

## Insights

# Why Data Collection is a Necessary Part of Quality Improvement

While changes are at the heart of quality improvement (QI), using data at every phase of a QI initiative helps inform the progress and outcomes of the work. The information is both a catalyst for change and a result of testing new strategies, making it a crucial element that can't be ignored at any point. Data is for learning, not judgment, and the lesson is about whether and how changes result in improvement.

### **Baselines and Context at the Beginning**

Understanding your system is the beginning step in making any type of improvement. One way to identify areas to change that lead to better outcomes for end users is to see where the pain points are and what practices could be more efficient. Without this first step a QI initiative would start with assumptions about what needs to change, which aren't always correct.

Once areas for improvement are defined, if baseline data is available, use it. If not, the initial data points in an improvement project can be a surrogate baseline.

Data collected to understand improvement shows progress over time and serves as a barometer that allows teams to understand which change ideas are beneficial and which need refinement to reach the intended outcomes.

### **Using Data to Learn about Tests of Change**

Because QI initiatives rely on tests of change, frequent data collection is a necessary step to maximize learning. Whether a new idea is part of the first Plan-Do-Study-Act (PDSA) cycle or the 30th, the data collected during a test is the insight that teams need in order to determine their best path forward.

Data has another role with PDSA cycles. It helps understand if the prediction or theory of the test has merit. Comparing your results to your predictions is done in the "S" (Study) in PDSA. The outcomes of every test should influence what happens next. Don't confuse PDSA data with your project data. PDSA data just informs you about this particular test of change. And remember, qualitative data is useful, it often precedes quantitative data and may provide just enough information to shape your next PDSA cycle.

## **After an Initiative**

Even as a QI initiative formally ends, data should still be collected to ensure that any improvements are maintained and to monitor the long-term impact of system changes. You may not need to collect with the same frequency, but still monitor the data often enough to make sure you are holding the gains.