Health Quality Ontario
Quality Improvement: Getting Started
Quality Improvement: Getting Started

The definition of a high-quality health system: A health system that delivers world-leading safe, effective, patient-centred services, efficiently and in a timely fashion, resulting in optimal health status for all communities. Quality Matters: Realizing Excellent Care for All (2015).

Quality improvement is a systematic, formal approach to the analysis of performance and efforts to improve it. In healthcare, quality improvement is a proven, effective way to improve care for patients, residents and clients, and to improve practice for staff. It is a continuous process at each home, practice or organization and should be an integral part of everyone's work, regardless of role. This section is an introductory resource to support those working to improve care in Ontario.

Quality Improvement at Health Quality Ontario

Health Quality Ontario is the provincial advisor on the quality of health care, helping to develop the way the health system improves. Health Quality Ontario connects across Ontario's health care system to build a culture of quality in support of relentless improvement by identifying opportunities for improvement, connecting the quality community, building capacity and catalyzing quality improvement.

Health Quality Ontario's vision for a quality health system

Health Quality Ontario defines a quality health system as one that is safe, effective, patient-centred, efficient, timely and equitable. These six dimensions of quality offer a focused way to engage clinicians, administrators, providers and patients in our system.

HQO’s QI Framework consists of six phases. Each of the six phases is iterative and designed to build on the knowledge gained from the previous phase.
Health Quality Ontario’s vision for quality is described in the report Quality Matters: Realizing Excellent Care for All [http://www.hqontario.ca/portals/0/Documents/pr/realizing-excellent-care-for-all-en.pdf]. This vision is grounded in the six dimensions of quality and relies on key principles and factors that support a culture of quality.

**Quality Improvement Plans**

Health care organizations in four sectors of the health system publicly demonstrate their commitment to quality improvement through the Quality Improvement Plans (QIPs) that they submit to Health Quality Ontario annually.

Each year, Health Quality Ontario works with multiple stakeholders to identify a handful of key quality issues to prioritize across the province, and defines specific priority indicators that organizations can use to track their performance on these key issues in their QIPs. Quality Compass is a resource that summarizes the leading, up-to-date evidence regarding how to improve on these priority issues for the QIPs.

More information on the QIP program, including a full list of the priority issues and indicators, is available on the QIP website [http://www.hqontario.ca/Quality-Improvement/Quality-Improvement-Plans].

---

**The Model for Improvement**

Health Quality Ontario’s quality improvement framework, described in the section that follows, is based on the Model for Improvement developed by Langley et al (1992). This model has two basic components. The first addresses three questions:

- **Aim/Issue** – what are you trying to accomplish?
- **Measure** – how will you know if the change is an improvement?
- **Change** – what changes can we make to result in the improvement?

The second comprises the rapid cycle improvement process containing a series of Plan-Do-Study-Act (PDSA) cycles which develop, tests, and implements changes for improvement.
To facilitate quality improvement initiatives in Ontario, Health Quality Ontario has developed a comprehensive Quality Improvement Framework. This framework brings together the strengths of several quality improvement science models and methodologies, including the Model for Improvement. Illustrated below you can see how Health Quality Ontario’s Quality Improvement Framework incorporates the Model for Improvement.
There are six phases in Health Quality Ontario’s Quality Improvement Framework, which are detailed in the diagram below. The quality improvement journey is iterative and designed to build on the knowledge gained from the previous phase.

The Model for Improvement Integrated with Health Quality Ontario’s QI Framework

There are six phases in Health Quality Ontario’s Quality Improvement Framework, which are detailed in the diagram below. The quality improvement journey is iterative and designed to build on the knowledge gained from the previous phase.

The sections of this quality improvement primer follow those of the Framework and offer a detailed introduction to each phase to start you on your quality improvement journey. For a full guide to quality improvement, read through Health Quality Ontario’s Quality Improvement Guide [http://www.hqontario.ca/portals/0/Documents/qi/qi-quality-improve-guide-2012-en.pdf].

Health Quality Ontario’s Quality Improvement Community of Practice: Quorum

While you progress along your quality improvement journey, it is recommended that you connect with colleagues internally and externally, sharing your ideas and stories so that everyone can learn from one another’s successes and challenges. To support a culture of collaboration, Health Quality Ontario has started an online community for quality improvement called Quorum.

