Part 1 of a two-part series on performance improvement in perioperative services by Patrice Spath.

Quality in health care services means doing the right thing, the first time, in the right way, and at the right time. To be a model of excellence, perioperative caregivers must commit themselves to delivering services of the highest quality by emphasizing continuous improvement of processes, communication, teamwork, and measurable results. This goal is complex and requires new ways of thinking and new skills.

To be successful, perioperative services needs a planned, systematic approach that supports departmental excellence.

The recently revised Quality and Performance Improvement Standards for Perioperative Nursing from the Association of periOperative Registered Nurses (AORN) serve as a good starting point for developing a worthwhile performance improvement initiative.

This two-part article builds on the AORN standards by providing practical guidance for achieving and maintaining excellence as the focus of perioperative services.

Key elements of improvement

Three key elements are necessary for improving the quality of perioperative services:

• an understanding of how to minimize the “human” factors that affect the quality and safety of perioperative systems of care
• application of methods to measure and analyze performance
• continuous improvement of perioperative services by acting on performance information.

Part 1 of this series addresses the first two elements. Continuous improvement is covered in Part 2.

Minimize the human factors

Actions to improve the individual and systematic aspects of perioperative services must consider the human factors associated with performance. Human factors strongly influence two aspects of departmental performance:

• work environment
• actions needed to improve performance.

For the work environment to support performance excellence, managers and staff members must trust one another and have a shared commitment to quality. Trust can be fostered by a credible, nonpunitive attitude toward errors that encourages people to share information about quality problems and participate in actions to prevent recurrence. Part of the trust also includes the belief that management will make every effort to deal with the conditions that negatively affect individual and system performance.

Management must also make clear that it is important to the department to have data defining the nature and frequency of errors and system problems. Without data, process improvement strategies are only “best guesses” about what actions are needed.

A “forgiving system”

Often clinicians still believe that humans are “perfectible” and that the “blame and train” tactic is the best route to improved patient care. When a human error happens, the traditional response is to blame the human and institute new training.
But when the vast majority of quality problems or medical accidents are attributed to human error, it indicates something is wrong with the system, not the people.

Consider this: How would you approach a problem caused by a noisy environment over which you have no control? You wouldn't blame the noise. Instead, you would design a process that could function effectively regardless of the noise. This is exactly the approach that should be taken in response to human error: Redesign the process to fit the people who must use it.

Once we accept the notion that human mistakes are inevitable, it becomes clear that improvement actions focused solely on changing individual performance will not result in sustainable quality gains. The quality of perioperative services will be advanced only by designing systems that are forgiving of human errors. A “forgiving system” is one that is resistant to errors and process failures or can easily recover if a problem occurs.

One solution is to force people to stop and think twice before proceeding to the next step in the process. An example is the “time out” before the start of a surgical procedure. This process change is intended to reduce the likelihood of a wrong-site, wrong-procedure, or wrong-person surgery. Creating a pause in the process is one way of making it more forgiving of errors. Computerized technologies rely on alert messages, alarms, and undo commands to help people avoid incorrect actions and recover from mistakes. Manual perioperative processes would benefit from similar tactics. More about techniques for creating safer systems will be covered in Part 2 of this series.

The first step in performance improvement is to acknowledge that error is inevitable. Such acknowledgment is paramount to creating a work environment supportive of excellence. Without a supportive culture, quality problems are likely to remain hidden rather than brought out into the open and analyzed.

Human errors cannot be avoided. Rather, error needs to be managed through culture changes, systemwide strategies, and better process design. Use the self-assessment questionnaire on this page to determine your department’s progress in minimizing the human factors associated with performance.

**Measure performance**

Effective performance improvement depends on the collection, analysis, and dissemination of relevant information. In the cycle of never-ending improvement, performance measurement plays an important role in:

- tracking progress against departmental goals
- identifying opportunities for improvement
- comparing performance against both internal and external standards
- formulating the direction of strategic activities
- achieving quality and productivity improvements.

Making constructive use of measurement data is critical if department performance is to improve.

Two issues to keep in mind in selecting performance targets are:

1. **Select the right measures.**

   If the right measures are not selected, people will focus on activities that do not move perioperative services toward desired performance goals. A combination of structure, process, and outcome measures can be used.

   For efficiency’s sake, it is best to concentrate on a few essential, meaningful measures. If there are too many, people may become too intent on measurement and lose focus on improving results. A guiding principle is to measure what matters most. Although each department is unique, there are questions to keep in mind when selecting performance measures:

   - Are perioperative services contributing to the overall success of the organization by assisting in the achievement of strategic goals? How can the department’s contribution be measured?
   - What performance does the department want to improve? What critical activities and outcomes should be measured?
• What are the essential requirements of the customers of perioperative services? What is most important to patients and other internal customers? How can these customer expectations be measured?

