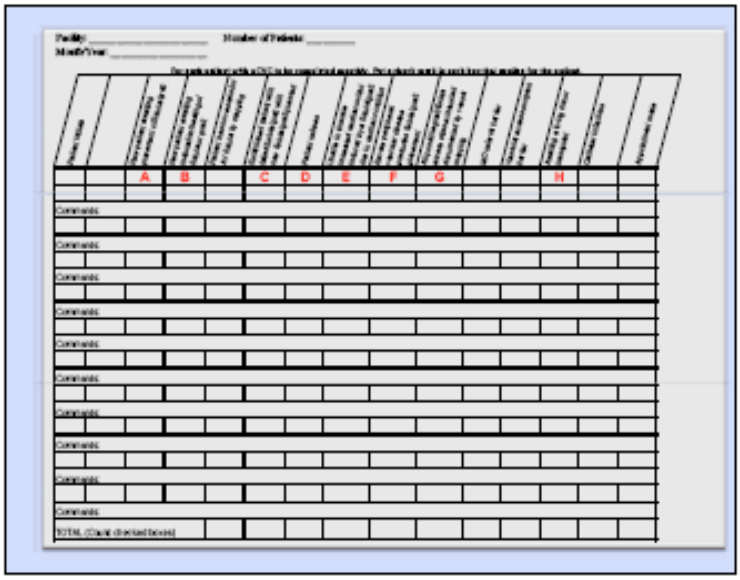

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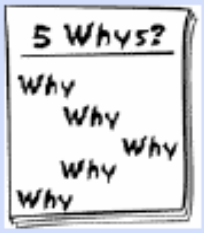
5 Whys



- Why did this occur?
- But why did that occur?
- So why did that occur?
- And then why did that occur?
- OK, so then why did that occur?

What are the barriers?

- What are the barriers to overcoming these root causes?
- What barriers are within your control and what are not?

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What are our root causes?

- Problem: 35% of patients have catheters for more than 90 days
- Goal: Decrease 90 day catheter rate to 25% in 6 months
- Root cause(s): Difficulty in getting new accesses placed

Developing your QAPI Plan

- Identify strategies
- All team members need to have a role
- Someone needs to be accountable and in charge
- Tasks need to be assigned and dates set to re-evaluate
- Plan needs to be dynamic – needs to be reviewed at least monthly

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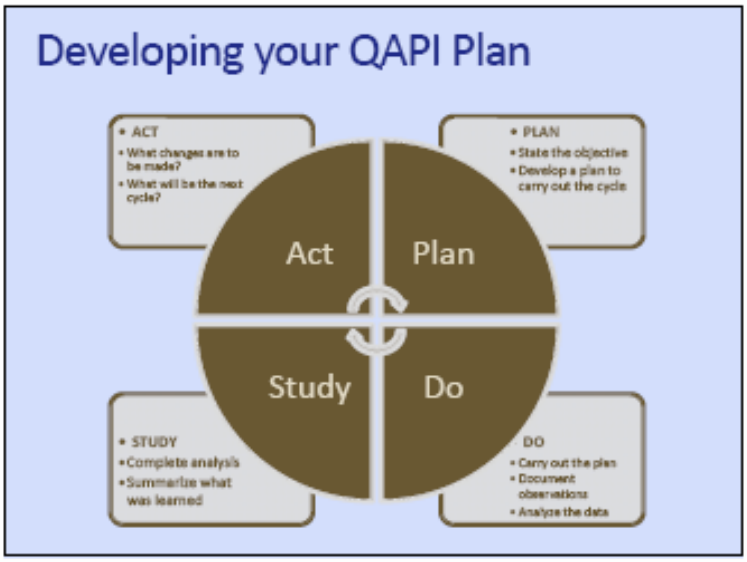