Quorum is an open online community dedicated to improving the quality of health care in Ontario. Quorum members collaborate to learn from one another, share experiences, and support innovation from inception through to meaningful improvement. Quorum fosters a culture of collaboration to enable continuous improvement and is open to anyone working on or interested in QI.

Visit Quorum [https://quorum.hqontario.ca/en/] and join the conversation today!

Getting Started

In Phase 1: Getting Started, a quality improvement team is assembled, a project charter created, the current state of patient experience is mapped out and the journey of understanding what improvement(s) should be made begins.

Steps to Getting Started:

- Get a good grasp of what quality improvement involves and how the Model for Improvement and the PDSA cycle are used.
- Assemble a quality improvement team. Consider team development methodologies.
- Begin drafting a quality improvement charter, and be prepared for it to evolve over time. Set overarching goals/aims to achieve within set timeframes.
- Develop a solid understanding of the current issues to determine where concerns exist and where there are potential areas of improvement within the current state.
- Key to understanding the current state is learning what the “customer” – in health care, the patient/resident/client – experiences during the health delivery processes and what they would want or need if care processes were changed.
- Start to think about how you will sustain and spread the initiative (Phases 5 & 6).

Health Quality Ontario’s Resources for Getting Started:
## Defining the Problem

During Phase 2: Defining the Problem, quality improvement teams dive deeper into the systems and processes that are currently in place. By doing this, teams determine the underlying issues that contribute to suboptimal results or undesirable outcomes.

### Steps to Defining the Problem:

1. **Identify the problem and create your Problem Statement(s).**
2. **Review the current state analysis undertaken in Phase 1 and highlight where that current state does not meet the needs or “voice” of your customers (i.e., your patients/residents/clients).** This analysis can be done by:
   - Observing the processes in real time assessing any waste (“Gemba”, i.e., go to the department or unit and observe)
   - Using a Defect Check Sheet to collect data to identify the main source of the problem (this data is then plotted on a Pareto Chart from Phase 4)
   - Using The Five Whys tool to drill down to the root of the problem
   - Using a Fishbone Diagram to outline the main causes and sub causes of the issue.
3. **Create and test a measurement plan.** The problems that come to the forefront in this phase will focus the efforts of the improvement team in the collection and analysis of data.
4. **Keep a list of improvement opportunities that could address the problems identified.**
5. **Start sharing the story of what you are doing with colleagues and stakeholders. Begin to think about a communications plan (Phase 6).**

### Health Quality Ontario’s Resources for Defining the Problem:

<table>
<thead>
<tr>
<th>Primers</th>
<th>Instruction Sheets</th>
<th>Tools</th>
</tr>
</thead>
</table>

---

**Defining the Problem**

During Phase 2: **Defining the Problem**, quality improvement teams dive deeper into the systems and processes that are currently in place. By doing this, teams determine the underlying issues that contribute to suboptimal results or undesirable outcomes.

### Steps to Defining the Problem:

1. **Identify the problem and create your Problem Statement(s).**
2. **Review the current state analysis undertaken in Phase 1 and highlight where that current state does not meet the needs or “voice” of your customers (i.e., your patients/residents/clients).** This analysis can be done by:
   - Observing the processes in real time assessing any waste (“Gemba”, i.e., go to the department or unit and observe)
   - Using a Defect Check Sheet to collect data to identify the main source of the problem (this data is then plotted on a Pareto Chart from Phase 4)
   - Using The Five Whys tool to drill down to the root of the problem
   - Using a Fishbone Diagram to outline the main causes and sub causes of the issue.
3. **Create and test a measurement plan.** The problems that come to the forefront in this phase will focus the efforts of the improvement team in the collection and analysis of data.
4. **Keep a list of improvement opportunities that could address the problems identified.**
5. **Start sharing the story of what you are doing with colleagues and stakeholders. Begin to think about a communications plan (Phase 6).**

### Health Quality Ontario’s Resources for Defining the Problem:

<table>
<thead>
<tr>
<th>Primers</th>
<th>Instruction Sheets</th>
<th>Tools</th>
</tr>
</thead>
</table>
Understanding your System

In Phase 3: Understanding your System, quality improvement teams collect and analyze data related to the problems identified in Phase 2. Collecting, compiling and analyzing measures should not require months of time-intensive activity. This should be an exercise in real time, yielding just enough data to begin the improvement process. As a team learns about the performance of its system, it will also identify some of the Change Concepts and Change Ideas.

