

*INFECTION PREVENTION IN ARIZONA'S CAHS—
MANAGING SYSTEMS TO IMPROVE QUALITY*

***Learning Session 2: Analyzing
Information for Decision Support***

*July 22, 2011 10:00 AM to 3:00 PM
Health Services Advisory Group, Phoenix, Arizona*

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Objectives

- Identify simple questions to provide meaningful QI data
- Improve clarity of data display
- Identify essential components of an effective QI report

Review of Homework

- Identify one Lesson Learned from Learning Session 1 that can be transferred and applied.
- Select one resource material that was reviewed (i.e., APIC fact sheets, hand hygiene music video, etc.) and identify how and with whom it will be shared.

Capturing and Analyzing Data

Questions for Meaningful Data*

- Should we stay the course or change direction?
- Is it too much or too little; too big or too small; too fast or too slow?
- Are we getting better or worse?
- Are the data stable enough that I can draw a conclusion from them, or are they jumping all over?
- Are things moving slow enough that I have time to think about this, or are they moving so fast that I have to make an emergency decision right now?

* "Using Simple Questions to Ensure Your Data are Providing Meaningful Answers for Your Board, Your Leadership, and You"
Kenneth R. Rhode, Senior Consultant, The Greely Company, TGC@Greely.com, www.greely.com

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A Question of Strategy

- Should we stay the course or change direction?
 - Key focus for senior leadership and the Board
 - Numbers are not enough to tell the story
 - Setting the context adds value to the data

(e.g. 14 falls last month and 16 falls this month)

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A Question of Magnitude

- Is it too much or too little; too big or too small; too fast or too slow?
(i.e., 14 falls or 16 falls represent the Magnitude)
 - Judgment needs to be used to interpret magnitude
 - Tools for interpreting magnitude
 - Benchmarking
 - Historic comparison
 - Comparison to goals or standards
 - Control charts

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A Question of Direction

- Are we getting better or worse?
 - Every graph or table should indicate which direction is good
 - Tools to evaluate direction
 - Smoothing data (rolling averages)
 - Slope of the trend line

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A Question of Variability

- Are the data stable enough that I can draw a conclusion from them, or are they jumping all over?
 - The greater the variability, the more unpredictable the process
 - Highly variable data does not allow for direct conclusions
 - [Decreasing variability precedes improvement]

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A Question of Rate

- Are things moving slow enough that I have time to think about this, or are they moving so fast that I have to make an emergency decision right now?
 - Techniques to evaluate urgency
 - Slope of the smoothed rolling average
 - Extrapolate to a goal or danger limit

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Making the Simple Questions Work

- Set expectations for data you use
- Make all data you report useful
- Include conclusions in your data presentations

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Information for Health Care Improvement



Presenting Data Clearly

Information for Health Care Improvement



Visual Display of Healthcare Data: Four Part Webinar by Naomi Robbins, Ph.D

- The following presentation uses a handout containing excerpted graphs and charts that were submitted by QIOs for discussion in the Webinar series Visual Communication of Healthcare Data, which concluded on Tuesday, April 5, 2011.
- A number of the slides contain comments by the series presenter Naomi Robbins, Ph.D., which have been left open on each respective page. Dr. Robbins included her contact information at the end of the PDF file if you have further questions.

Additional information is available in Dr. Robbin's book:
Robbins, Naomi B. 2005. *Creating More Effective Graphs*.
Wiley & Sons, Inc., New Jersey.

Visual Display of Healthcare Data: Four Part Webinar by Naomi Robbins, Ph.D

- The first Webinar covered the definition of an effective graph; commonly used graphs and their limitations; and human perception, how information is decoded from graphs and why some graphs work and some don't.
- The second Webinar covered useful graphs in one, two and more than two dimensions; dot plots, Tukey's box plots, scatterplots, cycle plots and other graph styles; and emphasized Trellis displays and linked micromaps.
- The third Webinar covered guidelines that apply to all graphs, choosing scales and an explanation of Excel defaults users should change.
- The fourth Webinar is a continuation of the third Webinar

Visual Display of Healthcare Data: Four Part Webinar by Naomi Robbins, Ph.D

- March 15 Webinar:
<http://qualitynet.webex.com/qualitynet/playback.php?First=No&FileNamen=http://vhqc.org/CommunicationsQIOSC/F-VAVISUAL1031511.wrf>
- March 22 Webinar:
<http://qualitynet.webex.com/qualitynet/playback.php?First=No&FileNamen=http://vhqc.org/CommunicationsQIOSC/F-VAVISUAL2032211.wrf>
- March 29 Webinar:
<http://qualitynet.webex.com/qualitynet/playback.php?First=No&FileNamen=http://vhqc.org/CommunicationsQIOSC/F-VAVISUAL032911.wrf>
- April 5 Webinar:
<http://qualitynet.webex.com/qualitynet/playback.php?First=No&FileNamen=http://vhqc.org/CommunicationsQIOSC/F-VAVISUAL040511.wrf>

Maintaining Team Involvement and Leadership Support

Essential Components of an Effective QI report

- S- Results, context, this is what the data show
- B- Actions, this is what we had tried
- A- Conclusions, what made it work/not work
- R- Keep doing it, recommended small test of change
- Approval/feedback/ direction (set priority)

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Example of QI Report

Goal: By December 31, 2011 100% of abnormal lab tests on all hospitalized patients will be reported to the Infection Prevention Nurse (IPN) within 24 hours.

- Results for June 2011: 82% of abnormal lab tests were reported to the IPN within 24 hrs. This is the third month in a row that the rate has increased.
- Past actions: In March 2011 a process was implemented to clearly designate who is responsible for notifying the IPN of abnormal lab results.
- Conclusions from RCA: When a person knows s/he is responsible for notifying the IPN and receives the information regarding the abnormal lab result timely, the rate of timely notification of the IPN improves.
- Recommendations/Requests:
 - IP Team members be allotted 2 hrs. paid time in the first 2 weeks of July to review/revise the processes for designating who is responsible for notifying IPN of abnormal lab tests, how designated party is made aware of their designation, and how designated party obtains information regarding the abnormal lab tests.
 - The IP Team members be allotted 2 hrs. of paid time in the last 2 weeks of July to develop and roll out the implementation plan.

Take-Home Messages

- Data reports must be understandable to leadership, Board members, and medical staff and transparent to everyone.
- Simplify data reports in terms of fewer colors, clearer labels, and minimal use of decimal points and “%” signs.
- Reach out to peer networks and discuss common issues (peer group interaction).
- Take action and plan to use data to improve numbers. Make data drive the decisions and prioritize issues.
- Obtain feedback and direction from leadership regarding priorities moving forward.

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Homework for WebEx#2 (Date TBD)

- Refine current QI report formats and/or data displays to make information more useful for decision support

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Next Steps: Who Does What by When

Who	Does What	By When

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Contact Information

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Analyzing Information for Decision Support

Over 1 million drug-related injuries occur every year in health care settings. The Institute of Medicine estimates that at least a quarter of these injuries are preventable.

To find out how to prevent medication errors, go to <http://www.hsag.com/drugsafety/>.



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