



Health Quality Ontario Quality Improvement: Getting Started

Quality Improvement: Getting Started

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Quality improvement (QI) offers a proven methodology for improving care for patients, residents and clients. QI refers to a QI team working towards a defined aim, gathering and reviewing frequent measures and implementing change strategies using rapid cycle improvements. QI science provides tools and processes to assess and accelerate efforts for testing, implementation and spread of QI practices. This section is an introductory resource to support those working to improve care in Ontario.

Although each home, practice or organization will have different priorities, this collection of core QI information will support you in reaching your goals. To help get you started, we have provided key quality improvement topics to support you on your journey.

HQO Quality Improvement Framework

To facilitate quality improvement initiatives in Ontario, Health Quality Ontario (HQO) has developed a comprehensive **Quality Improvement Framework** that brings together the strengths of several QI science models and methodologies, such as the Model for Improvement from the Institute for Healthcare Improvement (IHI), and traditional manufacturing quality improvement methods like Lean and Six Sigma. HQO grounded their framework in Deming's System of Profound Knowledge to ensure a system-wide view of improvement would be applied to any quality improvement initiative, in any healthcare sector.

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.

[Getting Started](#)
[Defining the Problem](#)
[Understanding Your System](#)
[Designing and Testing Solutions](#)
[Implementing and Sustaining Changes](#)
[Spreading Change](#)

PHASE I – Getting Started

During this phase, a quality improvement (QI) team is assembled and begins the journey of truly understanding what improvement should be made and how the team will know that their efforts have created a positive change.

How do I do it?

Assemble a team. Consider team development methodologies and concepts.

The team should set overall goals/aims that they would like to achieve within specific timeframes.

Begin drafting a QI charter.

Develop a solid understanding of the current issues/state to determine where concerns exist and where there are potential areas of improvement within the current state.

Essential to understanding the current state is learning what the "customer" - or in healthcare "the patient/client, resident"— actually experiences during the health delivery processes and what they would want/or need if care processes were changed.

It's important to make sustainability and spread a focus and priority from the beginning of any initiative - this is not something that can be successfully addressed after a project is complete.

HQO Resources

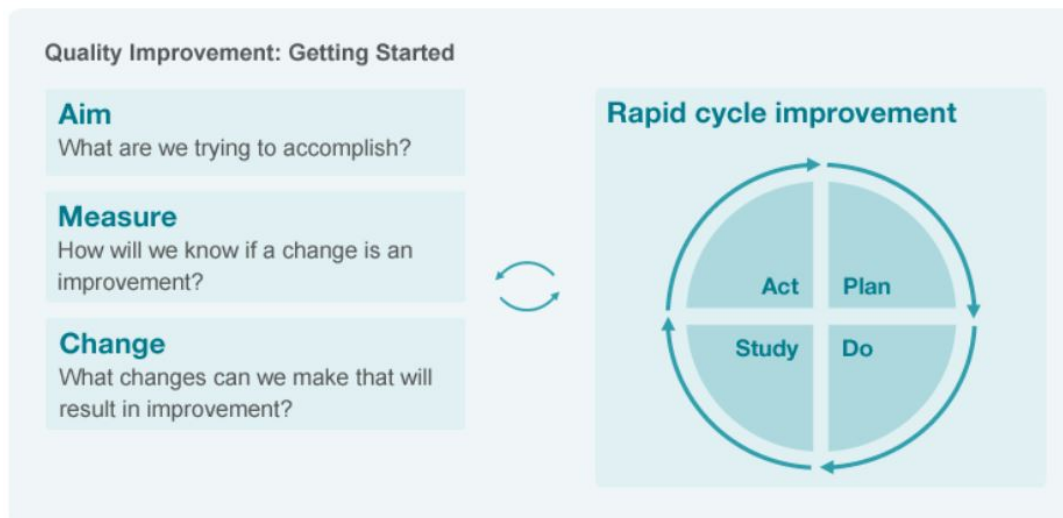
Primers to read/refer to	Instruction Sheets	Tools
Quality Improvement Science [http://www.hqontario.ca/Portals/0/Documents/qi/qi-science-primer-en.pdf]	PDSA [http://www.hqontario.ca/Portals/0/Documents/qi/qi-pdsa-instruction-sheet-ac-en.pdf]	PDSA Template [http://www.hqontario.ca/Portals/0/Documents/qi/qi-pdsa-tool-ac-en.pdf]
Quality Improvement Team Development [http://www.hqontario.ca/Portals/0/Documents/qi/qi-teamwork-develop-primer-en.pdf]	Capturing the Patient Experience [http://www.hqontario.ca/Portals/0/Documents/qi/qi-capturing-patient-experience-instruction-sheet-en.pdf]	
Voice of the Customer [http://www.hqontario.ca/Portals/0/Documents/qi/qi-voc-primer-en.pdf]		