Change Concept | A general notion or approach to change and is useful in developing specific ideas for change that lead to improvement. They are broad principles that provide general direction for planning improvements, but are not specific enough to be applied directly.
--- | ---
Change Idea | A specific and practical change that focuses on improving aspects of a system, process, or behaviour. Change ideas can be easily tested or measured so that the results can be monitored.

Steps to Understanding your System:

- Analyze your data. Continue to learn more about the problems you have identified by gathering and gaining an understanding of the data. This may include:
  - Exploring whether the current problem is consistent or inconsistent
  - Using run charts and control charts (i.e., Shewhart charts) to graph and understanding the variation in performance over time
  - Exploring whether the current process is capable of meeting customer (i.e., your patient/resident/client) expectations.
- Continue to share information and the results of your data analysis with your stakeholders (Phase 6).
- Think about your change ideas and prioritize which ones to act on first. Change ideas may originate from sources such as evidence-informed best practice guidelines, work done by other organizations, or team brainstorming sessions. Change concepts, such as decreasing waste or increasing flow, may also help...
teams generate ideas for trial.

Prepare for the next phase by gathering and collectively brainstorming as many change ideas as possible to address the issue or problem to be improved. Consider hosting a Kaizen event to collectively brainstorm with the quality improvement team and your stakeholders.

Update the quality improvement charter (Phase 1) by re-evaluating your aim, sub-aims and measures.

Health Quality Ontario’s Resources for Understanding your System:

<table>
<thead>
<tr>
<th>Primers</th>
<th>Instruction Sheets</th>
<th>Tools</th>
</tr>
</thead>
</table>

Designing and Testing Solutions

In Phase 4: Designing and Testing Solutions, there is a clear understanding of the opportunities for improvement and teams begin testing ideas through PDSA cycles. This phase provides teams the opportunity to exercise creativity and challenge the status quo by trying different improvement ideas. The PDSA approach allows trial and error of ideas on a small scale which lets teams smooth out any concerns in the process before sharing the success or failure of the change more broadly. The PDSA cycle builds confidence in the change process and creates buy-in by involving individuals that are truly affected by the proposed changes.

Steps to Designing and Testing Solutions:

Outline the steps of your PDSA cycle.

Begin testing. Document the testing so that the team can test multiple ideas simultaneously and clearly see what works well and what processes require some tweaking.

Measure whether a change has the desired impact and outcome.

Document the impact that the changes have on all the individuals involved in the process.

Share the stories of failure, improvement and success (Phase 5). Quorum [https://quorum.hqontario.ca/en] is an online community of practice where it is encouraged to share these successes and failures with the broader quality improvement community.

Health Quality Ontario’s Resources for Designing and Testing Solutions:

<table>
<thead>
<tr>
<th>Primers</th>
<th>Instruction Sheets</th>
<th>Tools</th>
</tr>
</thead>
</table>
Implementing and Sustaining Changes

During Phase 5: Implementing and Sustaining Changes the change ideas that were identified and tested are now formally implemented into everyday practice in the unit or department where the work is done.

Steps to Implementing and Sustaining Changes:

- Formalize and standardize the changes, documenting the new process. Include information about the required steps during new staff orientation, training sessions for current staff, in job descriptions and in policies and procedures.
- Create an ongoing measurement plan to ensure that staff adopt the changes and to monitor adoption and continual improvement. Identify a few key measures that will assist in determining whether new processes are being followed.
- Look out for and detect slippage. Alert leaders, managers and staff if processes are not functioning as intended.
- Communicate. Create an appetite for sustainable change by continuing to share the improvement story and the impact on the client experience and outcomes. Consider sharing your quality improvement story on [Quorum](https://quorum.hqontario.ca/en/).

Think about how to spread the change beyond the current unit or department to the entire organization (Phase 6). Consider who your “spread” team should include.

Health Quality Ontario’s Resources for Implementing and Sustaining Changes:

<table>
<thead>
<tr>
<th>Primers</th>
<th>Instruction Sheets</th>
<th>Tools</th>
</tr>
</thead>
</table>

Spreading Change

During Phase 6: Spreading Change, successful ideas are implemented on a broader scale. A successful spread of change requires understanding of the organizational culture, and knowledge of different departments, areas and staff groups. The plan must align with the vision and values of the organization to ensure the work to spread the improvement is undertaken with conviction in each area.

