



Quality in Primary Care

**Final Report of the Quality Working
Group to the Primary Healthcare
Planning Group**

August 2011





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Abbreviations

AOHC	Association of Ontario Health Centres
AHRQ	Agency for Healthcare Research and Quality
BSM	Blended Salary Model
CAHPS	Consumer Assessment of Healthcare Providers and Systems
CCM	Comprehensive Care Model
CHC	Community Health Centre
CHQI	Centre for Healthcare Quality Improvement
CIHR	Canadian Institute for Health Research
CQI	Continuous Quality Improvement
CPOE	Computerized Physician Order Entry
CPCSSN	Canadian Primary Care Sentinel Surveillance Network
DFLE	Disability Free Life Expectancy
DGP	Divisions of General Practice
DHB	District Health Boards
ECFAA	Excellent Care for All Act
EHR	Electronic Health Record
EMR	Electronic Medical Record
FHG	Family Health Group
FHN	Family Health Network
FHO	Family Health Organization
FHT	Family Health Team
FP	Family Physician
GDP	Gross Domestic Product
GP	General Practitioner
HALE	Health Adjusted Life Expectancy
HCC	Health Council of Canada
HQO	Health Quality Ontario
HLE	Healthy Life Expectancy
HRA	Health Risk Appraisal
ICES	Institute for Clinical Evaluative Sciences
IHI	Institute for Healthcare Improvement
IOM	Institute of Medicine
KT	Knowledge Transfer
LDL	Low-Density Lipoprotein
LHIN	Local Health Integration Network
MAS	Medical Advisory Secretariat
MOHLTC	Ministry of Health and Long-Term Care

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MSAA	Master Service Accountability Agreements
NHS	National Health Service
NP	Nurse Practitioner
NPLC	Nurse Practitioner-Led Clinic
OECD	Organization for Economic Cooperation and Development
OHQC	Ontario Health Quality Council
OHTAC	Ontario Health Technology Advisory Committee
OMA	Ontario Medical Association
P4P	Pay for Performance
PDSA	Plan-Do-Study-Act
PEM	Patient Enrolment Model
PHO	Primary Health Organization
PHPG	Primary Healthcare Planning Group
QA	Quality Assurance
QI	Quality Improvement
QIIP	Quality Improvement and Innovation Partnership
QIP	Quality Improvement Plan
RNPGA	Rural and Northern Physician Group Agreement
TQ	Total Quality
TQM	Total Quality Management

Executive Summary

Primary healthcare is the foundation of Canada's healthcare system. The term, "primary healthcare" refers to the health professionals and programs that are the first point of contact for patients. Effective primary healthcare is community based, promotes healthy lifestyles as a means of preventing disease and injury, and recognizes the importance of social and economic factors that can affect health (Health Council of Canada, 2007).

An excellent primary healthcare system ensures the right care is provided at the right time in the right way by the right person. In this way, primary healthcare can help to prevent acute or chronic health conditions, shorten the duration of illnesses, and reduce the risk of complications (Health Council of Canada, 2007).

Improving the quality of primary healthcare has gained growing attention in Canada (and in Ontario). A recent Commonwealth Fund-supported 11-country survey (2009) ranked Canada in the bottom three among participating countries with respect to the percentage of physicians reporting that: their practice had a process for identifying adverse events and taking follow-up action; they used electronic medical records; their clinical performance was routinely compared with other practices; their practice routinely received and reviewed data on clinical outcomes and patient satisfaction/experience; they routinely used written guidelines to treat patients with asthma or chronic obstructive lung disease and diabetes; and their practice had after-hours arrangements for patients to see a doctor or nurse without going to a hospital emergency room.

Quality in primary healthcare is a nebulous and multi-dimensional concept and is defined differently by different stakeholders. Defining quality can be difficult because primary healthcare is a complex environment in which there are differing needs based on the demographics of the community and the geographic region. Factors important in defining quality in one population may be less important in other settings.

A high quality healthcare system is defined in "The Excellent Care for All Act" as one that is accessible, appropriate, effective, efficient, equitable, integrated, patient-centred, population health-focused, and safe (Health Quality Ontario, 2011). Quality improvement is a structured process that includes assessment, refinement, evaluation and adoption of processes by an organization and its providers to achieve measurable improvements in outcomes to meet or exceed expectations.

Although there are a variety of quality improvement initiatives taking place in Ontario, there is no system-wide and sustained approaches to supporting quality improvement in primary

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healthcare. To address this gap, the Primary Care Healthcare Planning Group (PHPG) established the Quality Working Group with the mandate to develop recommendations on the appropriate application of evidence in primary care practice, and to enhance quality in the primary healthcare sector. Recommendations were to focus on: quality improvement planning; training and support; clinical and organizational best practices and evidence-informed delivery of services; quality measurement framework for primary care practices; and, barriers and enablers of quality of care.

To address questions about how to improve quality in primary healthcare, the Quality Working Group reviewed 13 strategies and enablers for improving quality. A literature review was conducted to determine the impact different strategies/enablers might have on the quality of healthcare. In some cases, evidence regarding the impact of specific interventions was found to be conflicting or insufficient. Recommendations have been prepared for each of the 13 potential quality enablers, informed by a set of guiding principles. Where evidence of impact was weak or conflicting, the Working Group recommendations identify the need to collect more data on which to base quality improvement changes, or to fund research and evaluation to gather definitive data on the subject. The Working Group's recommendations are:

Performance Measurement

- Primary healthcare performance measurement at the practice, local, regional and provincial levels should be based on the Triple Aim Framework (improved population health outcomes, enhanced patient experience and reduction/control of per capita costs) and the Health Quality Ontario attributes of a high performing health system (safety, efficiency, effectiveness, person centredness, timeliness, equity, integration, population health focus, appropriately resourced).
- Capacity to measure primary healthcare performance at all levels needs to be developed, drawing on EMR/EHR, administrative and patient survey data.
- Performance measurement data should be disseminated widely to drive change and inform decisions at the local and system level.

Performance Targets

- Performance priorities and targets should be set mainly at the practice and community levels taking into consideration regional/provincial/national targets if available.
- Provincial targets need to be carefully selected through a process of consultation with key stakeholders and should be based on short and long term health system goals, available capacity, evidence of potential for improvement and high quality data.

Electronic Medical Record/Electronic Health Record

- High quality primary healthcare requires EMR functionality recommended by the Agency for Healthcare Research and Quality and the Institute for Healthcare Improvement. These organizations identified the following attributes as critical elements of a highly functioning EMR:

Proactive Patient Based

- All involved in quality improvement should be able to query the data
- The system should support instant access to query results
- The querying system should allow the user to ask any question
- Users should be able to construct and run queries without technical assistance
- Users should be able to specify the inclusion of any data elements in queries
- The system should support “drill down” into data
- Users should be able to save queries for re-use and/or refinement
- The system should support the sharing of queries
- The types of action taken on the lists of patients in a query should be flexible
- The action taken on the list should incorporate and use patient data to further segment the action (e.g., HbA1c follow up)
- The system should automate the actions whenever possible

Planned Care for Individual Patients

The “whole patient” should:

- be displayed in one place
- be dynamic
- be used for planning, treatment and follow up
- support care across all conditions and health issues, not just the complaint associated with a particular encounter
- be the central location for other views of patient data, such as run charts of laboratory results and vitals
- incorporate evidence-based prompts and reminders
- provide a portal for the patient for both input and viewing data, giving the patient some control over his/her record

Measurement

- The measurement module should allow the user to customize any report by adding or changing a filter
- The query and filter structures for measurement and reporting should be identical to those used for the population-based care tool and for reminders and prompts

Other

- Ability to customize the data presented
 - Ease of use
 - Interoperability
 - Data available across the continuum of care
 - Appropriate data structures provide information that supports improvement
 - Automation
- Common data standards, capacity for data sharing, and appropriate training and support for providers in meaningful use of EMRs need to be developed and implemented.

Primary Healthcare Teams

- Continue expanding the number of collaborative interprofessional primary healthcare teams. Teams should vary in size, composition and organizational structure to meet local community needs.
- Interprofessional collaborative practice opportunities that are consistent with the needs of the population being served be made available to all primary healthcare models regardless of funding or provider payment methods.
- Support coordination, collaboration and/or integration of primary healthcare teams/practices with other community health and social services to allow for effective and efficient patient navigation through the healthcare system.
- To achieve efficiencies and improved outcomes, team members should function at their level of competency, focusing on the patient's needs and recognizing the importance of continuity in building trusting provider-patient relationships.