The Model for Improvement

The Model for Improvement has two main components: the first is based on three fundamental questions and the second is the rapid cycle improvement process comprising a series of PDSA cycles to develop, test and implement changes for improvement. PDSA Cycles (also known as Stewart Cycles and Deming Cycles) promote a **trial-and-learn** approach to improvement efforts, and encourage **tests of change** rather than extensive analysis. The Model for Improvement is a simple but powerful framework for structuring any QI project. QI teams that use this model have the highest chance of success. View the first clip of The Institute for Healthcare Improvement's helpful videos explaining the Model for Improvement below.

[Video link \[http://www.youtube.com/embed/SCYghxtioY\]](http://www.youtube.com/embed/SCYghxtioY)

Start by considering the three questions highlighted in the Model for Improvement below (Aim, Measure, Change).



Read on for additional support for your journey. For a full guide to quality improvement, read more in [HQO's Quality Improvement Guide \[http://www.hqontario.ca/portals/0/Documents/qi/qi-quality-improve-guide-2012-en.pdf\]](http://www.hqontario.ca/portals/0/Documents/qi/qi-quality-improve-guide-2012-en.pdf), or browse through HQO's [blended model for improvement \[http://www.hqontario.ca/quality-improvement/quality-improvement-framework/\]](http://www.hqontario.ca/quality-improvement/quality-improvement-framework/).

Assembling the QI Team

For a QI initiative to be successful, the project needs to have the support of the entire team, from administrators to front-line staff. The team should be inclusive, but should contain a maximum of 10 people in order to keep the group manageable.⁷ For more on assembling a QI team, please see [Residents First's Team Formation Guide \[http://www.hqontario.ca/Portals/0/Documents/qi/rf-guide-team-formation-en.pdf\]](http://www.hqontario.ca/Portals/0/Documents/qi/rf-guide-team-formation-en.pdf).

Gathering Baseline Data

In order to make improvements, first collect baseline data to determine where you are starting from. Baseline data is ideally collected for a 12 month period prior to the start of the QI initiative. If the topic or area of focus has already been identified, you can go to the Measurement tab to help you determine which measures could be collected for baseline data.

Creating an Aim Statement

An aim statement is used to clearly define the aim of the QI initiative. Aim statements should be clear, time-specific, stretchable (can be expanded), and provide real value. The following template could be used for creating aim statements:

"The aim of the _____ (issue) quality improvement team is to increase/reduce _____ (issue) by ___% from _____ (baseline number) to _____ (target number) persons/percent by _____ (date)."

Identifying Change Concepts and Change Ideas

A **change concept** is a general notion or approach to change and is useful in developing specific ideas for change that leads to improvement. Concepts are broader principles that provide general direction for planning improvements, but are not specific enough to be applied directly. The concept must be considered within the context of the specific situation and then turned into an idea. While there are a vast range of potential change concepts, here are a few examples in which potential change ideas may be derived and tested in the hospital setting:

- Assess resident needs
- Engage residents and family
- Create care plans for prevention
- Improve work flow
- Develop routine practices
- Design systems to prevent avoidable mistakes

Change ideas are specific and practical changes that focus on improving specific aspects of a system, process, or behaviour. Change ideas can be easily tested or measured so that the results can be monitored.

