Why Quality Improvement?

PART 1: THE CASE FOR QUALITY

The value of Quality Improvement (QI)

Quality health care has been defined as “doing the right thing, at the right time, in the right way, for the right person—and having the best possible results” (US AHCRQ). Quality improvement helps facilitate high-quality care by introducing a set of tools and approaches to help us integrate new and changing practice expectations into our busy clinical settings.

Improvement tools and techniques first developed within industrial and manufacturing sectors have been used in health care settings worldwide to identify customer needs, reduce variations in processes, and minimize errors. In clinical settings, improvement tools and techniques provide a framework for front-line clinicians and physician leaders to integrate evidence-informed best practices into practice faster. These tools place the locus of control in the hands of physicians and fellow clinicians as they establish what methods for delivering high-quality care work best in their context.

The ethos of quality centres around three key concepts that closely mirror the clinical process of diagnosis, treatment, and monitoring: having a clear goal or end point we are trying to accomplish (diagnosis and projected outcomes), identifying best practices that we can implement to reach our goal (treatment), and measuring our process toward the desired state (monitoring). As with clinical treatment, our ability to successfully reach the desired end state relies on our ability to test different solutions and monitor their effectiveness against the desired outcomes.

QI in clinical practice

Since the publication of the report *To Err is Human*, much attention has been focused on the chasm between what physicians know should be done for patients and what is actually done—the difference between what we know and what we do. Numerous studies have shown that the care patients actually receive is markedly different from what current best practice guidelines outline as optimal. Diagnosis of this variance has shown that the creation of reliable and sustained improvements in health care is difficult with traditional methods of relying on memory, using paper charts, and working hard to improve care for individual patients.

Rather than blaming clinical groups for poor-quality care, improvement science recognizes that every system is designed to produce the results it gets (Edwards Deming)—real, sustained improvement in clinical care and outcomes requires a deliberate redesign of care processes based on knowledge of human and system factors.

Agreeing with the statement above requires us to examine solutions to quality problems that look at how we currently organize and deliver care, and to consider changing our current systems. Otherwise we can expect to achieve the same poor-quality results.

The business case for QI has been well-established: High-quality care is less costly than low-quality care, due to less duplication and fewer hospital admissions and re-admissions. Effective chronic disease management also leads to fewer complications and fewer ER visits. Patients benefit, and the system benefits.
The role of physicians in QI
The BCMA’s strategic plan identifies three prime objectives the Association works toward:
- Maximum professional satisfaction.
- Highest quality of care for patients.
- Fair economic reward.

The strategic plan shows the trade-offs between the three objectives, and how a change in one affects the others.

Research has shown that when physicians are involved in quality improvement initiatives, their professional satisfaction increases and, conversely, when they have practice-related quality concerns, physicians tend to experience more work stress. This research showed that physicians whose practices were engaged in QI efforts were less likely to report isolation, work-life stress, and dissatisfaction.

Physicians are the drivers of health care decisions; they need to be at the centre of QI efforts in all health sectors. QI processes can be implemented in individual practices, group practices, or even province-wide practices.

PART 2: OPTIONS FOR ACHIEVING HIGH-QUALITY CARE

QI tools and approaches
There are several different improvement tools being used in health care settings.

Model for Improvement
The Model for Improvement is widely used in health care settings. Key components include use of Plan-Do-Study-Act (PDSA) cycles and the “three fundamental questions”:
1. What are we trying to accomplish?; i.e., identify a specific aim.
2. How will we know that a change is an improvement?; i.e., identify a balanced set of measures.
3. What changes can we make that will result in improvement?; i.e., identify what changes we want to try.

PDSA cycles
PDSA cycles are used in the Model for Improvement and in numerous other improvement methodologies for making small changes, observing results, and adjusting accordingly.
A PDSA cycle involves testing a small change—planning it, trying it, observing the results, and acting on what is learned. The cycle is repeated as new data is collected and changes are made.
The PDSA cycle is dynamic: The completion of one cycle flows into the beginning of the next, creating a momentum for continual improvement, or an “improvement ramp.”

Lean
Lean is a QI methodology that aims to eliminate waste and is driven by the identified needs of the customer. Lean projects aim to improve processes by removing non-value-added activities.
One of the commonly used lean techniques is value stream mapping; i.e., graphically displaying the process of services delivery with use of inputs, throughputs, and outputs.