Patient Enrolment

- Formal patient enrolment re-enforces patient-provider relationships and responsibilities and is foundational to pro-active, population-based preventive care and chronic disease management and to systematic practice level performance measurement and quality improvement. Ontario should continue the spread of Patient Enrolment Models.

Patient Engagement

- Patient engagement in the form of both patient self-management and patient involvement in services design and planning is widely believed to be a critical driver of quality improvement in primary healthcare. More information from evaluative studies on the best approaches to engaging patients is required.

Research and Evaluation

- A continuing flow of research and evaluation to inform primary healthcare policy and practice is an essential underpinning of a high-performing primary healthcare system and needs to be supported by adequate funding of research, evaluation and research training.
- Specific areas requiring focused evaluation include: approaches to patient engagement, approaches to quality improvement training and support, costs and benefits of primary care accreditation, physician versus team-based incentives.
- Promising but untried quality-related innovations should be implemented and evaluated on a small scale prior to system-wide implementation.

Financial Incentives

- Given the ambiguity of current evidence and the potential for perverse effects of pay-for-performance (P4P) in primary healthcare, primary care P4P incentives should be pursued with caution and be carefully evaluated.

Training and Support

- Quality improvement training and support should be made available over time to all primary care providers and organizations.
- Quality improvement training should be embedded in all healthcare professional training programs.

Public Reporting

- Public reporting of primary healthcare performance at the regional and provincial levels should track changes over time and include comparison across regions, taking differences in population characteristics into account.
- Mandatory public reporting of performance is not recommended for primary care practices and/or organizations.

Accreditation

- Primary healthcare accreditation is a potential driver of quality. However, evidence of lasting impact is required before a definitive recommendation can be made. A synthesis of international experience with primary healthcare accreditation and the evidence

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regarding its impact is currently underway under the auspices of the Canadian Health Services Research Foundation and should inform future decision making.

Primary Healthcare Organization/Governance

- Local primary healthcare provider networks that engage patients and the public could play a key role in promoting, supporting and coordinating quality improvement initiatives and in sharing quality improvement expertise and experience among local providers.

Leadership Development

- Create programs to support the development of quality improvement leadership capacity among primary healthcare clinicians and administrative staff.

Section 1: Background

Development and Establishment of the Primary Healthcare Planning Group

In June of 2010, the McMaster Health Forum held a dialogue with a variety of participants¹ on the topic of “Supporting Quality Improvement in Primary Healthcare in Ontario”. At this forum, dialogue participants agreed that Ontario lacks a system-wide and sustained approach to supporting quality improvement in primary healthcare. It was determined that an overarching framework for strengthening primary healthcare in Ontario was required. Forum participants concluded that a small planning group should be established with a mandate to draft and build consensus on a strategy for strengthening primary healthcare in Ontario, and to organize a summit at which the strategy would be debated, finalized and approved by a broad-based group of key stakeholders.

The Primary Care Healthcare Planning Group (PHPG) was established and included representatives from the Ministry of Health and Long-Term Care (MOHLTC), Ontario Medical Association (OMA), Registered Nurses’ Association of Ontario (RNAO), Ontario College of Family Physicians (OCFP) and Association of Ontario Health Centres (AOHC). The PHPG recommended that five working groups should be created to address quality, access, efficiency, accountability and governance to inform the approach for strengthening primary healthcare in Ontario.

Mandate of the Quality Working Group

In April of 2011, the Quality Working Group was established to provide recommendations on the appropriate application of evidence in primary care practice and on enhancing quality in the primary healthcare sector (Refer to Appendix A for the Terms of Reference). The key areas of focus for this Working Group included:

- Quality improvement planning, training and support in the primary healthcare sector
- Clinical and organizational best practices and evidence-informed delivery of services
- Quality measurement framework for primary care practices
- Barriers and enablers of quality of care

¹ Participants included representatives from the: Government of Ontario, stakeholder organizations (e.g., Ontario Medical Association (OMA), Ontario College of Family Physicians (OCFP), Registered Nurse Practitioners’ Association of Ontario (RNAO), Association of Ontario Health Centres (AOHC), Association of Family Health Teams of Ontario, Dietitians of Canada), Local Health Integration Networks (LHINs), Quality Improvement and Innovation Partnership (QIIP), Cancer Care Ontario (CCO), regulatory bodies and academics.

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The Working Group was composed of representatives from academic and research institutions, professional associations, regulatory colleges, providers and other system leaders. The Co-Chairs of the Quality Working Group were Dr. Brian Hutchison and Dr. Suzanne Strasberg.

Section 2: Trends and Current State of Quality Improvement in Primary Healthcare in Ontario and the Change Imperative

Current State of Primary Care in Ontario

Canada spends 10.4% of its gross domestic product (GDP) on healthcare (Organization for Economic Cooperation and Development, 2010). This is higher than the Organization for Economic Cooperation and Development (OECD) average of 9.0%. The Canadian physician-to-population ratio (2.3 per 1,000 population) is below the OECD average (3.2 per 1,000). However, the general practitioner-to-population and nurse-to-population ratios are above the average for member countries of the OECD (OECD, 2010). Family physicians (FPs) make up 51% of the physician workforce in Canada (CIHI, 2010).

In April 2010, there were 25,886 active physicians in Ontario. Of these physicians, approximately 11,550 were general practitioners (GPs)/family physicians. Of the GPs/FPs, approximately 7,700 (67%) were affiliated with a patient enrolment model (PEM); 1500-1600 (13-14%) were comprehensive care primary care physicians remunerated through straight fee for service (FFS); and the remainder (approximately 2300-2800; 20-24%) were in focused or part-time practice (ICES and OMA, personal communication, May 2011).

According to the Health Quality Ontario (HQO) report (2011), 93.5% of Ontarians had a family doctor. As of June 2011, the Ministry of Health and Long-Term Care (2011) reported that over 9.5 million Ontario residents were enrolled to receive care from 709 PEMs. The 709 PEMs included: 362 Family Health Organizations (FHOs) (with 3,631 physicians); 238 Family Health Groups (FHGs) (with 3,003 physicians); 38 Rural and Northern Physician Group Agreements (RNPGA) (with 93 physicians); 36 Family Health Networks (FHNs) (with 346 physicians); 21 Blended Salary Model (BSM) (with 74 physicians); 14 other groups (with 222 physicians); and 305 physicians in the Comprehensive Care Model (CCM). As of August 2011, there will be 200 Family Health Teams (FHTs) with 2,000 physicians and over 1,500 interprofessional healthcare providers serving 2.5 million enrolled patients (MOHLTC, personal communication, July 2011). In addition, there are 300 GPs and NPs in 73 Community Health Centres (CHCs) serving 367,216 patients (AOHC, personal communications, July 2011).

There are eight Nurse Practitioner-Led Clinics (NPLCs) in various stages of implementation and an additional 18 clinics that will be implemented. Over 5,000 Ontario residents are registered with a NPLC to receive primary healthcare. Approximately 6.5% of Ontarians do not have access to a family doctor (HQO, 2011). Of these, over half are actively looking for an FP but cannot find one (HQO, 2011). These Ontarians tend to have lower incomes and to be from the northern regions (HQO, 2011). There are regional disparities in the percentage of Ontarians

with a family doctor. This varies by LHIN from 85.8% in the North East LHIN to 98.1% in the South East LHIN (MOHLTC, 2010).

Current State of Quality in Canada and Ontario

Canada Relative to Other Countries and Ontario

Canada has participated in a series of benchmarking surveys that are conducted by the Commonwealth Fund to track trends in primary care. Surveys are conducted annually, providing a means to compare practices and trends over time, and to benchmark against other countries. Key indicators have been developed that allow performance to be compared between participating countries and to leverage the data for ongoing healthcare planning.

Surveys of primary care physicians in 2009 and adults in 2010 showed that Canada is performing well on some dimensions of quality and doing poorly on others. In most cases, Canada has been making progress with improving scores on key indicators of quality except for safety, efficiency and accessibility (Refer to Appendix B for detailed information on trends).