For a list of evidence informed best practices and change ideas for this topic, please see the [Best Practices tab](#).

Establishing Measures

Measurement is a critical part of monitoring your small tests of change. Measures tell a team whether their changes are actually leading to quality improvement. Once you have identified the main causes and other contributing factors, you can match your measure to the improvements you want to see.

There are three types of measures used in monitoring your QI efforts: outcome measures, process measures, and balancing measures. The three types of measures are described in the table below.

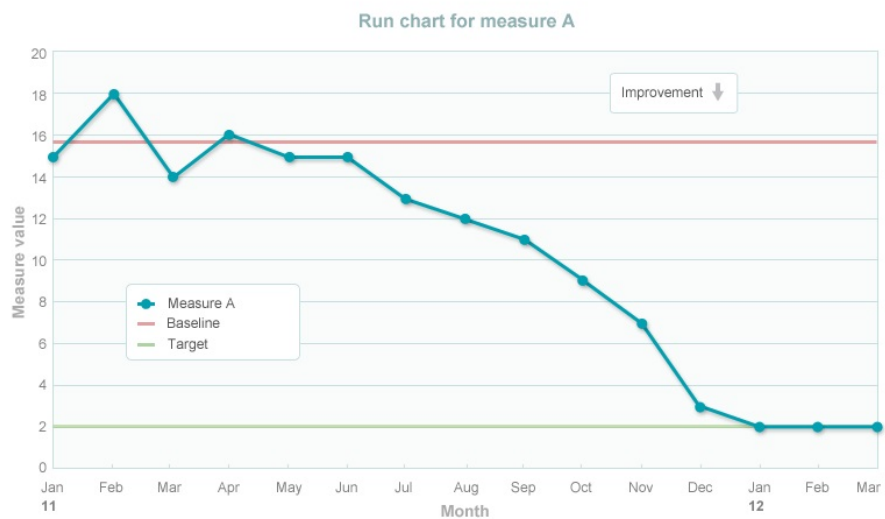
Outcome Measures	Indicators that capture clinical outcomes and or system performance
Process Measures	Indicators that track the processes that measure whether the system is working as planned
Balancing Measures	Indicators that ensure that changing one part of the system does not cause new problems in other parts of the system

For a comprehensive list of measures used to track changes, please click on the Measurement tab.

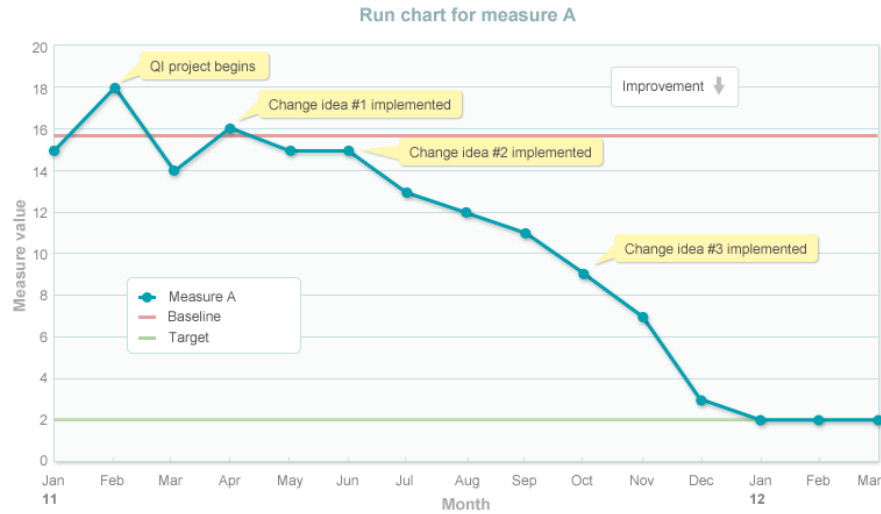
Creating Run Charts

A run chart is a graphical display of results from the indicators collected for that QI initiative. Plotting data over time using a run chart is a simple and effective way to determine whether the changes you are testing are leading to improvement.