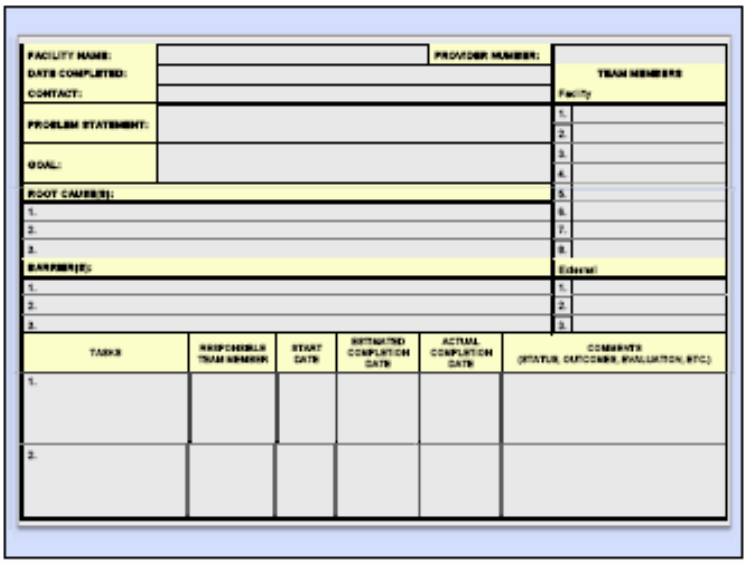

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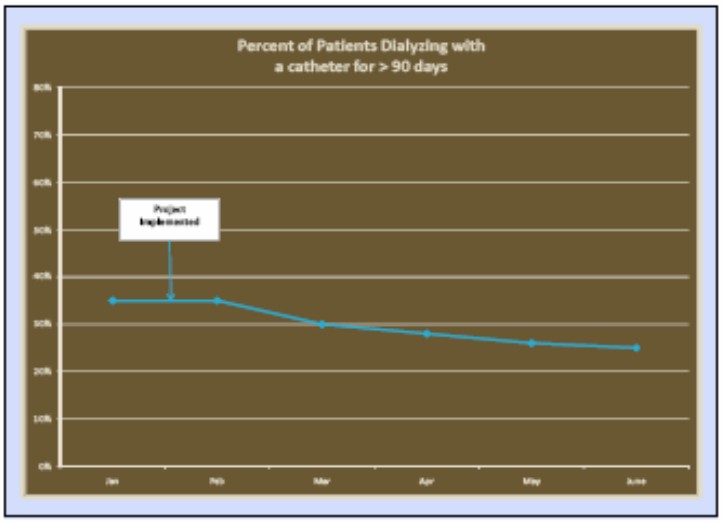

Evaluate and Re-evaluate

- Review plan regularly
- Use data to determine – Are we improving?
- Are we seeing unintended consequences?
- Does the plan need revision?
- Should we bring others to the team? If so, who is the best person to help?

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What do you do at the end??

- Evaluate!
  - Did we achieve our overall goal?
  - If not, why not?
  - If so, make it a permanent change
  - If not, what new strategies can we develop to try?
  - Are there best practices we can adopt?
  - Are there additional resources we need?
  - Are there new partners we can bring to the team?

Resources

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ESRD Network Resources

www.esrdnetworks.org

ANNA Resources

www.annanurse.org

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Institute for Healthcare Improvement

www.ihi.org

In Conclusion…

"Every system is perfectly designed to achieve the results that it gets."

Paul Batalden

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"The definition of insanity is doing the same thing over and over again and expecting different results"

Albert Einstein

Why Do QAPI?

- Because CMS says so?
- Because the Network is on my tail?
- Because we won't get paid if our outcomes are bad?

Because it's the right thing to do – the right care for every patient every time!

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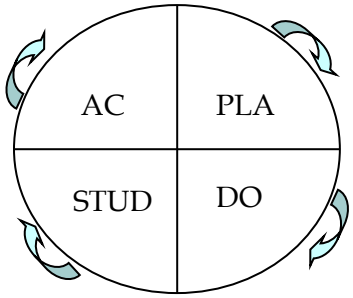
RESOURCES AND REFERENCES

PDSA WORKSHEET

(Adapted from the Institute for Healthcare Improvement © 2004)

CYCLE #: **DATE:**

	**Task:** **Project:** **Contact:**
BACKGROUND:	
PLAN: **What is the objective of this improvement cycle?**	
Predictions (what do we want to have happen):	
Plan for change or test: who, what, when, where	
Plan for collection of data: who, what, when, where, how will we collect it?	
DO: **Was the cycle carried out as planned? What did we observe that was not a part of our plan?**	
STUDY: **How did or didn't the results of this cycle agree with the predictions that we made earlier?**	
List what new knowledge we gained by this cycle:	
ACT: **List actions we will take as a result of this cycle:**	
Plan for the next cycle:	