Canada is achieving high scores on indicators related to quality dimensions such as *effectiveness* (chronic disease management), *focus on population health* (preventive care), *patient-centredness* (communication) and some elements of *efficiency*. The survey of Canadian adults indicated that Canada trailed the top performing countries only slightly in preventive care (except Pap smears) and chronic disease management. Canada ranked in the top three countries with respect to the percentage of Canadians reporting that they discussed at their regular place of care a healthy diet and healthy eating (52%), exercise or physical activity (56%) and things in their life that worried them or caused them stress (44%).

Compared to Canada, Ontario scored better in the percentage of patients with hypertension that obtained blood pressure and cholesterol checks and the percentage of patients with asthma, diabetes, heart disease, hypertension, high cholesterol that reported being very confident in their ability to control and manage health problems.

Although Canada is doing well in relation to other countries on chronic disease management and prevention, the HQO identifies room for improvement. The 2011 HQO annual report noted that only half of Ontarians with diabetes patients have their eyes and feet examined within the recommended time intervals and slightly fewer than half are getting the medication they need. The HQO also suggests that Ontario needs to do better in prevention. The rate of obesity has increased from 16% to 18% over the past eight years; and one in five Canadians is smoking (HQO, 2011). Furthermore, one-third of women aged 50 to 69 did not have a mammogram in the past two years; one in four adult women did not have a Pap test in the last three years; and one in five elderly women did not get screened for osteoporosis.

The Commonwealth surveys suggest that the system is performing well for some indicators of efficiency with 89% of Canadian adults reporting in 2010 that they could not remember a time when their test results information was not available at the time of their appointment and 92% reporting that duplicate tests were not done (this has slightly declined from 95% in 2007).

With respect to patient centred care: the majority of Canadian adults gave high scores to their regular doctors on communication: 85% reported that their regular doctor always/often gives them an opportunity to ask questions about recommended treatment; 89% reported that their regular doctor explains things in a way that is easy to understand; 83% reported that their doctor involves them as much as they want in care decisions; and 80% reported their doctor spends enough time with them. Almost three-quarter of Canadians (74%) who received care in the last year reported that the quality of care they received from their regular doctor was very good or excellent.

Canada achieved lower scores on indicators related to quality dimensions such as; *appropriately resourced, accessibility, patient-centred care, safety, equity, and effectiveness*. Physicians reported low rates for: the adoption of information systems; adoption of interprofessional healthcare providers in the healthcare delivery team; providing chronically ill patients with written instructions; providing patients with a written list of medications for managing care; and, access to after hour arrangements for patients. Ontario performed better than the Canadian average in the use of health information technology/office systems and integration of interprofessional healthcare providers.

Canadian adults reported low rates for confidence in their ability to manage their care and relatively high rates of: adverse healthcare incidents such as medication errors; mistakes in treatment; incorrect diagnostic or laboratory test results; and, difficulty obtaining access to primary care when they were sick.

The HQO (2011) reported that the system is not completely equitable since Canadians with low incomes or poor education are at higher risk of unhealthy behaviours and not getting health prevention services. For example, lower income Ontarians are 36% more likely to experience an acute myocardial infarction and have a 32% higher rate of injury-related hospitalization compared to the highest-income Ontarians.

In the most recent Commonwealth Fund surveys (2009; 2010), Canada ranked in the bottom three among all participating countries with respect to the following indicators:

- percentage of physicians reporting that their practice has a process for identifying adverse events and taking follow-up action (10%); this declined from 20% in 2006
- percentage of physicians using electronic medical records, which enables performance measurement and feedback (37%)

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- percentage of physicians reporting that their clinical performance was routinely compared with other practices (11%)
- percentage of physicians reporting that their practice routinely receives and reviews data on clinical outcomes of patient care (17%) and patient satisfaction/experience (15%)
- percentage of physicians that reported the routine use of written guidelines to treat asthma or chronic obstructive lung disease (76%) and diabetes (82%)
- percentage of physicians reporting that their patients often have difficulty getting specialized diagnostic tests (47%)
- percentage of physicians reporting that their patients often face long waiting times to see a specialist (75%)
- percentage of physicians reporting that their practice has an after-hours arrangement to see a doctor or nurse without going to a hospital emergency room (43%); this has declined from 47% in 2006 (Netherlands with 97%)
- percentage of Canadians that reported that it was very easy to contact their doctor's practice by phone during regular practice hours (26%)
- percentage of Canadians that reported obtaining an appointment the same day when sick (28%)

Preventive Care Bonuses

FPs/GPs in PEMs are entitled to receiving financial incentives for meeting established threshold levels for performing preventive care activities. The amount of the preventive care bonus varies based on the level of threshold achieved. An analysis of the uptake of the financial incentives for influenza vaccine, Pap smear, mammogram and childhood immunization consistently indicates that the distribution is bimodal, with most physicians claiming at the extreme ends of the threshold scale rather than in the middle (MOHLTC, 2011). This ranged from:

- 37% of physicians billing nothing (0%) and 36% of physicians billing for the maximum threshold (80%) for the influenza vaccine
- 32.5% of physicians billing nothing (0%) and 45% of physicians billing for the maximum threshold (80%) for Pap smears
- 29% of physicians billing nothing (0%) and 53% of physicians billing for the maximum threshold (75%) for mammograms
- 31% of physicians billing nothing (0%) and 62% of physicians billing for the maximum threshold (95%) for childhood immunization

These trends indicate that more physicians are reaching the maximum threshold for the mammogram and childhood immunization incentive compared to the Pap smear and influenza incentive.

The colorectal screening bonus was most widely adopted by PEM physicians. The distribution for this incentive was skewed towards the right (that is, towards the highest end of the range) with more concentration around the mean. The uptake of the incentive ranged from: 26% of physicians billing nothing (0%); 2% meeting the 15% threshold; 8.3% meeting the 20% threshold; 8.2% meeting the 40% threshold; 21% meeting the 50% threshold; 13% meeting the 60% threshold; and 21% of physicians billing for the maximum threshold (70%).

There is great variation among PEMs with respect to the uptake of each preventive care incentive. However, a consistent trend among all the incentives is that physicians in the RNPGA model were the most likely to bill nothing for each incentive; FHOs were second; CCMs were third; FHGs were fourth and FHNs were fifth. Physicians in FHNs were the most likely to bill for the maximum threshold for each incentive; FHGs were second; FHOs were third; CCMs were fourth; and RNPAs were fifth.

Current State of Quality Improvement Initiatives in Ontario

Federal and provincial governments in Canada have invested in improving the quality of the primary healthcare sector through a variety of initiatives (McMaster Forum, 2010).

Federal initiatives include:

- Investing in a Primary Health Care Transition Fund to support targeted quality improvement pilot projects between 2000 and 2006
- Establishing Canada Health Infoway to support the development of electronic health records (EHRs)

Provincial initiatives include:

- Establishing the Ontario Health Quality Council (OHQC) in 2005 to monitor access and outcomes and support continuous quality improvement in Ontario's healthcare system
- Introducing financial incentives for prevention and chronic disease management in comprehensive care models
- Funding and supporting the adoption and implementation of electronic medical records (EMRs) through Ontario MD and eHealth Ontario
- Funding a primary healthcare 'atlas' by the Institute for Clinical Evaluative Sciences (ICES) and decision support tools by the Centre for Effective Practice
- Establishing the Quality Improvement and Innovation Partnership (QIIP) in 2007 to lead the advancement of quality improvement in primary healthcare

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- Funding initiatives targeted to specific groups (e.g., Primary Care Asthma Program, Provincial Primary Care Cancer Network)
- Establishing accountability frameworks between Local Health Integration Networks (LHINs) and CHCs
- Commissioning of the McMaster Forum by QIIP with funding from the MOHLTC to conduct an environmental scan and establish a capacity map by examining the nature and extent of quality improvement activities in primary healthcare in Ontario, and to complete a synthesis of systematic reviews on evidence about the effectiveness of quality improvement interventions in primary care. This work informed the development of an issue brief which was used to facilitate a stakeholder dialogue on quality improvement in primary healthcare.

In June 2010, the mandate of the OHQC (now Health Quality Ontario (HQO)) was expanded by the government's *Excellent Care for All Act* (ECFAA). As a result, HQO has integrated the Centre for Healthcare Quality Improvement (CHQI), QIIP, the Ministry of Health and Long-Term Care's Medical Advisory Secretariat (MAS), the Ontario Health Technology Advisory Committee (OHTAC) and the Technology Evaluation Fund to form a single organization with the responsibility to: coordinate, consolidate and strengthen the use of evidence-based practice initiatives and technologies; support continuous quality improvement; and continue to monitor and publicly report on health system outcomes (HQO, 2011).