Run charts should be set up at the start of a QI project and updated with new data as the project unfolds. Data is collected at frequent time intervals and the data points are connected with a line. This chart illustrates progress over time and can help a team see if their changes have led to improvements:



Annotating the run chart helps explain the some of the non-random fluctuations in your data:

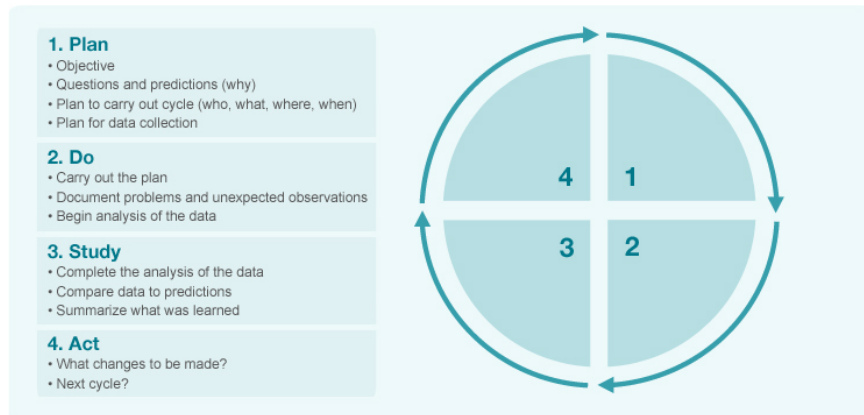


Review this quick-reference document for more information on [how to interpret run charts](#)

Testing Change: PDSA Cycles

PDSA stands for Plan, Do, Study, and Act. **PDSA cycles** are used to test change ideas through **small tests of change**, which are change ideas tested in a small part of the organization for a short period of time. Through each PDSA cycle, the QI team may learn something new and/or tweak their change idea to better suit the needs of the organization. One change idea may undergo several PDSA cycles to refine the idea before applying it to the entire organization. The figure below outlines the process of each PDSA cycle. The Institute for Healthcare Improvement also offers helpful videos on PDSA Cycles [here \[http://www.youtube.com/watch?v=-ceS91a820\]](http://www.youtube.com/watch?v=-ceS91a820).

The PDSA Cycle



QI Tools and Resources

- The Quality Improvement Framework:**
 The Quality Improvement Framework ([see Section 1](#)), contains primers on a variety of topics, as well as tools and instruction sheets that are useful supports for any quality improvement initiative.
- Hospital Admission Risk Prediction (HARP)**
 HARP is a new tool that helps health care providers identify patients at-risk of future hospitalization. By helping to predict future events, HARP supports early intervention in the care of patients that might otherwise experience a difficult episode. It can also assist in predicting which patients may become high users of health system resources. [Learn more about this initiative \[http://www.hqontario.ca/quality-improvement/tools-and-resources/harp\]](http://www.hqontario.ca/quality-improvement/tools-and-resources/harp).
- HQO Resources**
[HQO Quality Improvement Guide \(PDF, 2.7MB\) \[http://www.hqontario.ca/portals/0/Documents/qi/qi-quality-improve-guide-2012-en.pdf\]](http://www.hqontario.ca/portals/0/Documents/qi/qi-quality-improve-guide-2012-en.pdf)
[Model for Improvement - Plan, Do, Study, Act \(PDSA\) \(PDF, 328KB\) \[http://www.hqontario.ca/portals/0/Documents/qi/rf-document-pdsa-cycles1-en.pdf\]](http://www.hqontario.ca/portals/0/Documents/qi/rf-document-pdsa-cycles1-en.pdf)
[Ontario Chronic Disease Prevention and Management Framework \(PDF, 74KB\) \[http://www.hqontario.ca/portals/0/Documents/qi/oncdpm-en.pdf\]](http://www.hqontario.ca/portals/0/Documents/qi/oncdpm-en.pdf)
- Other Quality Improvement Initiatives in Ontario**
 The quality improvement work of Health Quality Ontario began long before the organization officially came together in 2011. Recognizing the importance of our legacy initiatives in achieving positive change, this section highlights key quality improvement programs undertaken by HQO's predecessor organizations, whose groundbreaking work is being built upon as we move forward in creating more comprehensive initiatives to achieve better outcomes, better experience, and better value for money.

