

# Understanding and Applying QAPI in Everyday Practice

Lynda K. Ball, MSN, RN, CNN  
Northwest Renal Network  
October 7, 2011

---

---

---

---

---

---

---

---

## CMS Disclaimer

This presentation was developed by Northwest Renal Network while under contract with the Centers for Medicare & Medicaid Services, Baltimore, Maryland, Contract #HHSM-500-2010-NW016C. The contents presented do not necessarily reflect CMS policy.

---

---

---

---

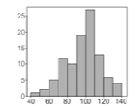
---

---

---

---

## Overview of Graphical Information



- Bar graphs – graphical representation of ungrouped frequency data
  - ✓ Histograms – Bar graph that shows the distribution of data
- Area graphs – show how things change over time
- Pie charts – percentage of a whole

---

---

---

---

---

---

---

---

## Effectiveness of Graphs

- Use the correct scale
- Measurement time interval
- Chose the proper graph format
- Assists in decision making

(Tufte, E. 2001)

---

---

---

---

---

---

---

---

## Is your unit providing optimal delivery of dialysis care?

- Proof/documentation?
- How do you know what processes are working and which ones need improvement?
- Can you discuss your facilities strength/weaknesses?

---

---

---

---

---

---

---

---

## Is your unit providing optimal delivery of dialysis care?

- Is your patient population any more challenging than a normal dialysis unit?  
If so, how is it documented and addressed in your QAPI?
- Is staffing an issue?  
How is it addressed in your QAPI?

---

---

---

---

---

---

---

---

## What is QAPI?

- ▶ More than “putting out fires”
- ▶ More than just asking “why”
- ▶ Ask the following questions:
  - ✓ What occurred?
  - ✓ What elements may have contributed to issue?
  - ✓ How to prevent a recurrence?

---

---

---

---

---

---

---

---

## QAPI: The Challenge

- Why is doing QAPI so hard in the dialysis unit?

Nurses are focused on what is going on with individual patients vs...

Administrators must look at overall provider performance with regard to all processes / all outcomes

---

---

---

---

---

---

---

---

## Role of the Medical Director

- Operational responsibility for the QAPI Program
- QAPI program is effectively developed, implemented, maintained, and evaluated
- Ensures the facility achieves clinical outcomes
- In charge of oversight of attending physicians
- Controls the process for involuntary patient discharge/transfer
- Ensures the facility is participating in Network activities and pursues Network goals

---

---

---

---

---

---

---

---

## Steps in Performance Improvement

1. Organize the team
2. Prioritize areas for action
3. Explore root causes
4. Develop and implement your improvement plan
5. Monitor and report progress

(Baker & Lieou, 2006)

---

---

---

---

---

---

---

---

## Reviewing Your Current QAPI Documentation

- All required QI indicators included?
- Goals indicated?
- Trends reviewed?
- QI indicators prioritized?
- Action plan needed?
- Is the IDT involvement documented?

---

---

---

---

---

---

---

---

## How Do You Set Goals?

- CMS / ESRD Network
  - ✓ Performance Targets
  - ✓ MAT
- Compare clinical outcomes
  - ✓ Previous year(s)
  - ✓ Against other facilities in your Network
  - ✓ Against national benchmarks

---

---

---

---

---

---

---

---

## Conditions for Coverage

494.110 Condition: Quality Assessment and Performance Improvement

“The dialysis facility must **develop, implement, maintain, and evaluate** an effective, data-driven QAPI program with participation by the professional members of the interdisciplinary team.”