QAPI ACTION PLAN (Blank)

FACILITY NAME:		**START DATE:**	
DATE COMPLETED:		**TEAM MEMBERS**	
CONTACT:		Facility	
PROBLEM STATEMENT:		1.	
		2.	
GOAL:		3.	
		4.	
ROOT CAUSE(S):		5.	
1.		6.	
2.		7.	
3.		8.	
4.		9.	
5.		10.	
6.		11.	
7.		12.	
8.		13.	
BARRIER(S):		External	

FACILITY NAME:		START DATE:	
1.		1.	
2.		2.	
3.		3.	
4.		4.	
5.		5.	
6.		6.	
7..		7.	
8..		8.	

TASKS	RESPONSIBLE TEAM MEMBER	START DATE	ESTIMATED COMPLETION DATE	ACTUAL COMPLETION DATE	COMMENTS (STATUS, OUTCOMES, EVALUATION, ETC.)
1.					
2.					

FACILITY NAME:		START DATE:	
3.			
4.			
5.			
6.			
COMMENTS:			
IDEAS FOR FOLLOW UP CQI			

Quality Improvement Tools
BRAINSTORMING

Brainstorming is a process that enables a team to generate a high volume of ideas on any topic. It can be structured or unstructured and can be done silently or aloud. Key aspects of brainstorming include:

- Getting all team members involved
- Creates enthusiasm
- Encourages creativity

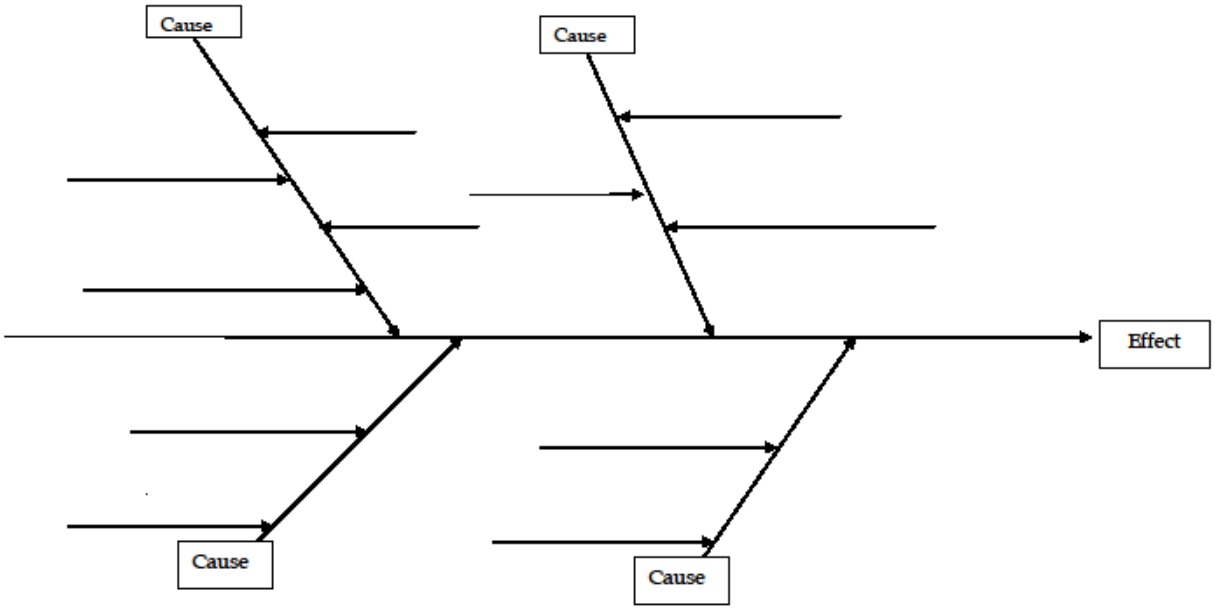
How to Brainstorm

- Agree on the problem, issue or question to be addressed by the group.
- Call out ideas in turn around the group allowing people to pass if they desire. Do not permit comment or criticism. The object is to generate as many ideas as possible.
- Record each idea on a flipchart.
    - Do not interpret or abbreviate
    - Never criticize
    - Build on and expand the ideas of others
    - Review the list for clarity and to discard duplicates