The legislation requires that every healthcare organization (currently defined as a hospital within the meaning of the Public Hospitals Act) (HQO, 2011):

- Establish a quality committee to report on quality-related issues
- Develop an annual quality improvement plan and make it available to the public
- Link executive compensation to the achievement of targets set out in the quality improvement plan
- Conduct patient/care provider satisfaction surveys
- Conduct staff surveys
- Develop a patient declaration of values following public consultation, if such a document is not currently in place, and
- Establish a patient relations process to address and improve the patient experience.

An environmental scan commissioned by QIIP on quality improvement initiatives in Ontario showed that quality improvement programs in Ontario's physician led primary healthcare practices are fragmented and limited in coverage (McPherson et al, 2010). The scan identified 24 distinct programs in which the focus varied from disease or condition, team, organization, region, sector, or approach. Only a few programs had a focus on quality improvement. Many of the programs were pilots with no clear indication of their possible fit into a system-wide and sustained approach to supporting quality improvement in healthcare. In community governed

healthcare organizations, 16 distinct programs were identified. Many of these programs intersected with quality improvement but were not specifically focused on it. For these reasons, Ontario requires a system-wide and sustained approach to supporting quality improvement in primary healthcare.

Section 3: Terminology Associated With Quality

Defining Quality, Quality Improvement, Quality Assurance, Accreditation and Knowledge Transfer

The Excellent Care for All Act defines a high **quality** healthcare system as: accessible, appropriate, effective, efficient, equitable, integrated, patient centred, population health focused, and safe (HQO, 2011). The MOHLTC, through the Excellent Care for All Strategy has indicated its commitment to leveraging all nine of these attributes to advance quality initiatives across the province. In the fall of 2010, a working group was formed to provide advice to the MOHLTC around the design of Quality Improvement Plans (QIPs). The consensus was that while all nine attributes are valuable, the QIPs should specifically focus on four of them for streamlined provincial and public reporting:

- Safe
- Effective
- Accessible
- Patient Centred

An examination of the literature indicates that there is no universally accepted definition of Quality Improvement (QI), as it relates to primary healthcare. **Quality Improvement, Continuous Quality Improvement (CQI), Total Quality (TQ), Total Quality Management (TQM), and Continuous Improvement (CI)** are terms that are often used interchangeably. QI involves a structured process that includes assessment, refinement, evaluation and adoption of processes by an organization and its providers to achieve measurable improvements in outcomes to meet or exceed expectations (Refer to Appendix C). The fundamental concept underlying QI is that in order to achieve a new level of performance, the system needs to change. QI emphasizes changes in processes and systems of healthcare delivery and measures the impact of those changes. Repeating these processes continuously to improve quality outcomes is CQI. QI initiatives can target patients, families, staff, health professionals and the community.

Quality Assurance (QA) activities are intended to provide confidence that quality requirements are being met. QA involves measurement of performance, usually against pre-defined standards or benchmarks, and often focuses on identifying deficiencies or outliers. Quality assurance activities may be internal to an organization or conducted by an external agency. Quality assurance may or may not include processes to address identified shortcomings. In practice, some programs labelled “quality assurance” incorporate the essential features of “quality improvement”.

Accreditation is a rigorous external evaluation process that comprises self-assessment against a given set of standards, an on-site survey followed by a report with or without recommendations, and the award or refusal of accreditation status (Pomey et al., 2010).

In Canada, accreditation is voluntary except for First Nations' facilities, university-affiliated hospitals and institutions in Quebec. Accreditation Canada is a national non-profit organization that was established to guarantee that healthcare organizations in Canada provide services of acceptable quality. This organization follows international accreditation protocols for the self-assessment of healthcare organizations against a given set of standards determined by professional consensus. An on-site survey is conducted and followed by a report with or without recommendations and the award or refusal of accreditation status. Accreditation Canada has developed and pilot-tested primary healthcare accreditation standards.

Accreditation is one of many potential QA activities. A key difference between QA and accreditation is that accreditation of an organization takes place through a third party whereas QA can take place internally by a healthcare organization or externally by a third party.

Knowledge translation (KT) is a relatively new term coined by the Canadian Institutes of Health Research (CIHR) in 2000. CIHR defined KT as "the exchange, synthesis and ethically-sound application of knowledge—within a complex system of interactions among researchers and users—to accelerate the capture of the benefits of research for Canadians through improved health, more effective services and products, and a strengthened healthcare system" (CIHR, 2005). In a clinical setting, KT can be defined as the effective and timely incorporation of evidence-based information into the practices of health professionals in such a way as to effect optimal healthcare outcomes and maximize the potential of the health system. KT interventions include: educational interventions (large, small group sessions; continuing medical education; self-directed learning); linkage and exchange interventions (knowledge brokers, opinion leaders, educational outreach visits); audit and feedback; informatics interventions (education, reminder systems, clinical decision support systems, presenting and summarizing data); and patient-mediated interventions (self-care and chronic disease management) (Strauss et al., 2009).

KT informs the content of QI programs. KT interventions and strategies can be used to facilitate QI.

Section 4: Strategies and Enablers of Quality: A Literature Review

The literature identifies a variety of potential enablers and strategies for quality improvement. To inform recommendations for improving quality in primary healthcare, a literature review and analysis for each strategy was completed and is summarized in this section.

Performance Measurement

Performance measurement is the process whereby an organization establishes the parameters by which programs and services are measured and determines whether desired outcomes are being achieved. Performance measurement is important to quality improvement since it allows for: the identification of opportunities for improvement; tracking progress against organizational goals; and comparing of performance against both internal and external standards.

In Ontario, current initiatives include the QIIP/HQO-ICES project in which health administrative data will be provided to primary healthcare practices participating in the QIIP/HQO Learning Community. This information includes; demographic and health characteristics of the practice population, provision of preventive care, chronic disease monitoring, ER visits, specialist referrals, admission rates for ambulatory care sensitive admissions and specific chronic diseases, and hospital readmission rates.

CIHI has a Voluntary Reporting System through which FPs submit and receive feedback based on their EMR data (CIHI, 2011). The CIHI provides participating healthcare practitioners with: information and tools (quality improvement, patient-centric provider feedback reports) to improve quality of patient care and practice management; a forum by which participating PHC clinicians can collaborate on quality improvement and PHC research; the ability to generate new information in priority areas, such as access to care, quality, utilization and outcomes to support effective policy development and health system management; and, insight on how to make EMRs more useful for practitioners. The Canadian Primary Care Sentinel Surveillance Network (CPCSSN) provides ongoing feedback based on data extracted from the EMRs to participating primary care practices on their performance and their EMR data quality. CPCSSN is a Canada wide EMR-based research system which is focused on chronic disease prevention and management. It makes use of epidemiology and practice based primary care data from FPs and nurse practitioners (NPs). The provider's individual results are compared to local and national benchmark data (CPCSSN, 2011).

The 'accountability agenda' has stressed the importance of using measurable indicators of performance measurement (Emanuel and Emanuel, 1996; Ries and Caulfield, 2004; Segsworth, 2003; Aucoin and Jarvis, 2005; Brown, Porcellato, Barnsley, 2006). Performance measures should be: clinically relevant; scientifically sound and tested before implementation; feasible to collect; capable of showing improvement over time; designed and agreed on by all stakeholders to prevent gaming; and aligned with national measures (when feasible).

In establishing performance measures for quality improvement it is also important to consider: crowd-out effects on other activities that may not receive attention if certain measures are emphasized; downstream effects of the program on other healthcare use (e.g., increased volume of testing, resources required to treat additional identified cases); the temptation to select activities that are relatively easy to measure rather than more important ones that are difficult to measure (MOHLTC, 2007). To be meaningful, performance measurement data must be: timely; consistent; and the meaning of the data must be understood. Well-defined, validly measured performance data can be compared between healthcare organizations and providers and disseminated to inform decisions at the local and system level.

Triple Aim Framework

In Canada, the healthcare sector is increasingly embracing a new quality improvement framework referred to as the Triple Aim Framework. This quality improvement model was developed by the Institute for Healthcare Improvement (IHI), a not-for-profit organization located in Cambridge, Massachusetts. The concept design started in 2005 and has been adopted by a broad range of healthcare organizations in North America and internationally since 2007. The Ontario LHINs have adopted the Triple Aim Framework as a means of implementing and tracking progress with healthcare improvement initiatives (Loucks, 2011).