The following initiatives were developed in collaboration with other health care organizations, drawing on the collective strength of the partnerships to most effectively integrate quality improvement practices in the field. To learn more about these programs, please click on any of the links below:

[Behavioural Supports in Ontario Project \(BSO\)](http://www.akeresourcecentre.org/BSO) [<http://www.akeresourcecentre.org/BSO>]
[Emergency Department Process Improvement Program \(EDPIP\)](http://www.patientflowtoolkit.ca) [<http://www.patientflowtoolkit.ca>]

- **Success Stories**

For Primary Care:

No One Can Whistle a Symphony: [Success Strategies for Patient Self-Management and Quality and Improvement \(PDF, 208 KB\)](#) [<http://www.hqontario.ca/portals/0/Documents/qi/pc-patient-story-darin-stevens-en.pdf>]

Working for Change: [South Riverdale Community Health Centre \(PDF, 346 KB\)](#) [<http://www.hqontario.ca/portals/0/Documents/qi/pc-journey-story-southernriverdale-en.pdf>]

Betty Lou Cole: [Front Desk Champion \(PDF, 719 KB\)](#) [<http://www.hqontario.ca/portals/0/Documents/qi/pc-journey-story-nationriver-en.pdf>]

Quality Improvement in Action: [Dr. Yasmeen, Hamilton Family Health Team \(PDF, 298 KB\)](#) [<http://www.hqontario.ca/portals/0/Documents/qi/pc-journey-story-hamilton-en.pdf>]

For Long-Term Care:

[Community Nursing Home Pickering](#) [<http://www.hqontario.ca/quality-improvement/tools-and-resources/community-nursing-home-pickering>] – reduced the number of falls on the Maple unit from 12 to 2 falls per month

[Deer Park Villa](#) [<http://www.hqontario.ca/quality-improvement/tools-and-resources/deer-park-villa>] – reduced pressure ulcer occurrence from 12% to 5%

[The Westmount](#) [<http://www.hqontario.ca/quality-improvement/tools-and-resources/the-westmount>] – reduced falls, transfers to hospitals, and incidence of pressure ulcers

- **External Tools**

[American Society for Quality Tools](http://www.asq.org/learn-about-quality/quality-tools.html) [<http://www.asq.org/learn-about-quality/quality-tools.html>]

[Six Sigma Quality Tools and Templates](http://www.isixsigma.com/tools-templates/) [<http://www.isixsigma.com/tools-templates/>]

[Most Responsible Physician Quality Improvement Program \(MRP QIP\)](#) [<http://www.hqontario.ca/Portals/0/Documents/qi/mrp-qip-reference-guide-en.pdf>]

- **Links to External Resources**

Resources for Patient Self-Management:

[South West Self-Management — Toolkit](http://www.swselfmanagement.ca/smtoolkit/) [<http://www.swselfmanagement.ca/smtoolkit/>]

[Stanford School of Medicine — Self-Management Programs](http://patienteducation.stanford.edu/programs/) [<http://patienteducation.stanford.edu/programs/>]

[Flinders University — The Flinders Program](http://www.flinders.edu.au/medicine/sites/fhbhr/self-management.cfm) [<http://www.flinders.edu.au/medicine/sites/fhbhr/self-management.cfm>]

[American College of Physicians — Effect of a Self-Management Program on Patients with Chronic Disease \(article\)](#)

[http://www.acponline.org/clinical_information/journals_publications/ecp/novdec01/lorig.pdf]

