Want Real Performance and Outcomes Improvement? Track Interventions and Results Over Time

written by Thomas Dent, M.D. | December 9, 2015

> Time will explain it all. He is a talker, and needs no questioning before he speaks—Euripides

For many providers, reviewing performance data is just another distraction from practicing medicine, rather than a valued tool for making better medical decisions. And who can blame them? Performance or outcome data reviewed in isolation, as static results, aren't all that useful. The exercise is akin to looking at a single photograph of an event and inferring cause and effect without any corroborating evidence.

To be an effective resource that leads to actual outcome improvements, data must be tracked over time. Most often, however, performance measurement is considered for just one time period, usually an annual summary or report. But performance improvement efforts require testing interventions longitudinally to see what actually works and what doesn't. For your data to "talk" to your practice or organization, you need to think like a researcher, not merely an observer.

What data should be tracked over time?

Provider performance data and patient outcomes data are the outgrowth of Value-Based Health Care measurement processes, including Meaningful Use, PQRS, the Value-Based Payment Modifier and ACO Shared Savings. The two forms of data are related, but not the same. The

percentage of patients with hypertension who achieved adequate control (PQRS Measure #236, MU Measure #165) is an example of provider performance data. The patient outcome data from this measure are the actual blood pressure values. Other patient outcome data would include utilization data, such as hospital admissions or emergency room visits.

While reporting these data may fulfill the annual Medicare PQRS requirement, there is a broader benefit to be had. Using data for the purpose of improving care—evaluating what interventions enabled a greater percentage of patients to gain adequate control of blood pressure—requires longitudinal outcomes measurement.

We believe tracking this data is best accomplished through a Clinical Data Registry (CDR) or a Specialized Registry; CDRs are required to report information about the health status of patients over varying periods of time.

How are provider performance and patient outcome data tracked currently?

For PQRS, providers are judged by performance during a reporting period (usually a calendar year). The reward or penalty is assessed at the end of the measurement period. Sometimes the denominator may stretch over more than one year, but the reporting period is one year.

For example, the breast cancer screening measure for PQRS (Measure #112), is a 27-month look back to determine if a mammogram has been provided in that time period, but the measure must be reported annually. The provider's success (or failure) in either reporting or performance is not carried over from one measurement period to the next. As a result, each measurement period is independent from prior or subsequent ones; neither a patient's health status nor a provider's performance is tracked over time.

When there is a value in the measure (e.g. HgbA1C, systolic blood pressure), the most recent event in the measurement period is reported. A few measures look at the change in performance within the measurement period, such as Meaningful Use Measure # 159-Depression Remission at 12 months. With this measure, patients with an initial PHQ-9 score > 9 (reflecting moderate to more severe depression) who demonstrate remission at twelve months, defined as a PHQ-9 score less than 5, satisfy the performance for the measure. This measure is an excellent step toward rewarding improvement, but is limited to the reporting period.

How do your providers benefit from tracking data over time?

> Measuring tracked data places the focus on change. Providers and provider organizations don't have the resources to continue to use interventions that aren't effective. A longitudinal measurement process is essential to assessing the effectiveness of actions or interventions to improve performance.

Measurement of improvement (or lack thereof) is intrinsically fair. The providers who are managing a more challenging or underserved population won't be penalized for the basic status of their patient population when outcomes are assessed over time. By contrast, in the basic status model, a physician or practice may be tempted to remove these more difficult patients from the practice to improve performance. It is intolerable to think that providers would be rewarded for avoiding sick patients, but unless the outcome measure is changed to reflect improvement, that unintended reward creates a strong incentive.
Trending of data results may serve as an "early warning system" about problems for the patient or a population of patients that should be addressed before a serious problem occurs. When tracking Meaningful Use Measure #50- Closing the Referral Loop, for example, if the provider is not getting consultation reports from patients who were referred to other providers, there may be lapses in the patient's care. This is a definite liability risk to the provider, and timely tracking of referrals is necessary.
Tracking and trending patient and provider data helps to flag unstable data prior to any intervention. It may be that a specific data element in time is a random variation, and subsequent data may show a regression to the mean.
Continuous tracking by run-time-charts may help to determine if the measurement system has fundamentally changed (e.g. the denominator of the measure changed). This provides a deeper understanding of the data, which is crucial for accurate decisions or conclusions.

What are the challenges of tracking data over time?

Measurement specifications change over time, and this may make annual comparisons difficult. For this reason, outcomes derived from the measures may be more valuable to track over time. Case in point: the denominator for the measure on controlling the HgbA1C in diabetes changed between Version 2 and Version 3 of the Meaningful Use Measure #122, when the diagnosis of gestational diabetes was included in the denominator of Version 3. The numeric intermediate outcome did not change, and could be tracked across the years.
There may be a change in a group's providers. This a good reason to look at the TIN level for some measures. If the measure is of the individual provider and the provider leaves, then there is no continuity for the group on that measure. However, if the patient continues seeing other providers in the practice, then the data tracking may continue for that patient for the practice's TIN. If the provider takes patients with her to a new practice, using the same measures, then on-going tracking may occur for her NPI.

What are trends in tracking performance data over time?

Z-scores are currently used to calculate provider performance for the Value-Based Payment Modifier; this methodology compares providers against a mean of other providers for the

measure. The Z-score is the multiple or fraction of a standard deviation above or below the mean (e.g. 2.1 SD or 0.7 SD) for an individual measure's performance.

Tracking a provider against others over time affords an opportunity to determine if a specific provider or group is improving or worsening compared to similar providers. We can expect that this delta (change) comparison measurement will be important in the future, and Specialized Registries are an excellent way to start this process.

Tracking performance is closely linked to assessing changes in performance after some action or intervention has taken place in the measured population. When an intervention is undertaken, then it should be visible within the visualized tracked data (usually a run-time chart).

Longitudinal data has a lot to tell us about how to improve provider performance and patient outcomes. And that data speaks loudest when your organization employs tools such as a Specialized Registry or Clinical Data Registry, designed to measure the influence of interventions over time.

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