



"Partners in Perinatal Quality"

Special Edition
E-Zine
May 15, 2009

This special e-zine was sent out specifically for the project development teams who are working on measurement development for future TIPQC projects. We hope that this might also be helpful to all TIPQC members for any current or future projects.

Quality Tip: Measurement

To date in our e-zines, we have discussed identifying an opportunity for improvement, setting an aim, organizing a team, and developing a flowchart of your process. The next area of interest is to select measures, define them operationally, and develop a data collection plan.

MEASUREMENT

While developing your aim statement, consider measurements based on your theory about how to make improvements. There are different kinds of measures, for example:

OUTCOME measures relate directly to the aim or result of your study--e.g., temperature.

INTERMEDIATE measures predict an outcome--e.g., fewer infections will lead to fewer deaths.

PROCESS measures assess the points in the sequence or flow of the process that lead to an outcome--e.g., education of staff will lead to compliance in hand hygiene.

PROXY measures are indirect measures which coincide with or approximate the outcome--e.g., the refill rate for soap and alcohol based hand sanitizers, as a proxy measure for hand hygiene following an education and awareness campaign.

BALANCING measures are the unintended consequences or adverse side effects that can occur when you make changes--e.g., when reducing number of painful procedures, are you missing important care? (J. Handyside, 2005).

You will want to create an **Operational Definition** of each measure. An operational definition is a description, in quantifiable terms, of what to measure and how to measure it consistently—such that any person would collect it the same way and get the same answer. A data collection plan answers the following:

1. Why collect the data?
2. What methods will be used for the analysis?
3. What data will be collected?
4. When will the data be collected?
5. Where will the data be collected?
6. Who will collect the data?
7. What training is needed for the data collectors? (ELI, 2002)

Types of Measurement include:

- **Continuous** or **Variables** measurement data (e.g., length, temperature, mg).
Has a meaningful zero.
- **Count** or **Classification** qualitative data (e.g., # errors, yes/no, apples/oranges/pears). Cannot be fractionated or scaled.

Whenever possible, choose continuous data over count data, for the richness of information. Also be sure and pilot your data collection before full implementation of your study.

Keep in mind that a number is an "**Indicator**" and not the real thing itself. In fact, Deming was well known for saying, "There is no such thing as a fact." He was trying to get people to realize that all measurement is fraught with error. Knowledge of variation is more important than having THE number.

REFERENCES

Executive Learning, Inc. Handbook for Improvement (Healthcare Edition). Nashville: Healthcare Management Directions, 2002.

Handyside, Jim. "Measurement Types" Game. Vermont Oxford Network Annual Meeting, Portland OR, April 2005.

For more information on Measures & Data Collection and Understanding Variation, & Setting the Aim, see: http://www.tipqc.org/quality_improvement.htm

Keyzine on Measurement: <http://www.mkkey.com/EZines/ezine49-measurement.htm>

Please watch the web for updates on all projects throughout the month.

www.TIPQC.org

Sincerely,

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