[University of Victoria — Chronic Disease Self-Management Program References](#)

[http://www.coag.uvic.ca/cdsmp/resources_references.htm]

Organizations that Report on Quality (Canada):

[Accreditation Canada](http://www.cchsa.ca) [<http://www.cchsa.ca>]

[Canadian Institute for Health Information](http://www.cihi.ca) [<http://www.cihi.ca>]

[Health Council of Canada](http://www.healthcouncilcanada.ca) [<http://www.healthcouncilcanada.ca>]

[National Quality Institute](http://www.nqi.ca/) [<http://www.nqi.ca/>]

[Statistics Canada](http://www.statcan.gc.ca/) [<http://www.statcan.gc.ca/>]

Organizations that Support Quality Improvement (Canada)

[Canadian Patient Safety Institute](http://www.patientsafetyinstitute.ca) [<http://www.patientsafetyinstitute.ca>]

[Institute for Safe Medication Practices](http://www.ismp-canada.org) [<http://www.ismp-canada.org>]

[Safer Healthcare Now!](http://www.saferhealthcarenow.ca) [<http://www.saferhealthcarenow.ca>]

Organizations that Support Quality Improvement (International):

[A System for Profound Knowledge - The W. Edwards Deming Institute \(US\)](http://deming.org/index.cfm?content=66) [<http://deming.org/index.cfm?content=66>]

[Agency for Healthcare Research and Quality \(US\)](http://www.ahrq.gov) [<http://www.ahrq.gov>]

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

[Institute for Healthcare Improvement \(US\)](http://www.ihl.org) [<http://www.ihl.org>]

[Joint Commission on Accreditation of Healthcare Organizations \(US\)](http://www.jointcommission.org/) [<http://www.jointcommission.org/>]

[National Association for Healthcare Quality \(US\)](http://www.nahq.org/) [<http://www.nahq.org/>]

[National Patient Safety Foundation \(US\)](http://www.npsf.org) [<http://www.npsf.org>]

[National Quality Forum \(US\)](http://www.qualityforum.org) [<http://www.qualityforum.org>]

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

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

Best Practice Guidelines Clearinghouses:

[Centre for Effective Practice](http://www.effectivepractice.org/) [<http://www.effectivepractice.org/>]

[MOHLTC's Health Care Improvement Practices Registry](https://improvementpractices.com/HomePage.aspx) [<https://improvementpractices.com/HomePage.aspx>]

[National Guideline Clearinghouse \(US\)](http://www.guideline.gov/) [<http://www.guideline.gov/>]

Quality Indicator Clearinghouses:

[National Quality Measures Clearinghouse](http://www.qualitymeasures.ahrq.gov/) [<http://www.qualitymeasures.ahrq.gov/>]

Academic Journals on Quality and Safety:

[International Journal for Quality in Health Care](http://intqhc.oxfordjournals.org/) [<http://intqhc.oxfordjournals.org/>]

[Journal for Healthcare Quality](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1945-1474) [[http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1945-1474](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1945-1474)]

[Quality and Safety in Health Care](http://qshc.bmj.com/) [<http://qshc.bmj.com/>]

[Quality Management in Health Care](http://www.qmhcjournal.com/pt/re/qmhc/home.htm) [<http://www.qmhcjournal.com/pt/re/qmhc/home.htm>]

[The Joint Commission Journal on Quality and Patient Safety](http://www.jcrlinc.com/26813/newsletters/32/) [<http://www.jcrlinc.com/26813/newsletters/32/>]

Certification Programs for Quality Improvement Professionals

[American Society for Quality – ASQ Certification](http://www.asq.org/certification/) [<http://www.asq.org/certification/>]

[National Association for Healthcare Quality – Certified Professional in Healthcare Quality Certification](http://www.cphq.org) [<http://www.cphq.org>]

[University of Michigan - Lean Health Care Certification](http://cpd.engin.umich.edu/proed.htm?id=26) [<http://cpd.engin.umich.edu/proed.htm?id=26>]