Steps to Spreading Change:

- Create and implement a spread plan. Spread should start with the path of least resistance, concentrate first on units or departments eager for the change.
- Communicate changes. Include items such as the reason for changes and why all people (patients/residents/clients and staff) will be positively affected by the changes.
- Look out for and address slippage. Alert leaders, managers and staff if processes are not functioning as intended.
- Create a measurement plan for spread. The measurement plan should contain key measures for continually assessing the performance and reliability of the improved processes.
Health Quality Ontario’s Resources for Spreading Changes:

<table>
<thead>
<tr>
<th>Resources</th>
<th>Primers</th>
<th>Instruction Sheets</th>
<th>Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Additional Quality Improvement Resources**

**Health Quality Ontario Reports:**


**Health Quality Ontario initiatives:**

- Quorum [https://quorum.hqontario.ca/en/](https://quorum.hqontario.ca/en/)
  A collaborative online community of practice dedicated to improving the quality of health care by learning from each other, sharing experiences and supporting innovation.

- IDEAS Ontario [https://www.ideasontario.ca/]
  IDEAS (Improving & Driving Excellence Across Sectors) is a comprehensive, evidence-based quality improvement training program for Ontario’s health professionals.

**Canadian organizations that support and report on quality:**

- Accreditation Canada [https://www.accreditation.ca/]
  Accreditation Canada is an independent, not-for-profit organization that is dedicated to improving the quality of health care systems in Canada and across the globe through the rigorous process of accreditation.

- Canadian Foundation for Healthcare Improvement [http://www.cfhi-fcass.ca/AboutUs.aspx](http://www.cfhi-fcass.ca/AboutUs.aspx)
  The Canadian Foundation for Healthcare Improvement is a not-for-profit organization funded by the Government of Canada, dedicated to accelerating healthcare improvement. CFHI plays a unique, pan-Canadian role in spreading healthcare innovations.
Canadian Patient Safety Institute [http://www.patientsafetyinstitute.ca/en/Pages/default.aspx]

The Canadian Patient Safety Institute (CPSI) develops evidence-informed products, provides excellent stewardship of resources, ensures clear and open communication, delivers measurable results, celebrates the successes of their partners, nurtures successful partnerships and is passionate about safe healthcare for all Canadians. They inspire extraordinary improvement in patient safety and quality. CPSI has Safer Healthcare Now [http://www.patientsafetyinstitute.ca/en/About/Programs/SHN/Pages/default.aspx] interventions to raise awareness and facilitate implementation of best practices to support patient safety improvement.

Canadian Society for Quality

The Canadian Society for Quality is a catalyst organization in Canada that invites quality practitioners, organizations and associations to pool their collective research and knowledge in the relentless pursuit of performance excellence.

Centre for Effective Practice

The Centre for Effective Practice (CEP) is a federally-incorporated, not-for-profit organization founded in 2004 by the University of Toronto’s Department of Family and Community Medicine. In July 2008, the Guidelines Advisory Committee (GAC) joined CEP. We are here for providers. To give them what they need to provide the best care to their patients. The Centre for Effective Practice (CEP) engages with providers throughout the process and creates solutions based on best-evidence that can be adapted to the local context.

Center for Quality Improvement and Patient Safety [http://www.cquips.ca/]

The Centre for Quality Improvement and Patient Safety (C-QuIPS) is a joint partnership between the University of Toronto’s Faculty of Medicine, Sunnybrook Health Sciences Centre and the Hospital for Sick Children. C-QuIPS provides leadership in quality improvement and patient safety education complemented by research programs and collaborative networks within the Toronto Academic Health Science Network and the broader healthcare system.

Health Quality Ontario [http://www.hqontario.ca/]

Health Quality Ontario is the provincial advisor on the quality of health care. We are motivated by this single-minded purpose: Better health for all Ontarians.

Institute for Safe Medication Practices [https://www.ismp-canada.org/]

The Institute for Safe Medication Practices Canada is an independent national not-for-profit organization committed to the advancement of medication safety in all healthcare settings.