The Triple Aim Framework focuses on three objectives (the "Triple Aim"):

- Improve the health of the population
- Enhance the patient experience of care (including quality, access and reliability)
- Reduce, or at least control, the per capita cost of care

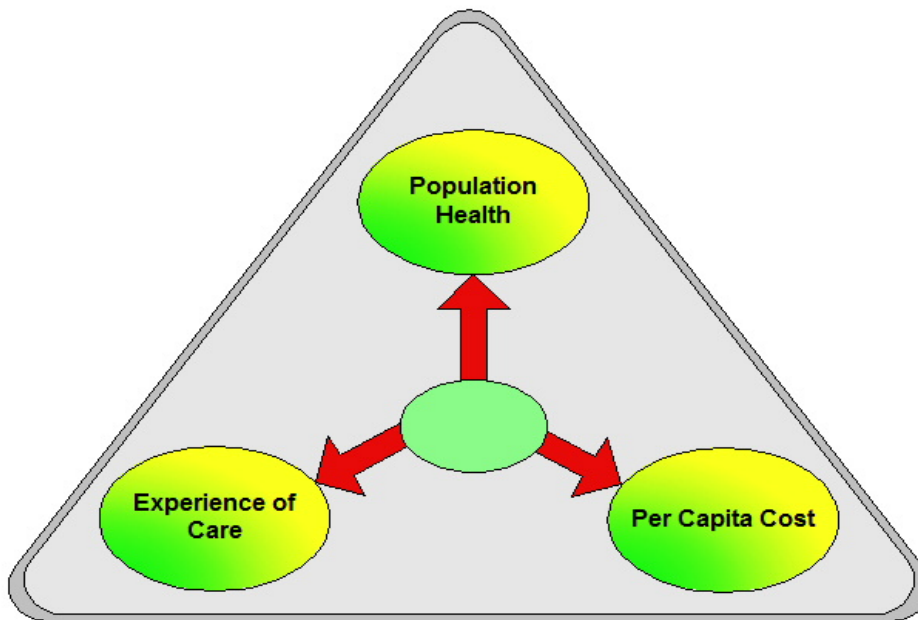


Figure 1 - Triple Aim Framework (Institute for Healthcare Improvement)

An example of a successful Triple Aim initiative cited by Beasley (2011) involved redefining the way care was provided by alternative healthcare workers. By involving alternate healthcare workers and scheduling longer, less frequent clinics, it was possible to improve patient access, patient satisfaction and reduce the cost of providing care to a fraction of the original costs.

Berwick et al. (2008) described five components of the Triple Aim framework: individuals and families; definition of primary care; prevention and health promotion; per capita cost reduction; and integration, social capital and capability building (Refer to Appendix D for more details). The IHI Triple Aim team has put together a set of suggested measures that also help to operationally define the Triple Aim.

Some examples of criteria that relate to Population Health include: healthy life expectancy (HLE): life expectancy combined with health status (e.g., health adjusted life expectancy (HALE), disability free life expectancy (DFLE)); mortality: life expectancy, years of potential life lost, standardized mortality rates; health status: single-question or multi-domain health status (e.g., SF-12, EuroQol); composite health risk appraisal (HRA) score; disease burden (e.g., summary of the prevalence of certain conditions, summary of predictive model scores, hospital and ED utilization for ambulatory care sensitive conditions).

Examples of criteria that relate to patient experience include: standard questions from patient surveys (e.g., U.S. Consumer Assessment of Healthcare Providers and Systems (CAHPS) or

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How's Your Health global questions, National Health Service (NHS) World Class Commissioning or Healthcare Commission experience questions, likelihood to recommend); and set of measures based on key dimensions (e.g., U.S. Institute of Medicine (IOM) dimensions).

Examples of indicators of per capita cost might include: cost per member of the population per month; or, costs in high volume/cost categories (e.g., secondary care).

Berwick et al. (2008) believe that certain pre-conditions must be in place before healthcare organizations can pursue the Triple Aim framework. The organization or system must recognize the need to deal with the health of the entire population - not just individual patients. There must be constraints on the finances available or the need to provide an equitable healthcare delivery system, and there must be an "integrator" able to coordinate services and focus on population health, patient experience, and per capita healthcare simultaneously.

The Triple Aim Framework includes roles for Macro and Micro Integrators. Macro Integrators are organizations or groups of organizations that manage resources to support a defined population (e.g., a LHIN). Macro Integrators work with front line service providers and systems that support individuals. A Micro Integrator is an individual or team that delivers the best or most appropriate care to an individual. A Micro Integrator could be a healthcare professional, or team of healthcare professionals responsible for delivering healthcare. A primary care practice or organization with an enrolled patient population can serve as both a Macro and Micro Integrator.

Key indicators to measure and track performance and ongoing quality improvement focus on one or more of the Triple Aim foci. These indicators are used to measure baseline performance prior to changes being introduced, and at various periods during and after a change is made to determine the extent of the improvement, and whether the improvement is sustained. Key indicators for a Triple Aim project should align with the IOM* and HQO** quality indicators (Refer to Appendix E for definitions).

Key Indicator	Population Health	Patient Experience	Per Capital Health Cost
Safety*,**		X	
Effectiveness*,**		X	
Person-centeredness*,**		X	
Timeliness*,**		X	
Equity*,**	X	X	
Efficiency*,**			X
Integration**		X	X
Focus on population health**	X		
Appropriate resources**			X

Success Stories

A number of success stories have been identified by healthcare organizations using the Triple Aim Framework. These include: Queens Health Network; HealthPartners; QuadMed; Bellin Health; and CareOregon (refer to the IHI website - <http://preview.ihi.org/offerings/Initiatives/TripleAim/Pages/Materials.aspx>).

Genesys Health System

Genesys Health System's success story is applicable to the primary care sector. Genesys Health System is a non-profit, integrated healthcare delivery system that provides a continuum of medical care services to patients in Genesee County and the area surrounding Flint Michigan. It partners with a network of 150 community-based primary care physicians affiliated with the Genesys Physician–Hospital Organization (PHO) (Klein and McCarthy, 2010).

Genesys is pursuing quality improvement using the Triple Aim framework by engaging community-based primary care physicians to enhance care coordination, preventive health, and efficient use of specialty care. It is also promoting health through the deployment of health navigators, who help patients adopt healthy behaviours, and by partnering with a county health plan to extend access to primary care and other services to low-income, uninsured county residents (Klein and McCarthy, 2010). While the health navigator program focuses on behaviours that will have the greatest impact on health outcomes, they also help patients adapt behaviour change plans to their preferences, interests, and readiness for change. For example, a patient may wish to reduce stress before tackling weight loss (Klein and McCarthy, 2010).

Genesys also engages in other community efforts to help improve population health. The health system is a member of the Greater Flint Health Coalition, which joins local providers, purchasers, consumers, insurers, schools, and faith-based organizations in efforts to improve the health status of Genesee County residents, while decreasing costs and inefficiencies in care. The model has helped lower the use and cost of care while improving physician performance on quality indicators. A study by General Motors found the automaker spent 26% less on healthcare for enrollees who received services at Genesys versus local competitors. The use of health navigators has improved health behaviours and satisfaction of patients. Extending the health navigator model to low-income, uninsured patients enrolled in a tax-supported county health plan has led to improved health status and reduced use of the hospital and emergency departments (Klein and McCarthy, 2010). A patient survey asking patients to evaluate their physicians and their state of agreement on a five-point scale produced average ratings of 3.27 out of 5 on whether patients could achieve life changes; 3.95 out of 5 on whether the provider team knew them; and an overall satisfaction of 4.4 out of 5 (Klein and McCarthy, 2010).

Performance Targets

A Performance target is a quantitative expression of an objective to be met in the future by an organization, program or employee. Performance targets can be used to facilitate continuous quality improvement and are often used in pay-for-performance (P4P) programs.