Recommended Books:

[Gemba Kaizen: A Commonsense, Low-Cost Approach to Management](#)
[http://books.google.ca/books/about/Gemba_Kaizen_A_Commonsense_Low_Cost_Appr.html?id=qaqKh6Tp4SsC&redir_esc=y] - M Imai
[Lean Production Simplified: Plain-Language Guide to the World's Most Powerful Production System](#)
[<http://www.sme.org/ProductDetail.aspx?id=13999>] - P Dennis
[Lean Thinking: Banish Waste and Create Wealth in Your Corporation \(Revised and Updated\)](#)
[<http://www.sme.org/ProductDetail.aspx?id=27589>] - JP Womack, DT Jones
[Learning to See: Value Stream Mapping to Create Value and Eliminate MUDA](#) [<http://www.sme.org/ProductDetail.aspx?id=27592>] - M Rother
[High Performing Healthcare Systems: Delivering Quality By Design](#) [<http://www.longwoods.com/publications/books/571>] - G Ross Baker, A MacIntosh-Murray, C Porcellato, L Dionne, K Stelmacovich and K Born
The improvement guide: a practical approach to enhancing organizational performance - GL Langley, KM Nolan, TW Nolan, CL Norman, LP Provost. Jossey-Bass, San Francisco, 1996
[The memory jogger II: a pocket guide of tools for continuous improvement and effective planning](#)
[http://www.goalqpc.com/shop_products_detail.cfm?PID=193&PageNum_GetProducts=4&ProductShopBy=7] - M Brassard, D Ritter. GOAL/QPC, Salem NH, 1994
Practical tools for health care quality: statistical and problem-solving tools for continuous improvement - SK Murray, OB Murray. PQ Systems, Dayton, 1997

Quality Improvement Awards:

[CCHSE 3M Health Care Quality Team Awards](#) [http://www.cchse.org/default_awards.asp?active_page_id=931]

Home Care:

[Ontario Association of Community Care Access Centre](#) [<http://www.ccac-ont.ca>]
[Ontario Community Support Association](#) [<http://www.ocsa.on.ca>]
[Ontario Home Care Association](#) [<http://www.homecareontario.ca>]

Helpful QI Resources

- [Interpreting Run Charts](#)
Health Quality Ontario
- [Model for Improvement \(Clip 1\)](#) [<http://www.youtube.com/watch?v=SCYghxtioYU>]
Institute for Healthcare Improvement
- [Model for Improvement \(Clip 2\)](#) [<http://www.youtube.com/watch?v=6MIUqduINwQ&feature=relmfu>]
Institute for Healthcare Improvement
- [PDSA Cycle Video \(Part 1\)](#) [<http://www.youtube.com/watch?v=-caS9Ta820&feature=youtu.be>]
Institute for Healthcare Improvement
- [PDSA Cycle Video \(Part 2\)](#) [http://www.youtube.com/watch?v=eYoXjmv_QI&feature=relmfu]
Institute for Healthcare Improvement
- [The run chart: a simple analytical tool for learning from variation in healthcare processes](#) [[http://www.ncbi.nlm.nih.gov/pubmed?term=%E2%80%A2%09The run chart%3A a simple analytical tool for learning from variation in healthcare processes](http://www.ncbi.nlm.nih.gov/pubmed?term=%E2%80%A2%09The+run+chart%3A+a+simple+analytical+tool+for+learning+from+variation+in+healthcare+processes)]
Perla RJ, Provost LP, Murray SK. BMJ Qual Saf. 2011 Jan;20(1):46-51.

References

7. Health Quality Ontario. Quality Improvement Guide.

Toronto: Health Quality Ontario; 2012 Sept [cited 2012 Nov 7].
Available from: <http://www.hqontario.ca/portals/0/Documents/qi/qi-quality-improve-guide-2012-en.pdf>
[<http://www.hqontario.ca/portals/0/Documents/qi/qi-quality-improve-guide-2012-en.pdf>]

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