# Delfini

*Evidence- and Value-based Solutions for Health Care*

*Clinical Improvement Consults, Content Development, Training & Seminars, Tools*

## Primer: Quality Measurement Efforts

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| **Key Points** | **Measurement is a way of monitoring whether we are achieving our goals**<br><br>**Quality Measurement Efforts**<br>▪ Clinical improvement — focus is on change from current state to new state<br>▪ Performance measurement — a quantitative way to measure health care quality which may or may not have resulted from a clinical improvement<br><br>**Caution ➔ Measurement is complex and prone to pitfalls**<br>▪ Look for valid and useful evidence using an evidence-based approach<br>   ▪ When measuring health status outcomes, use proxies which are related to services or processes<br>▪ Quality measurement efforts are usually observational, not experimental. Observations are highly prone to confounding<br>   ▪ For clinical interventions, unless you are doing "research," you should choose to measure occurrences that have a link to the outcomes<br><br>**Advice**<br>▪ Utilize valid, useful evidence as much as you can<br>▪ Be aware of pitfalls and potential for confounding<br>▪ Try to frame as a focus on "attention to quality" |
| **Occurrences for Measurement** | 1. Outcome-related occurrences:<br>   a. Health status outcomes: morbidity, mortality, symptom relief, functioning and health-related quality of life<br>   b. Health care outcomes: satisfaction, behaviors, costs<br>2. Performance-related occurrences: diagnostic, therapeutic and monitoring interventions<br>3. Process-related occurrences: patient services such as visits, providing information, etc., and behind-the-scenes processes such as hours worked, equipment calibration, chart delivery, etc |
| **Measurability Considerations** | Measures should be —<br>▪ Quantifiable and valid<br>▪ Measure is accurate (e.g., correctly identifies the occurrences it is designed to identify) and dependable (e.g., with repeated testing measurement should yield same results)<br>▪ Measure is useful and usable – includes capability for risk stratification, comprehensible and helps with quality improvement<br><br>Measurement must be achievable<br><br>**Caution ➔**<br>▪ Even with a valid measure, invalid results can occur if appropriate data are not obtained or gathered correctly |
| **Performance Measurement** | Performance measurement in clinical care is a quantitative way to measure what is done to patients or what care patients receive, consisting of a denominator, a numerator and a frequency<br><br>▪ To measure quality, the denominator specifies the "universe" of who or what ought to have had an occurrence (e.g., who should be treated with an ARB).<br><br>▪ The numerator is the count of what actually happened (e.g.., who actually got an ARB out of those who should have received an ARB).<br><br>▪ The frequency specifies how often it is supposed to happen. |

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| | ▪ Denominator = the base number of units from which you are measuring for your improvement<br>▪ Numerator = the subset of your denominator in which you will count the number of occurrences of your events of interest<br>▪ Frequency for measurement = the intervals for your measurement<br><br>**Example**: "All patients, without exclusions, with diagnosis of diabetes mellitus receiving at least one hemoglobin A1c annually" |
| **Performance Measure Validity** | ▪ A valid denominator specifies the right base from which the measurement will be made (what ought to be measured)<br>  ▪ Denominator validity means that the denominator has the right inclusions and exclusions to identify the right pool for measurement<br>▪ Numerators generally count events such as something that happens to a patient or something patients receive<br>  ▪ A valid numerator is based on valid, useful and usable scientific evidence<br>  ▪ Ideally frequency and other time issues in numerators, such as time-to-intervention, is derived from evidence<br><br>**Caution ➔** Even with a valid measure, invalid results can occur if appropriate data are not obtained or gathered correctly |
| **Performance Measure Calculation** | Numerator:  (# of patients meeting numerator criteria) **divided by**<br>Denominator:  (# patients in denominator) – (# patients with valid denominator exclusions) |
| **Performance Measure Pitfalls** | **Performance Measure Cautions (including P4P applications) ➔**<br>In addition to potential problems of  invalid numerators, denominators and frequencies and data collection challenges, performance measures can severely threaten quality if not utilized correctly —<br>▪ Potential for misleading information about what constitutes quality care or what quality achieved<br>▪ Penalize quality performers<br>▪ Reward poor performers<br>▪ Alienate those who are "measured"<br><br>These potential pitfalls include —<br>▪ Differences in populations which might not be adjusted successfully through risk adjustment<br>▪ Performance measures can introduce an element of inflexibility<br>▪ Legal considerations<br><br>**Caution ➔** Evaluating and comparing organizations, units and individuals using performance measures can result in misleading conclusions.  Some relevant factors include —<br><br>Bottom-line: performance measures (and therefore pay-for-performance initiatives) have the potential for misinforming the end-user:<br>▪ The system can be gamed<br>▪ Risk adjustment challenges<br>▪ Appropriate actions may have been taken to improve quality of care, but because of patient factors, systems factors or small sample size, performance may not result in clinical improvement<br>▪ Small sample sizes can create validity problems, especially at the individual level<br>▪ Many confounders<br>▪ Adjusting for case mix is problematic |

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