Six Sigma
Six Sigma is a rigorous statistical measurement methodology designed to reduce cost, decrease unwarranted variation, and eliminate defects. Sigma is a statistical unit reflecting the number of standard deviations a given process is from perfection. For example, at the level of six-sigma a process has about 3.4 defects per million opportunities and is virtually error free.
Chronic Care Model
The Chronic Care Model (CCM) is a comprehensive systems approach to managing chronic disease most effectively. The CCM describes how clinical outcomes can be improved as a result of a productive relationship between an informed, activated patient and a prepared, proactive practice team. The CCM directs specific attention to areas for action in a primary care practice:

- Self-management
- Delivery system design
- Decision support
- Information systems
- Community

Breakthrough Series learning collaboratives
The Breakthrough Series of learning collaboratives support health care organizations to make rapid changes in processes of care to improve quality while reducing costs. The collaboratives consists of three main components:

- Learning sessions – description of main changes.
- Action periods – testing and reporting on changes made in the practice.
- Collaboration – optimizing outcomes by sharing results with other practice teams.

Sustainability and spread are key components of change management strategies:

- Sustainability – new ways of working and improved outcomes becoming the norm; holding the gains and not reverting back to old ways.
- Spread – actively sharing learning in one area, and all parts of an organization or a system acting on this learning.

Measurement
Measurement is critical to quality improvements in health care and is important in several steps in process improvement: identifying which problem to address and obtaining baseline measurements. It is also integral following implementation of a new process. Measurement for improvement should illuminate how outcomes were achieved and how processes might be changed to achieve them, and it should guide a practice team’s decisions regarding which changes implemented they might want to stop, increase, or maintain.

Measurement for improvement is often confused with measurement for accountability and research. Although there may be occasions of overlap between them, these three types of measurements are distinct and have discrete uses.

Measurement for improvement is distinct in its primary purpose; i.e., to support and inform learning and improvement at the local clinic or service level. Measures are designed and collected such that they can direct local activities and are not necessarily meant to compare or generate unbiased knowledge that can be used elsewhere.

Payers and governments are often interested in measuring quality from an accountability perspective. They usually review outcomes or results from many areas to assess performance using an established standard. Measures selected for accountability will be measures that matter to external parties and can include such data as complication rates or costs of procedures. These measures may not be timely or specific enough to drive the particular changes in behavior or process at the clinic level that are required for improvement.
Measurement for research purposes differs from improvement in its focus on developing new knowledge. It tends to be slower and more expensive and elaborate. It focuses on questions of rigour and reliability rather than contextual application of changes in individual clinics or practice settings. While measurement for research is critically important in the generation of guidelines and protocols to follow, it is more robust than the measurement we conduct for improvement purposes.

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<th>Who</th>
<th>Improvement</th>
<th>Accountability</th>
<th>Research</th>
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<tbody>
<tr>
<td>Audience</td>
<td>Providers/staff</td>
<td>Funders</td>
<td>Science community</td>
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<th>Improvement</th>
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<tbody>
<tr>
<td>Purpose</td>
<td>Understanding of changes that lead to improvement</td>
<td>Comparison</td>
<td>New knowledge</td>
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<tbody>
<tr>
<td>Measures</td>
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<td>Complex collection</td>
<td>Many, complex collection</td>
</tr>
<tr>
<td>Time period</td>
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<td>Long, past</td>
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<th>How</th>
<th>Improvement</th>
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<tbody>
<tr>
<td>Measures</td>
<td>Internal</td>
<td>External</td>
<td>External with control of processes</td>
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<td>Sample size</td>
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**A culture of quality**

A focus on quality can lead to a change in culture; e.g., work to improve patients’ rights and confidentiality resulted in informed consent and regulations.

In a system with a quality culture:

- Systems themselves are designed to reduce unwarranted variation but support clinically necessary and patient-desired variation.
- Transparency of data is the rule, not the exception, because data is used for learning, not judgment, and directs actions and decisions.
- Care teams that include family and specialist physicians as well as multidisciplinary health professionals share responsibility for care of complex patients.
- Clear targets and processes are shared among members of the system to ensure that best practices are used every time.

Sources