Brainstorming Variations

- ***Unstructured***
    - Call out ideas as they come to mind rather than in turn.
- ***Silent***
    - Write ideas on post it notes and pass to the scribe to write on the flip chart.
- ***6/3/5***
    - Give the group five (5) minutes to write down three (3) ideas on a piece of paper.
    - Instruct the group to pass the piece of paper to the person on their right. Give the group five (5) minutes to add an additional three (3) ideas to their neighbor's list.
    - Record each idea on a flip chart.

Cause –Effect (Fishbone) Diagram



Quality Improvement Tools

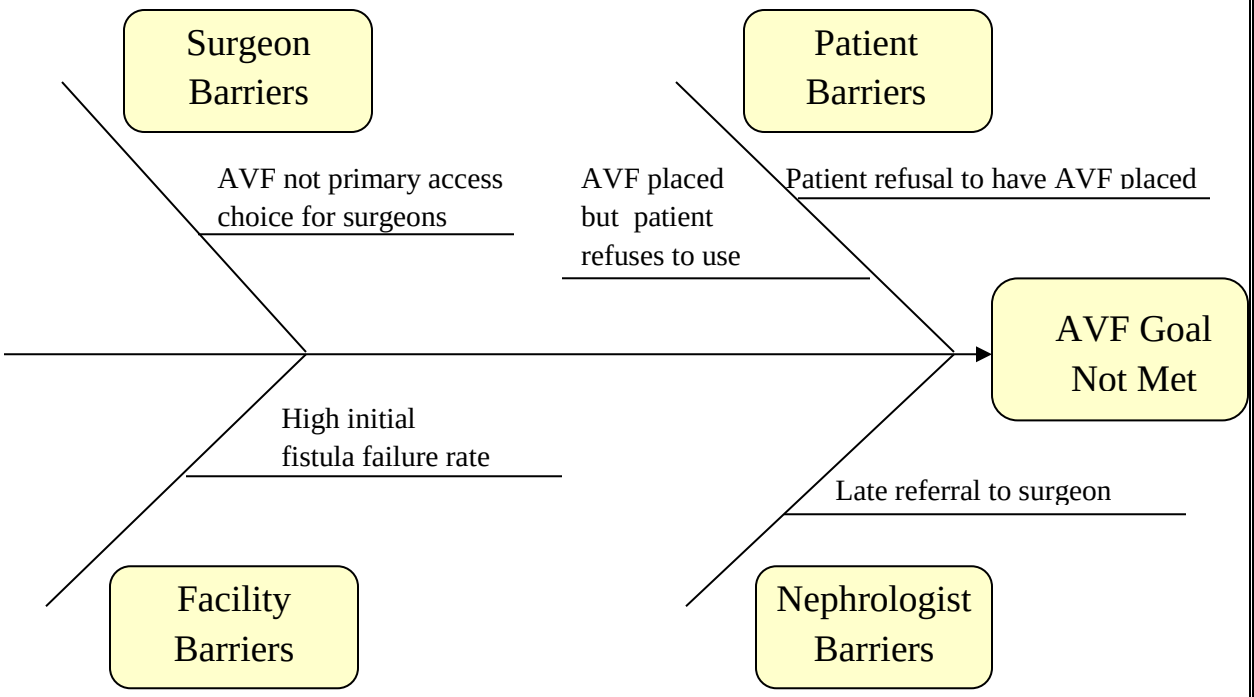
Cause and Effect / Fishbone Diagram

The "fishbone" is a snapshot of the collective knowledge of a problem or process. It is a picture of the relationship between an effect and its causes. The cause and effect diagram can be used to help explore the causes related to any problem or issue.