---

---

---

---

---

---

---

---

## Quality Indicators - MAT

(V629) Adequacy	KT/V, URR
(V630) Nutritional Status	Albumin, body weight
(V631) Bone Disease	PTH, calcium, phosphorus
(V632) Anemia	Hemoglobin, ferritin
(V633) Vascular Access	↑ fistulas, ↓ catheter rate
(V634) Medical Errors	↓ frequency of specific errors
(V635) Reuse	↓ adverse outcomes
(V636) Patient Satisfaction	↑ survey scores
(V637) Infection Control	↓ infections, ↑ vaccination status

---

---

---

---

---

---

---

---

## Prioritizing Improvement Activities

(V639) Considerations in prioritization

- Prevalence of problem
- Severity of problem
- Impact on clinical outcomes
- Impact on patient safety

---

---

---

---

---

---

---

---

## Immediate Correction

Examples of serious health and safety threats:

- ▶ Unsafe water or dialysate
- ▶ Defective clinical equipment
- ▶ Unsafe reprocessing of dialyzers
- ▶ Epidemiological risks
- ▶ Insufficient number of competent staff to perform scheduled treatments:
  - ✓ Preserve accesses
  - ✓ Monitor patients
  - ✓ Ensure safe machine function

---

---

---

---

---

---

---

---

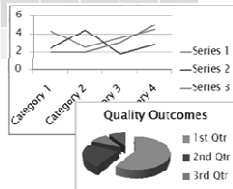
---

---

## How will you use your data?

Quality Indicator	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
HD Adequacy Kt/V > 1.2 Goal 54%	90%	86%	85%	84%	83%	82%	84%	85%
Hgb 10-12 gm/dL Goal 70%	64%	62%	65%	64%	68%	68%	68%	72%
Hgb < 10 gm/dL Goal < 10%	6%	5%	4%					
Albumin > 4.0 / 3.7 (BCG/BCPI)	30%	35%	34%					

**Focus should be on the aggregate, not on the individual patient outcome....**




---

---

---

---

---

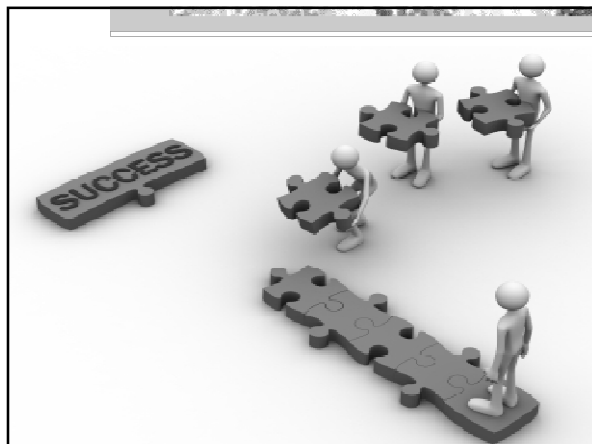
---

---

---

---

---




---

---

---

---

---

---

---

---

---

---

## Root Cause Analysis

### Definition:

Finding the real cause of the problem and dealing with it rather than simply continuing to deal with the symptoms.



---

---

---

---

---

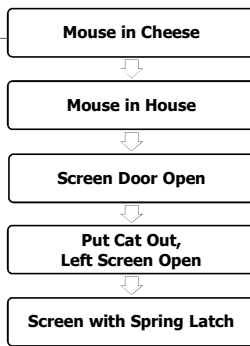
---

---

---

## Root Cause Analysis

**5**  
**W**  
**h**  
**y**  
**S**



---

---

---

---

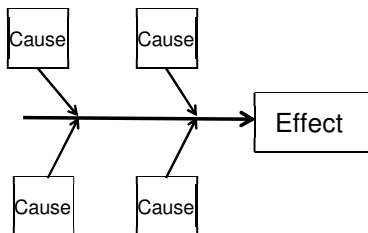
---

---

---

---

## Cause & Effect Diagram



---

---

---

---

---

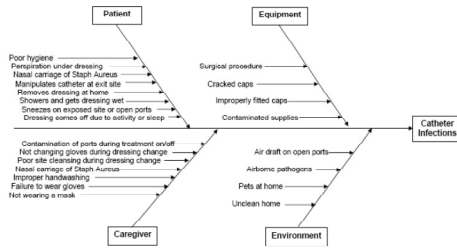
---

---

---

# Root Cause Analysis

## Reducing Central Venous Catheter Infections




---

---

---

---

---

---

---

---

# Root Cause Analysis

Use tools to collect aggregate % of patients data

“Biggest bang for the buck”