In Ontario, the MOHLTC has signed Master Service Accountability Agreements (MSAA) with the LHINs which include sector specific indicators for each healthcare sector (MSAA, 2011). In the primary healthcare sector, CHCs are required to participate in a Client Access for Primary Care Clinical Service Program. This involves developing and collecting key explanatory and accountability indicators related to health equity, value and affordability, and quality. The accountability indicators include benchmarks of pre-existing data; may be tied to dedicated funding from the MOHTLC; must be valid, feasible measures of system performance; and allow for comparability across like organizations and/or regions. The explanatory indicators will: be complementary to the accountability indicators; support planning, negotiation and problem solving at the provincial, LHIN level or agency level; support transparency and enable planning discussions; and support and sustain quality improvement, effectiveness and efficiency.

CHCs have also committed to participating in the Data Quality Assessment Tool Implementation project. This tool utilized the CIHI Data Quality Framework and provides a series of qualitative and quantitative quality indicators.

There is some evidence suggesting that performance targets can be successful drivers of quality if designed appropriately and are implemented alongside other improvement initiatives (general inspection, regulation, and financial incentives). If well designed, targets can help organizations and practitioners focus on a manageable number of achievable goals, which thereby lead to system improvements. Van Herten and Gunning-Schepers (2000) concluded that in order for performance targets to be effective, they must be specific, measurable, accurate, realistic and time bound.

Performance targets can have perverse effects including: neglect of untargeted aspects of the health system; focus on short-term targets within the providers' control rather than long-term or less controllable objectives; influence by professional interests; undermining the reliability of the data due to aggressive targets; inducing undesirable behavioural responses due to aggressive targets (Smith, in press).

In the UK, Public Service Agreements included strategic targets for all government departments, including the Health Ministry (Smith, 2007). These Agreements focused primarily on outcomes, such as the improvement of mortality rates, reductions in smoking and obesity, and reductions in waiting times. In contrast to most national target systems, this proved effective in securing some of the targeted objectives in healthcare (Bevan and Hood, 2006).

The success of this initiative has been attributed to: precise targets; general targets based at the local level, rather than the national level; professionals being engaged in the design and implementation of some targets; increased financing, information and managerial capacity to organizations; and attaching incentives to targets. Based on this experience, performance priorities and targets should be developed in consultation with key stakeholders and set mainly at the practice and community level.

Electronic Medical Record and Electronic Health Record

The term Electronic Medical Record (EMR) generally refers to information systems within one location (e.g., a doctor's office or hospital) while EHR refers to a system where information from multiple sources can be pooled and/or shared (OHQC, 2010). The Ontario government has invested significantly in providing subsidies to primary care physicians for adoption of EMRs. These subsidies were previously available to physicians in specific primary care models but more recently have been extended to all primary care physicians (Hutchison, 2011). As of May 31, 2011, there were approximately 6,500 Ontario physicians using, or in the process of implementing an EMR. This included approximately 4,700 community FPs. In addition, 300 CHC physicians received funding directly from eHealth Ontario to implement an EMR (Ontario MD, personal communication, June 26, 2011).

There is significant consensus in the literature and field that sophisticated health information technology at the practice level is fundamental to the provision of high quality, efficient primary healthcare. Information management systems need to: support clinical decision-making; identify care needs; support performance measurement and quality improvement; be linked across healthcare settings; and support patients as partners.

A recent high-quality review found that EHRs that include clinical information management and decision support tools (particularly those that translate data into context-specific information) improved provider performance. This review found substantial savings could be achieved by implementing EHRs. However, none of the included studies focused on primary healthcare (McMaster Health Forum, 2010).

The use of information technology for generating reminders and for clinical decision-support systems has been shown to improve both operational efficiency and quality of care. These improvements included: increased frequency of screening; improved preventative care and disease management; reduced prescribing errors; improvements associated with computerized physician order entry (CPOE) (e.g., reduced repeat tests and more timely tests and procedures); less missing information; and cost savings (AHRQ, 2007; Mitchell 2001; Hunt, 1998 as cited in CHSRF, 2009). The use of EMRs has also been shown to improve: overall patient satisfaction with their visits; patient satisfaction with physicians' familiarity with them; patient-provider

communication; the use of time during the visit, and comprehension of decisions made during the visit (Hsu et al., 2005 as cited in CHSRF, 2009).

Information technology can also lead to improvements in the system of care through proactive planning for populations, queries and follow-up on sub-populations, and having all pertinent patient information in one place allowing for the development of a holistic care plan (AHRQ, 2007 as cited in CHSRF, 2009).

The Agency for Healthcare Research and Quality (AHRQ) and the Institute for Healthcare Improvement (IHI) examined the requirements for an EMR that supports quality improvement. These organizations identified the following attributes as critical elements of a highly functioning EMR:

Proactive Patient Based

- All involved in quality improvement should be able to query the data
- The system should support instant access to query results
- The querying system should allow the user to ask any question
- Users should be able to construct and run queries without technical assistance
- Users should be able to specify the inclusion of any data elements in queries
- The system should support “drill down” into data
- Users should be able to save queries for re-use and/or refinement
- The system should support the sharing of queries
- The types of action taken on the lists of patients in a query should be flexible
- The action taken on the list should incorporate and use patient data to further segment the action (e.g., HbA1c follow up)
- The system should automate the actions whenever possible

Planned Care for Individual Patients

The “whole patient” should:

- be displayed in one place
- be dynamic
- be used for planning, treatment and follow up
- support care across all conditions and health issues, not just the complaint associated with a particular encounter
- be the central location for other views of patient data, such as run charts of laboratory results and vitals
- incorporate evidence-based prompts and reminders
- provide a portal for the patient for both input and viewing data, giving the patient some control over his/her record

Measurement

- The measurement module should allow the user to customize any report by adding or changing a filter
- The query and filter structures for measurement and reporting should be identical to those used for the population-based care tool and for reminders and prompts

Other

- Ability to customize the data presented
- Ease of use
- Interoperability
- Data available across the continuum of care
- Appropriate data structures provide information that supports improvement
- Automation

The report also indicates that the EMR must support systems for: information sharing (e.g., one data warehouse versus interoperable systems); data ownership; and, ensure data accuracy.

EMR functionality is not necessarily sufficient to promote its utilization for quality improvement. Providing appropriate training and support to providers on the meaningful use of EMR is essential for realizing the benefits of the EMR.

The California Networks for EHR Adoption (CNEA) program was initiated in 2006 to speed the adoption and lower the costs associated with implementing EHRs in the state of California. Participants share experiences and lessons learned between teams as a means of accelerating adoption rates. The program found that without continuous, structured follow-up training, the benefits of EHR cannot be fully realized (California Health Care Foundation, 2010).

Primary Healthcare Teams

Collaborative primary healthcare teams consist of a variety of healthcare providers responsible for delivering a range of healthcare services to patients. In Ontario, non-FFS models of primary healthcare include a range of non-physician healthcare professionals within their practice. In Ontario, approximately 21% of FPs work in interprofessional healthcare models (CHCs, FHTs) (Hutchison, 2011). There is a potential to extend access to non-physician healthcare professionals to primary care practices based on population needs.

A growing body of evidence shows that collaborative primary healthcare teams can improve patient health and quality of life, particularly for those with chronic health conditions. Such teams are also an effective way to provide primary healthcare services to rural, remote, and under-serviced areas.

Collaborative care for people with depression resulted in improvements that were sustained over five years (Gilbody et al., 2006 as cited in HCC, 2009). Patients receiving team-based care reported better health results such as lower blood pressure (Taylor et al., 2005 as cited in HCC, 2009). Children with asthma had fewer days per year of symptoms than asthmatic children in standard care (Lozano et al., 2004 as cited in HCC, 2009). Alzheimer's patients had significantly fewer psychological symptoms of dementia without increasing their medication (Callahan et al., 2006 as cited in HCC, 2009). Terminally ill patients receiving team-managed, home-based primary healthcare reported significant improvements in factors such as their level of pain and mental health (Hughes et al., 2000 as cited in HCC, 2009). Overweight patients being treated by a multidisciplinary group were more likely to achieve their weight-loss goals than those in other treatment groups (Feigenbaum et al., 2005 as cited in HCC, 2009).

Grumbach et al. (2004) cautioned that the success of team based care rests on how well different healthcare professionals work together to form an effectively functioning team. Team members should function at their level of competency, focusing on the patient's needs and recognizing the importance of continuity in building trusting provider-patient relationships to achieve efficiencies and improved outcomes (Cronenwett and Dzau, 2010). A key success factor for teamwork is empowering team members to perform tasks according to their scope of practice, experience, and education (Schoen, 2007).