How to Create a Cause and Effect / Fishbone Diagram

- Clearly state the problem or process to be explored.
- Put the statement in a box on the right hand side of a piece of paper and draw a line heading straight to the box.
- Draw diagonal lines both above and below the main line.
- Identify the major categories of factors that contribute to the problem. Put these category labels next to each diagonal line.
- Generate a list of causes or contributing factors for each category. Write these causes on smaller lines.

An example fishbone is shown below:



Quality Improvement Tools
THE 5 WHYS

The key to solving a problem is to first truly understand it. Often, we try to solve a problem before completely comprehending its cause, and the focus shifts too quickly from the problem to the solution. What we think is the cause, however, is sometimes just another symptom.

One way to identify the root cause of a problem is to ask "Why?" five times. When a problem presents itself, ask "Why did this happen?" Then, don't stop at the answer to this first question. Ask "Why?" again and again until you reach the root cause. This exercise can be surprisingly insightful in helping you figure out what is really going on, and can help you avoid "quick fix" solutions. It is especially useful for tackling chronic problems that show up over and over again in a system.

Why?

Why?

Why?

Why?

Why?

QUALITY IMPROVEMENT TOOLS: FLOW CHARTS

A flow chart is a visual display of a process that may be used to identify the sequence of steps in the process. The flow chart shows unexpected complexity, problem areas, redundancy, unnecessary loops, etc.

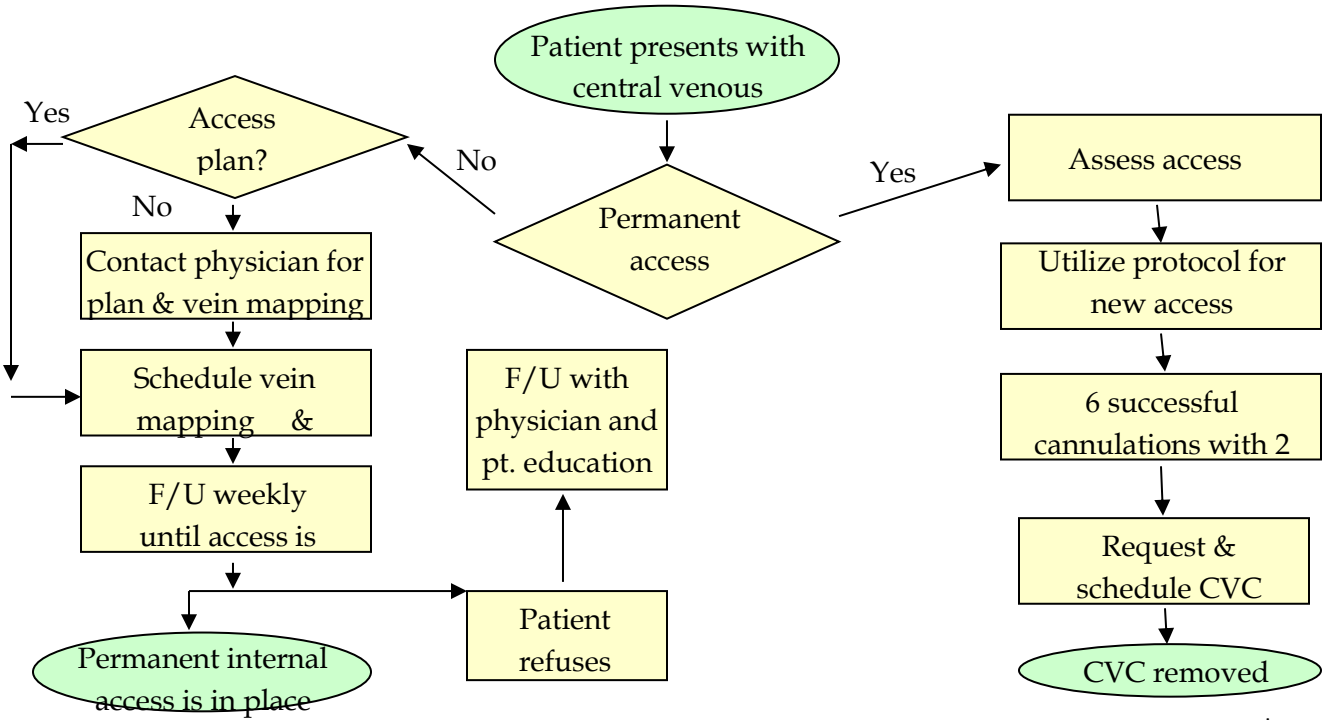
Symbols Used in a Flow Chart

- Oval – represents the beginning or end of a process
- Rectangle – represents a step or activity in the process
- Diamond – represents a decision point in the process
- Small circle with a letter or number inside – represents a break in the flow which is continued elsewhere on the same page or another page
- Arrow – shows the direction or flow of the process and how separate steps are connected to each other