Compiling excuses is **NOT** root cause analysis

---

---

---

---

---

---

---

---

# Let's take a look....

Quality Indicator	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
HD Adequacy KT/V ≥ 1.2 Goal 94%	89%	88%	86%	84%	84%	82%	87%	90%
Hgb 10-12 gm/dL Goal 70%	66%	63%	67%	67%	68%	69%	69%	71%
Hgb < 10 gm/dL Goal < 10%	4%	6%	8%	8%	7%	5%	5%	9%
Albumin ≥ 4.0/3.7 (BCG/BCP) Goal 35%	30%	30%	32%	35%	34%	35%	35%	35%
Catheter Rate Goal < 10%	17%	20%	19%	19%	22%	24%	22%	19%

**Adequacy** Hgb 10-12 Hgb <10 Albumin Catheter Rate  
**Not met** No, but... Met goal At goal Not met

---

---

---

---

---

---

---

---

## Prioritizing

Which indicator(s) will you choose?

1. Adequacy – Not met
2. Catheter – Not met
3. Hemoglobin 10-12 gm/dL – No, but...

---

---

---

---

---

---

---

---

## PDSA: Plan

### Quality Improvement Action Plan

Facility Name XYZ Dialysis	Provider # 123456	Date Plan Initiated: 8/31/2011
Problem Statement: Adequacy goal 94% of patients to achieve KT/V $\geq$ 1.2 Last 8 months below goal		Team Leader: Ima Nurse, RN – Nurse Manager
Goal: 94% of patients to achieve KT/V $\geq$ 1.2 by 11/30/2011	Percent Currently at Goal: 90% of patients achieving a KT/V $\geq$ 1.2	
IDT Members involved: Dr. Doolittle, Nephrologist; Lisa Lab, RD; Cindy Social, SW; Ima Nurse, RN		
Root Cause(s) 1. Treatment duration not met 2. Blood flow rate not met	Root Cause Analysis (% effecting problem) 1. 62.3% 2. 43%	

---

---

---

---

---

---

---

---

## PDSA: Do

### Quality Improvement Action Plan

Action Plan	Staff Respon	Start Date	Check-point Date	Completion Date	Comments
1. Create and distribute education for pts RE: coming off dialysis early.	Staff RN Betty	9/10	9/13	9/15/11	All pts received
2. Education for staff on following prescription: Length of treatment & BFR	Edu dept	9/12	9/15	9/20/11	All staff attended
3. Chart audit 10% DTR weekly starting 9/26 x 6 wks.	Ima	9/26	10/7		

---

---

---

---

---

---

---

---

## PDSA: Study

### What is Rapid Cycle Improvement?

Variant of process improvement that:

- relies on existing knowledge
- dramatically shortens discovery process
- works on “rapid trial & learn” method
- relies heavily on action

- ❖ Make one change at a time
- ❖ Trial in small sample (pod, 1<sup>st</sup> shift, MWF)

---

---

---

---

---

---

---

---

## PDSA: Act - Monitoring Performance Improvement

(V638) The facility **must**:

- Continuously monitor its performance
- Take actions that result in performance improvement
- Track to assure improvements are sustained over time

---

---

---

---

---

---

---

---

## Measurement Guidelines

The question - *How will we know that a change is an improvement?*

- ✓ Use sampling to make measurement efficient
- ✓ Usually requires more than one measure
- ✓ Balancing measures help to assure that the *system* is improved
- ✓ Plot data on the measures *over time*

