INSTRUCTIONS
Monitoring Progress for Sustainable Improvement

What is this tool? This tool provides guidance on how to monitor and report your progress in sustaining performance improvements, including how to establish measures to track your efforts and suggested steps for the monitoring process. This tool provides the following information:

- An overview and rationale for a monitoring system to sustain improvements;
- Identification of the key elements of a monitoring system; and
- Guidance on how to establish each monitoring system element.

Who are the target audiences? The primary audiences for this tool are hospital leaders and managers, quality program staff, and analysts.

How can this tool help you? You can use this tool to guide your monitoring strategy to ensure that your hospital sustains the results achieved during your quality improvement work. The measures you monitor after implementation will include rates for the AHRQ Inpatient Quality Indicators (IQIs) and Patient Safety Indicators (PSIs), as well as other process or outcome measures that you identify as representing key performance elements.

After you work successfully to achieve improvements in clinical and administrative practices, it is important to establish a mechanism to ensure that those new practices (and related outcomes) are sustainable. Many hospitals do not do this and performance gains may erode significantly later. Using this tool, you can establish a monitoring mechanism that you can use to track key performance measures, communicate trends within the hospital, and identify emerging performance issues early so that you can correct them in a timely manner.

How does this tool relate to others? This tool should be used with the tool on *Applying the Quality Indicators to Hospital Data* (Tool B.1), which provides instructions for calculating and using IQI and PSI rates for quality improvement in your hospital, as well as the tool *Assessing Indicator Rates Using Trends and Benchmarks* (Tool B.5). This tool also will build on the work you did using the tools on *Implementation Measurement* (Tool D.7) and *Project Evaluation and Debriefing* (Tool D.8), both of which provide guidance on measuring and evaluating improvements during your implementation period. Once you have completed your implementation actions, this tool helps you continue measurement on a more limited scale, to help sustain your improvements over time.

What Is Involved in Ongoing Monitoring?

There is no single "correct" way to build a system for monitoring sustainability of performance. Each hospital will design its system to best fit its management culture, performance priorities, and available operating and technological resources. However, any monitoring system must be able to support active vigilance by your hospital staff of performance trends and emerging issues. The following elements are essential for any effective monitoring system:

- Choose a limited set of effective measures.
- Establish a schedule for regular reporting.
- Develop report formats to communicate clearly.
- Establish procedures for acting on problems identified.
- Assess sustainability on a periodic basis.

Each element is discussed here, including suggestions for development of an effective monitoring system to support sustainability of improvements you achieved for the AHRQ quality indicators (QIs).

If your hospital already has a comprehensive system for reporting trends in performance measures on a regular basis, you should be able to incorporate the key measures related to your QI improvement initiative into that system and to specify reporting frequencies. How you will do that, and whom you will work with, will depend on whether your hospital's reporting system is automated or paper based.

If your hospital does not have an established monitoring system, then you will need to develop a process specifically for tracking the key measures you choose to monitor for your QI improvement initiative.

Choose a Limited Set of Effective Measures

You will need to make judicious choices of which measures of QI performance to include in your monitoring system. You will want to have a balance between tracking key aspects of your improved processes versus placing undue burden on hospital personnel and resources due to tracking too many measures.

You should select measures that allow you to address two "bottom line" questions about performance:

- Are we still using the new processes implemented in our improvement process, or have the processes started to erode?
- Are the outcomes the processes are intended to affect moving in the desired direction?

A negative answer to either question will require early action to diagnose what might be compromising performance, and then to correct identified problems.

Your implementation team should:

- Develop a list of candidate measures, with a rationale for the importance of each measure.
- Test each measure against the criteria described below.
- Identify and discard weak measures.
- If necessary, use a formal ranking process to identify priorities among the remaining candidate measures.

Such a process ensures that the measures are chosen carefully, and it also increases the sense of ownership that participating staff have in the measures.