How to Create a Flow Chart

- Decide which process to display on a flow chart
- Define the first and last step of the process
- Describe the first step of the process in an oval
- Put each subsequent step in a rectangle
- Connect the steps with arrows
- Put each decision point in a diamond and create a path for each alternative
- Put the last step in an oval

An example flow chart can be found below for the management of patients with central venous catheters.

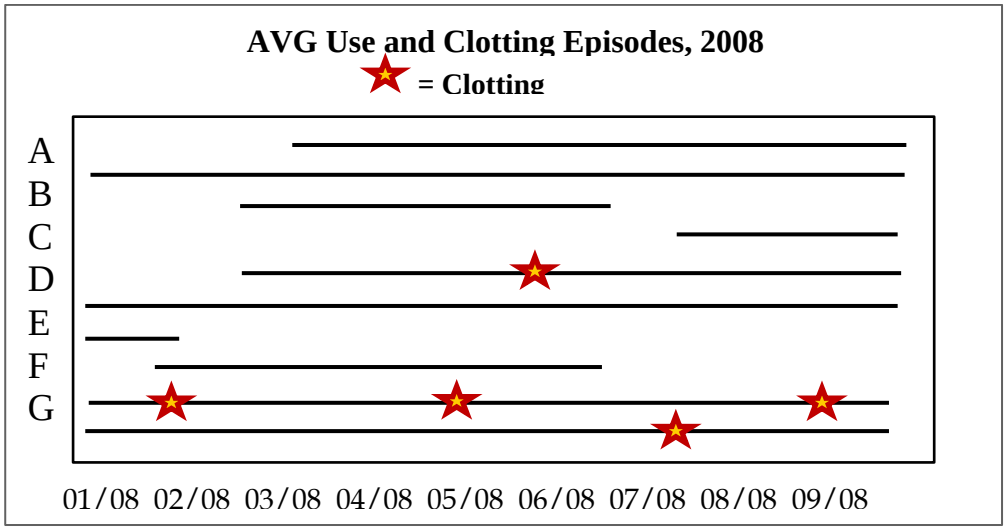


CALCULATING CLOTTING EPISODES PER PATIENT YEAR

Numerator: number of episodes per year. Multiple episodes involving the same patient are counted individually.

Denominator: patient year or sum of patients' time at risk for the event of interest.

- Count the number of months each patient dialyzed using an AVG.
- Add all the months together and divide by 12. This is the total number of years the patients were at risk and is referred to as "patient years".
- For example:
  - 10 patients used their AVG during 2008.
    - Patient A used a CVC during January, February, and March but an AVG was used from April to December. This patient has 9 months for the count.
    - Patient B used an AVG for 12 months
    - Patient C used an AVG for 6 months
    - Patient D used an AVG for 4 months
    - Patient E used an AVG for 10 months
    - Patient F used an AVG for 12 months
    - Patient G used an AVG for 2 months
    - Patient H used an AVG for 7 months
    - Patient I used an AVG for 12 months
    - Patient J used an AVG for 12 months
  - The total of the months listed above equals 86 months; 86 months ÷ 12 = 7.1 patient years at risk.
  - Review the clotting episodes for this same group of patient during the year.
    - Patient E had 1 clotting episode
    - Patient I had 3 separate clotting episodes
    - Patient J had 1 clotting episode
  - All clotting episodes are added together for a total of 5 episodes.



Number of clotting episodes is 5 (Numerator)
Patient year is7.1 (Denominator)
5 ÷ 7.1 = 0.7
Clotting episodes are 0.7 per patient year.
MAT goal is to decrease clotting episodes to < 0.5 per patient year.

QAPI FRAMEWORK