---

---

---

---

---

---

---

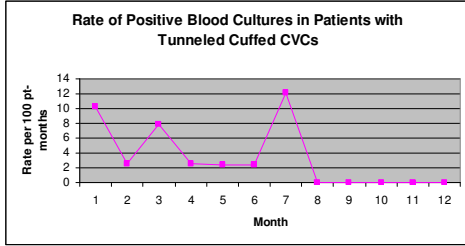
---





## National Healthcare Safety Network

### Rates over time




---

---

---

---

---

---

---

---

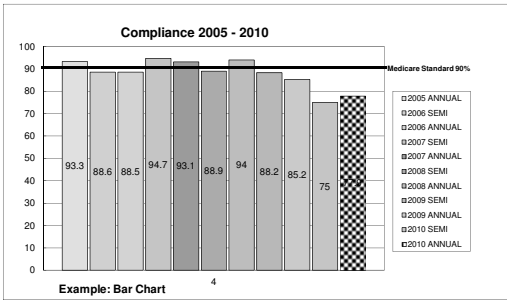
---

---

---

---

## Example: CMS Compliance Report



Example: Bar Chart

---

---

---

---

---

---

---

---

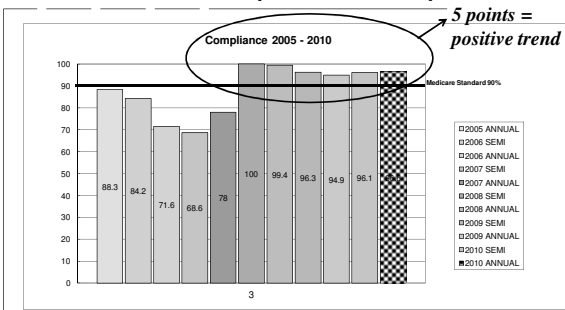
---

---

---

---

## Example: CMS Compliance Report




---

---

---

---

---

---

---

---

---

---

---

---



## What Does It Mean for Your Facility?

- Refine your QAPI process
  - ✓ Engage your staff
  - ✓ Review processes regularly
  - ✓ Intervene quickly
  - ✓ Understand root causes and barriers
  - ✓ Design strategies that match the barriers
  - ✓ Track you data

---

---

---

---

---

---

---

---

## What Does It Mean for Your Facility?

- Change your culture
  - ✓ Evaluate processes (P&P, equipment, etc)
  - ✓ Determine barriers to change
  - ✓ Identify ways to overcome barriers
  - ✓ Incorporate best practices
  - ✓ Create an environment of collaboration

---

---

---

---

---

---

---

---

## Resources

- Agency of Healthcare Research and Quality at [webmm.ahrq.gov/](http://webmm.ahrq.gov/)
- American Society for Quality at [www.asq.org](http://www.asq.org)
- Forum of ESRD Networks at [www.esrdnetworks.org/mac-toolkits](http://www.esrdnetworks.org/mac-toolkits)
- Institute for Healthcare Improvement at [www.ihl.org/Pages/default.aspx](http://www.ihl.org/Pages/default.aspx)
- NRAA at [www.nraa.org](http://www.nraa.org)
- Renal Physician's Association at [www.renalmd.org](http://www.renalmd.org)

---

---

---

---

---

---

---

---

## References

Adams, L. (2008). Rapid cycle improvement: Simple methods, powerful results. Presented at 2008 CMS/ESRD Networks' Annual Meeting.

Baker, S. & Lieou, T. (2006). Applying quality improvement techniques to analyze problems and find solutions. Presented at National Public Health Performance Standards Program Annual Training.

---

---

---

---

---

---

---

---

## References

Centers for Medicare & Medicaid Services. (2008). Measures Assessment Tool.

Duval, L. & George, C. (2010). QAPI: Beyond the paper. Presented at Network 8 meeting Reforming ESRD: Changes, Challenges, Choices.

Tufte, E. (2001). Visual display of quantitative information. Graphics Press.

---

---

---

---

---

---

---

---

## Questions?

Lynda K. Ball, MSN, RN, CNN  
Quality Improvement Director  
Northwest Renal Network

[lball@nw16.esrd.net](mailto:lball@nw16.esrd.net)

[www.nwrenalnetwork.org/QI/QI.htm](http://www.nwrenalnetwork.org/QI/QI.htm)

---

---

---

---

---

---

---

---