International Organizations that Support QI:

American Society for Quality (USA) [https://asq.org/]

ASQ provides the quality community with training, professional certifications, and knowledge to a vast network of members of the global quality community. ASQ has tools [http://asq.org/learn-about-quality/quality-tools.html] that can help you identify causes, understand processes, collect and analyze data, generate ideas, keep projects on track, and make informed decisions for all of your continuous improvement activities.

Agency for Healthcare Research and Quality (USA) [https://www.ahrq.gov/]

The Agency for Healthcare Research and Quality (AHRQ) is the lead Federal agency charged with improving the safety and quality of America’s health care system. AHRQ develops the knowledge, tools, and data needed to improve the health care system and help Americans, health care professionals, and policymakers make informed health decisions. The AHRQ’s National Quality Measures Clearinghouse [https://www.qualitymeasures.ahrq.gov/] is a public resource for summaries of evidence-based quality measures and measure sets. NQMC also hosts the HHS Measures Inventory. The AHRQ’s National Guideline Clearinghouse [https://www.guideline.gov/] is a public resource for summaries of evidence-based clinical practice guidelines.

Australian Commission on Quality and Safety in Health Care (AU) [https://www.safetyandquality.gov.au/]

The Commission works in partnership with patients, consumers, clinicians, managers, policy makers and healthcare organisations to achieve a sustainable, safe and high-quality health system.

Institute for Healthcare Improvement (USA) [http://www.ihi.org/Pages/default.aspx]

The Institute for Healthcare Improvement (IHI) is an independent not-for-profit organization which is a leading innovator, convener, partner and driver of results in health and health care improvement worldwide. They provide essential training and tools in an online, educational community to help you and your quality improvement team deliver excellent, safe care through their Open School [http://www.ihi.org/education/ihiopenschool/Pages/default.aspx].

Joint Commission on Accreditation of Healthcare Organizations (USA) [https://www.jointcommission.org/]

An independent, not-for-profit organization. The Joint Commission accredits and certifies nearly 21,000 health care organizations and programs in the United States. Joint Commission accreditation and certification is recognized nationwide as a symbol of quality that reflects an organization’s commitment to meeting certain performance standards.
standards. The mission of Joint Commission Resources (JCR) is to continuously improve the safety and quality of health care in the United States and in the international community through the provision of education, publications, consultation, and evaluation services on the Joint Commission Resources [http://www.jcrinc.com] website.

Lean Six Sigma [https://www.isixsigma.com/tools-templates/]

Lean Six Sigma is a methodology that relies on a collaborative team effort to improve performance by systematically removing waste and reducing variation. It combines lean manufacturing/lean enterprise/lean healthcare [http://isl.engin.umich.edu/professional-programs/lean-healthcare/index.htm] and Six Sigma to eliminate the seven kinds of waste.

National Association for Healthcare Quality (USA) [http://nahq.org/]

Promotes the continuous improvement of quality in healthcare by providing educational and development opportunities for professionals in the healthcare quality profession and equips professionals and organizations to meet set standards.

National Patient Safety Foundation (USA) [http://www.npsf.org/]

The National Patient Safety Foundation’s vision is to create a world where patients and those who care for them are free from harm. A central voice for patient safety since 1997, NPSF partners with patients and families, the health care community, and key stakeholders to advance patient safety and health care workforce safety and disseminate strategies to prevent harm. NPSF is an independent, not-for-profit organization.

National Quality Forum (USA) [http://www.qualityforum.org/Home.aspx]

NQF measures and standards serve as a critically important foundation for initiatives to enhance healthcare value, make patient care safer, and achieve better outcomes.

NHS National Patient Safety Agency (UK) [http://www.npsa.nhs.uk/]

The National Patient Safety Agency leads and contributes to improved, safe patient care by informing, supporting and influencing the health sector.

The International Society for Quality in Health Care (Global) [http://www.isqua.org/home]

To inspire and drive improvement in the quality and safety of healthcare worldwide through education and knowledge sharing, external evaluation, supporting health systems and connecting people through global networks. This network spans 100 countries and five continents.

The W. Edwards Deming Institute (USA) [https://deming.org/]

The aim of The W. Edwards Deming Institute is to foster an understanding of The Deming System of Profound Knowledge to advance commerce, prosperity and peace in healthcare.

References


Retrieved from: http://www.ihi.org/resources/Pages/HowtoImprove/ScienceofImprovement/HowtoImprove.aspx