To date, little is known about the team structures, composition, roles or relationships that are most effective and efficient in meeting the needs of specific populations.

Collaboration between primary healthcare teams and other sectors is important in the coordination of patient care. Integrated health systems include access to a comprehensive range of clinical and health-related services. Responsibility for planning, providing or procuring, and coordinating all core services for the continuum of health requirements and for the population served is assumed by the integrated health system (Leatt et al., 2003; Marriott and Mable 1998, 2000). This includes services from primary care through tertiary care, and cooperation between health and social care organizations (Simoens and Scott, 2005).

Currently collaboration between primary care physicians and some community providers is underdeveloped in Ontario. A survey examining the perception of Ontario FPs on collaboration with community pharmacists indicated that physicians have fewer than five conversations a week with a pharmacist about a patient's drug therapy management, very few used pharmacists as their primary source of medication information and few participated in higher-level collaborative behaviour (referring patients to pharmacists for medication reviews) (Pojskic et al., 2010). Physicians in the study reported significant advantages to collaboration with community pharmacists, including more accurate patient medication lists and financial savings

to the healthcare system (e.g., detecting double doctoring/excess prescription use, reducing need for specialist referral).

Patient Enrolment

Patient enrolment is a process in which patients in a defined population or geographical area are formally registered with a primary care organization, team or provider. Patient enrolment facilitates accountability by defining the population for which the primary care organization or provider is responsible (Hutchison, 2008). In Ontario, 9.5 million Ontario residents are enrolled to receive care from 709 PEMs.

Formal patient enrolment with a primary care provider lays the foundation for a pro-active, population-based approach to preventive care and chronic disease management and for systematic practice level performance measurement and quality improvement. It clearly establishes primary healthcare providers as health stewards for a defined population rather than providers of services to those who present themselves for care and clarifies mutual responsibilities. Ontario should continue the growth and development of PEMs.

Patient Engagement

Patient engagement can take the form of engagement in one's own health, care and treatment or involvement in the design, planning and delivery of health services (Parsons, 2010). Involving patients in evaluating health needs and healthcare performance is an essential component of quality improvement. To understand the patient and family experiences, shadowing guidelines have been developed for healthcare practitioners (Digioia, 2010). The guidelines provide step by step information on how a shadower can follow the patient and family care experience. HQO is currently developing a primary healthcare patient engagement framework (Spencer-Cameron, 2010).

Patient engagement enables patients to collaborate with their healthcare professionals in the self management of their care; to evaluate and shape the design and delivery of care within the care team; to evaluate and shape the strategic direction of healthcare within a healthcare organization (e.g., patient focus groups/patient involvement in governance/planning and policy); and to support and advocate for strong partnerships with patients and the primary healthcare community (Spencer-Cameron, 2010).

Coulter and Ellins (2006) indicate there is an association between the engagement of patients in their health, care and treatment and: patients' recall of information, knowledge and confidence to manage their conditions; the likelihood of patients reporting that the chosen treatment path was appropriate for them; patient reporting of their experiences and satisfaction with care;

and, the use of healthcare resources, where engaged patients are more likely to adhere to chosen courses of treatment, and to participate in monitoring and prevention – for example, by attending screening.

It has also been shown that some interventions to involve patients in sharing the decision about treatment choice result in patients choosing less interventionist (and less costly) treatments than their clinicians might otherwise have recommended (Parsons et al., 2010).

One study indicated that there is limited evidence to support interventions that promote patient involvement in improving safety (Hall et al., 2010). Other studies indicated that there was no clear evidence that empowering patients through access to their EHRs improved quality of care (Ko et al., 2010; Laugharne, 2004; Gysels et al., 2007). There are few reliable and robust studies on the effects of patient involvement in the design, planning and delivery of primary healthcare services.

Involving the patient in self-management and in the design and planning of healthcare services is widely believed to be a critical strategy for achieving quality improvement in primary healthcare. More information is required on the best approaches to patient engagement.

Research and Evaluation

A constant flow of research evidence to inform primary healthcare policy and practice is an essential underpinning of a high-performing and continually evolving primary healthcare system. In addition to ongoing performance measurement and monitoring, effective health system planning and management require focused evaluations of the implementation and impact of key policy and system management innovations. Such evaluations allow shortcomings to be identified and addressed and successes to be reinforced and spread. Evaluations of pilot or demonstration projects provide a low risk opportunity to test the effectiveness of quality improvement strategies and enablers.

Adequate funding of both research and research training are needed to create and sustain a vibrant and productive primary healthcare research enterprise. Quality improvement research that pertains to the primary healthcare sector is limited. To ensure efficiency and effectiveness, there must be investment in health services research and evaluation focusing on quality improvement in the primary healthcare sector.

Financial Incentives

Pay for Performance (P4P) in primary care represents a set of strategies that use financial levers to encourage healthcare providers to achieve measured standards of patient care to improve quality. P4P is meant to increase payback on resources invested in medical care by providing incentives which increase the quality of care and/or to increase the use of medical treatments with evidence of enhanced value and better patient outcomes (Institute of Medicine of the National Academies, 2007; Pink et al., 2006).

In Ontario, financial incentives in primary care are paid for meeting established threshold levels for performing preventive care activities. The amount of the preventive care bonus varies based on the level of threshold achieved. Other incentives are focused on encouraging the provision of priority services.

A study from the McMaster University Centre for Health Economics and Policy Analysis (Hurley et al., 2011) assessed Ontario physicians' responses to financial incentives, including preventive care P4P bonuses and special payments for priority services (e.g., obstetrical deliveries, prenatal care, hospital care, palliative care, in-office technical procedures, home visits, and care of patients with serious mental illness). The study found P4P incentives led to an increase over baseline levels in the provision of four of five preventive services: 5.1% for seniors' influenza vaccination; 7% for Pap smears, 2.8% for mammography, and 56.7% for colorectal cancer screening (Hurley et al., 2011). There was no detectable improvement from special payments for priority services above threshold levels.

There are only a few rigorous studies of P4P, and overall the evidence of its effects is weak (McMaster Forum, 2010). The review found that financial incentives targeting individual healthcare professionals appear to be effective in the short run for simple, distinct, well-defined behavioural goals (McMaster Forum, 2010). There is less evidence that financial incentives can sustain long-term changes. Half of the included studies focused on quality improvement in primary healthcare (McMaster Forum, 2010). P4P is well suited to address issues of under-use but less suited to curtailing overuse or inappropriate utilization (MOHLTC, 2007).

If implemented, careful consideration must be given to the design of a P4P program and potential perverse effects. A review of P4P programs that provide payments to primary care physicians in the United Kingdom, Australia and US (MOHLTC, 2007) found that it is important for the incentives and goals to be aligned and that policy makers and providers know the link between performance measures and the overall goals of primary care. It is also important for financial rewards to be linked to the desired outcome or activity to provide the desired incentive. To be effective, it is necessary to measure baseline performance before introducing the incentives to determine: the extent to which performance is already being achieved; how much it can be improved; and to forecast program costs. This requires ensuring data accuracy,

validity and reliability of measurement (MOHLTC, 2007). When setting targets and payment structures, both achievement of set goals and improvement from baseline measures should be rewarded. Unless this is done, targets may be seen as unfair to good providers (if only improvement is rewarded) or insufficient to encourage changes in practice (if only attainment is rewarded) (MOHLTC, 2007).

Several perverse effects of P4P have been identified. High performers tend to do better, while poor performers improve more slowly or even do worse. Net revenue may decline for those who need to invest the most in quality improvement, and resource-poor service providers may not invest sufficiently to qualify for the incentives (CHSRF, 2009). Improvement in some areas may be to the detriment of others and the incentive structure may promote the cherry picking of which patients are seen, or what services are provided. Extrinsic incentives may undermine providers' intrinsic motivation (Hutchison, 2008). P4P schemes tend to reward processes rather than outcomes, and the processes rewarded are only a subset of delivery processes (often those for which data are available). Focusing on these rather than the entire delivery process may divert attention from other areas which are also important (Hutchison, 2008; Miller, 2007; Rosenthal, 2004 as cited in CHSRF) There is also the potential to create a detrimental effect on dependent programs or services such as: increased demand for laboratory tests or diagnostic procedures; potential iatrogenic effects of finding false positive cases; and increased resources required to treat additional identified cases (MOHLTC, 2007).