Criteria for measure selection may include:

- **Processes, utilization, and outcomes.** Consider both process and outcome measures for inclusion in your monitoring system. The IQIs or PSIs for which you have been doing performance improvement should be included as the ultimate outcome measures (see Tool B.1, *Applying the Quality Indicators to Hospital Data*). Process measures also can be monitored to ensure that the key steps in the improved processes continue to be used over time. You can draw on the measures you used for evaluating progress in implementing your quality improvement plan (see Tool D.7, *Implementation Measurement*, and Tool D.8, *Project Evaluation and Debriefing)*. This can maintain continuity between the implementation phase and subsequent operations.
- **Importance of the factor being measured.** The measures you choose should capture the most important milestones achieved for the new processes implemented—those you want to protect over time (e.g., PSI rates, use of timeouts before surgery, reduced length of stay).
- **Ability to interpret and act on findings.** An ideal measure will give clear signals that allow you to identify underlying issues that affect performance on a measure. It is sometimes difficult to determine if a change in a measure (e.g., increased length of stay, increased reporting of adverse events) is a sign of a performance problem, often because multiple factors may contribute to such a change.
- **Feasibility of measurement.** The most efficient way to collect data is to use data from existing automated information systems or to add data elements to these systems. If these sources do not provide the needed data, then you can use chart abstractions, surveys, new administrative forms, or special outcome studies. However, such studies are more resource intensive and are often more vulnerable to incomplete documentation.
- **Identifiable and measurable denominators.** To produce accurate reports for measures that are calculated as rates (e.g., percentage of patients with postsurgical infections), it is important to have complete counts for the relevant patient populations (e.g., all patients who had surgery during a time period). Other measures that are not expressed as rates also can be used for monitoring, such as the occurrence of serious adverse events (e.g., a sentinel event) that would require immediate action, or counts of desirable (e.g., use of debriefs for building teamwork) or undesirable activities.

Establish a Schedule for Regular Reporting

It is critically important to regularly report trends for your selected measures to key personnel throughout the hospital (see Tool B.5, *Assessing Indicator Rates Using Trends and Benchmarks)*. The measures serve only as an information source; the key to successful monitoring is to communicate information to relevant groups and enable them to act on it to sustain effective processes and outcomes.

You will need to make the following choices in designing your reporting process:

1. How to calculate each measure and what data to use.
2. What time period to use for tracking each measure (e.g., monthly, quarterly, annually).
3. What information you want to generate on each measure.
4. Who will receive reports on measure trends.
5. How frequently reports will be provided to each of the recipient groups.

It is fine to track measures at different frequencies, as long as you have a rationale for that approach. For example, a measure you think will change slowly could be tracked annually, and a measure that you think could change more quickly should be tracked more frequently.

Hospital management should take a lead role in identifying the groups that will receive the monitoring reports, as well as the mechanisms used to communicate the information. To encourage engagement and action on issues, each group receiving reports should have an opportunity to participate in interpretation and discussion of the findings. Use their suggestions and perspectives to help guide actions to address any issues revealed in the trends.

Develop Report Formats To Communicate Clearly

The "best" methods to display monitoring data are the ones that work for your implementation team and other users. Some people find tables to be an effective way to communicate information; others prefer graphs. Two principles apply to all data display methods:

- Display only the most important information from your analyses to succinctly "tell the story" of trends in performance.
- Keep each table or graphic simple so that users can find the important information easily.

You should report the same results to all users of the monitoring information, but each type of user will be interested in different aspects of the information. For example, hospital leadership may want detailed information on all measures, whereas individual physicians, frontline nurses, other clinical staff, and support staff may want reports that focus on measures relevant to where they work.

You may want to use different reporting formats for the various user groups. Work closely with each user group in developing the reports so that you can understand their information needs and preferences for presentation. Remember that every step in the process will affect how receptive each group will be to the monitoring and how ready they will be to act when issues emerge that require their attention.

Establish Procedures for Acting on Problems Identified

Taking timely action to correct emerging issues is the best way to ensure the sustainability of improvements you have achieved. When you need to take action, you first will assess the situation to gain an understanding of the problem. Then you will develop and carry out an action plan to implement needed corrections. This process mirrors the one you used to implement your process improvements, for which tools in this toolkit can be used (Tools D.1 through D8).

Assess Sustainability on a Periodic Basis

In addition to routine monitoring, it is advisable to periodically perform a more detailed assessment of the status of desired practices. Such an assessment can stimulate increased vigilance by staff, and it may yield lessons for additional improvement actions.