• What is important to accreditation and regulatory agencies? What are the national or local topics that affect perioperative services and how can these issues be measured?

2. **Establish performance expectations or targets for each measure.**

   Performance targets are quantifiable estimates or results expected for a given period of time. Targets can be broken down into:
   - goals for discrete short-term intervals (e.g., the next two quarters)
   - medium- or long-term performance targets.

   Performance targets not only should promote a high-quality and safe environment but also be realistic. The best targets are those that stretch the capabilities of staff members and the department but are still possible. Stretch targets not only result in genuine improvement but also help to build staff pride and confidence. On the other hand, impossible performance targets demotivate and stifle innovation.

   Whenever possible, performance targets should be derived from baseline data about the department’s past performance or comparison data from similar organizations. The OR Benchmarks projects sponsored by OR Manager, Inc, are an example of a comparative data source that can be used to establish stretch performance goals.

### Analyze performance results

If properly constructed, perioperative service performance measures will result in data that are meaningful for improving departmental performance. The data should be timely, relevant, and concise. Assessment results should provide information on how well current performance compares to intended goals and on the effectiveness of departmental activities and operations in their specific contribution to performance goals.

Among factors to consider when analyzing performance results:

• Are the right measures being used to evaluate performance?

• Do the measures provide a better understanding of the cause-and-effect relationship between perioperative processes and outcomes?

• Do the measures reflect organizational or departmental priorities?

• Do the data indicate any undesirable performance trends over time?

• Do the data suggest improvement opportunities in areas other than the ones being assessed?

• If performance targets are not met, what inhibited successful performance?
• If performance targets are significantly exceeded, are there additional benefits to be gained in terms of reducing costs or improving quality or safety?

**Share results**

Everyone in the department should be informed of the results. Share briefings that summarize and track results over time at staff meetings or through other means. Use simple, eye-catching tables or graphics such as run charts to summarize performance data. Don’t make people “hunt for the needle in the haystack.” Use color or other techniques to highlight improvement opportunities. Use the same report format for all measures because it is easier for people to comprehend the results quickly. The illustration on the previous page shows a sample of a straightforward performance report.

The critical elements of a good performance measurement system are similar to those required for any quality improvement activity:

• leadership and commitment
• good planning and a sound implementation strategy
• appropriate staff member involvement
• simple measurement and evaluation.

The payback from performance measurement comes from using the data to improve performance. If the results are not used, employees will not take performance measurement seriously nor will they trust that management is really committed to dealing with problems. When the hard work of data collection yields nothing more than periodic reports, staff can quickly lose trust in management’s commitment to excellence. The information must be used to make positive changes that contribute to achieving departmental goals and objectives. How to make this happen is covered in Part 2.

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Patient safety and human factors

Analysis of accidents of the World War II Air Corps (today’s Air Force) revealed that poorly designed cockpits often led pilots to make mistakes. They were highly trained personnel, but the controls before them did not take into account the effects of intense stress on their perception and cognition. The analysis led to cockpit design improvements that became the model for a new era of dramatically safer military and commercial airplanes.

This understanding reflects the science known as human factors, often linked to pioneering organizational psychologist James Reason.

Human factors is a discipline devoted to studying the interaction of people and equipment and the variables that affect the outcomes of the contact. It is rooted in the awareness that the successful performance of the “operator” within large systems—whether in manufacturing, the military, or health care—depends on an array of complex and interdependent forces. And if those forces are poorly understood and not accommodated in the design of the process or equipment, the stage is set for error and possible disaster—near misses, accidents, and even fatalities.

Source: Institute for Healthcare Improvement, www.qualityhealthcare.org

Are you minimizing the human factors?

Place a check (☑) in the low, medium, or high box to indicate how strongly you agree with each of these statements as they relate to your department.

<table>
<thead>
<tr>
<th>People in this department . . .</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
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<tbody>
<tr>
<td>1. Believe that even competent, well-trained professionals can make mistakes.</td>
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<td>2. Cooperate with one another to resolve problems.</td>
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<td>3. Feel comfortable reporting quality problems or unsafe conditions to their superior.</td>
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<td>4. Regularly report all patient incidents and near misses.</td>
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<td>5. Believe that there are process changes that can be made to reduce the likelihood of a medical mishap.</td>
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<td>6. Are willing to change some of their old habits in order to improve quality and patient safety.</td>
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<td>7. Believe that the department’s leaders are committed to continually improving performance.</td>
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<td>8. Take time to discuss and act on the department’s performance results.</td>
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<td>9. Believe that reducing process steps and handoffs will lessen the risk of errors.</td>
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<td>10. Use information about errors and performance problems to make changes and improvements to process and/or systems.</td>
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Source: Patrice Spath