Many P4P schemes make payments to physicians based on measurements that are made at the practice level, or which measure activities that are performed by members of the healthcare team. A study of P4P programs in Australia, U.K. and U.S. found nurses were typically salaried employees of a practice group which were typically owned by physicians (MOHLTC, 2007). In the U.K. this caused conflict when teams were not well integrated or collegial. However, in other settings (such as a California plan operated in a unionized environment), both primary care providers and practice nurses were direct employees of the health plan and the union was able to negotiate performance payment for nurses for activities that were primarily performed by the nursing staff. Payments schemes that reward healthcare professionals performing specific activities (rather than the practice group) are more likely to ensure an equitable distribution of performance payment. There is limited research on the positive or negative effects incentives might have on teams. More research is required in this area.

Training and Support

Quality improvement training and support can take the form of quality improvement collaboratives and coaching. A collaborative is a learn-by-doing approach to quality improvement which relies on spreading existing knowledge to achieve the desired outcome. Key features include: learning quality improvement techniques; sharing "on-the-ground"

experiences and success; and, conducting small tests of change known as Plan-Do-Study-Act (PDSA) cycles. Coaching is a method that customizes support for the practice and allows improvement experts to gain greater insight into how the practice functions. Practice coaches help physicians and teams develop the skills they need to adapt clinical evidence to the specific circumstances of their practice environment (Aligning Forces for Quality, 2010).

Quality improvement tools and techniques for planning and implementing change include: Lean, Six Sigma and the Model for Improvement (Dawda et al., 2010). Each framework has a different emphasis. Each seeks to facilitate the application of evidence or innovation reliably and efficiently. Organizations commonly adopt aspects of more than one framework in their quality improvement endeavours.

In Ontario, the MOHLTC created QIIP to provide training and support to primary care practices. To date, QIIP has completed three learning collaboratives with 122 FHT and CHC teams (Hutchison, 2011). In 2010, QIIP launched the Learning Community which combines virtual and face-to-face learning on the application of QI methods and tools and support from quality improvement coaches. In Wave 1, approximately 127 interprofessional healthcare teams participated in one or more of six action groups focused on improving chronic disease management (Asthma, Chronic Obstructive Pulmonary Disease, Diabetes, Hypertension), preventive care (Integrated Cancer Screening) and Access and Efficiency (Office Practice Redesign) (QIIP, 2011). Ninety-two teams are participating in Wave 2 which focuses on Access and Efficiency (Office Practice Redesign) and includes participants from most primary care models, including traditional fee-for-services practices. The Learning Community is based on the Model for Improvement and PDSA cycles of change, a web-based, real-time workspace called the GATEWAY, and support from an external quality improvement coach (Hutchison, 2011).

There is increasing evidence that quality improvement training and support can effectively help healthcare providers apply quality improvement methods in their practice. Collaboratives targeting diabetes management have been shown to: improve HbA1c, low-density lipid (LDL) and blood pressure testing rates and results; improve patient education; increase preventive procedures; reduce hospitalization; and improve quality of life indicators (Piatt, 2006; Asch, 2005; Tsai, 2005; Sperl-Hillen, 2000; Wagner, 2001; Camp, 2004, as cited in CHSRF, 2009). In the UK, the use of collaboratives by the National Primary Care Development Team resulted in improved access to primary care, reduction in heart disease mortality, reduction in coronary heart disease mortality, saving of 6,070 lives, and improvement of diabetes care (CHSRF, 2009). In Saskatchewan and British Columbia, chronic disease management collaboratives resulted in improved outcomes for patients with chronic disease (Health Quality Council Saskatchewan, 2008; Tregillis, 2006, as cited in CHSRF, 2009).

The IHI's Breakthrough Series model has: increased patient and provider satisfaction and improved health outcomes by enabling participants to share experiences; accelerate learning; and spread best practices. These initiatives have resulted in: reduced wait times for appointments; reduced wait times while at the physician's office; improved continuity of care; and increased patient and provider satisfaction (IHI 2008 as cited in CHSRF, 2009).

There is growing evidence that practice facilitation positively affects the adoption of evidence-based practice guidelines (Baskerville et al., in press) and helps staff apply quality improvement techniques (Lawrence and Packwood, 1996; Hearnshaw, 1998). Evidence regarding the impact of coaching on facilitating quality improvement in chronic care management is growing (Wu, 2009). A study by Steiner (2010) found that quality improvement coaches resulted in increased office efficiency and improved care for patients with diabetes and asthma. A research synthesis commissioned by Canadian Health Service Research Foundation (CHSRF) is currently underway to examine the effectiveness of quality improvement interventions in primary healthcare.

Training in the use of continuous quality improvement methods and measurement techniques is not widely available to healthcare practitioners. Providing hands-on training and support to healthcare practitioners can facilitate the adoption and use of quality improvement methods and tools. Quality improvement training and support should be made available over time to all primary care providers and organizations and be embedded in all healthcare professional training programs.

Public Reporting

Public reporting in healthcare is a mechanism by which the public is informed of the performance of their healthcare system. Performance reporting can take place at the system, organizational or provider level. Information can be made available to the policymakers, healthcare managers, healthcare providers and the general public. In Ontario, the HQO is responsible for reporting on the nine attributes of quality at the provincial level.

Publishing information in the public domain, to inform the public and other stakeholders about system and provider performance, is growing. This information often takes the form of report cards or provider profiles that summarize measures, such as wait times, patient satisfaction ratings and mortality rates, across providers. Public reporting on healthcare quality is motivated by the principle of transparency in publicly funded healthcare and is touted as an important driver of quality improvement and as a means of promoting consumer choice (Morris and Zelmer, 2005; Shekelle, in press; Marshall et al., 2000; Marshall et al., 2003).

Public reporting can improve quality through two pathways: a selection pathway, whereby consumers become better informed and select providers of higher quality; and a change

pathway, whereby information helps providers to identify the areas of underperformance, thus acting as a stimulus for improvement (Berwick et al., 2003). Therefore, making information about quality (and costs) widely available is seen as an important tool for quality improvement.

Although public reporting at the institutional level (e.g., hospitals, integrated health organizations and health plans) is recognized to improve patient outcomes, there is less evidence on the impact that public disclosure of the performance of individual providers and practices has on quality improvement initiatives and outcomes. To date, there is no evidence to suggest that patients change their medical provider if differences in quality are demonstrated (Galvin and McGlynn, 2003 as cited in Smith, 2004; Reinertsen et al., 2008). There is stronger evidence to suggest that reporting promotes quality improvement initiatives (Fung, 2008; Sorbero, 2008; Doran, 2008; Werner, 2008; Lindenauer et al., 2007, as cited in CHSRF, 2009). Studies that evaluated improvement of actual quality measures identified some improvement, but the improvements were small (Castle et al., 2007; Lindenauer et al., 2007, as cited in CHSRF, 2009).

A recent medium-quality review found that publicly releasing performance data stimulates quality improvement activity at the hospital level; however, the review did not identify a clear message about the primary healthcare sector (McMaster Forum, 2010). In England, all National Health Service healthcare organizations are issued an annual performance rating – a report card rating them from zero to three stars, based on about 40 performance indicators. Poor performance has put executives' jobs at risk, and the initiative had a strong effect on reported aspects of healthcare, such as wait times. However, it also induced unintended behavioural consequences such as lack of attention to some aspects of clinical quality (Audit Commission, 2003; Carvel, 2003 as cited in Grol, 2004). In the United States, two states (New York and Pennsylvania) have experimented with public reporting of post-operative mortality rates for coronary artery bypass graft surgery. Rates are risk adjusted and published for both *the hospital* and the *individual surgeon*. The schemes resulted in marked improvement in risk adjusted mortality in both New York and Pennsylvania (Shekelle, in press). However, there is debate about whether these schemes have been beneficial since a number of adverse outcomes have also been reported (Schneider and Epstein, 1996; Dranove et al., 2003 as cited in Grol, 2004).

In Ontario, provincial initiatives involving public reporting of emergency department wait times and surgeries and other procedures have resulted in improved outcomes. Public reporting on the Ontario Wait Times website has reduced the amount of time spent in emergency rooms by complex patients by two hours (HQO, 2011). The 90th percentile wait times for hip replacements, knee replacements and cataract surgeries decreased by more than half since 2005. The 90th percentile wait time for CT scans decreased from 2.5 months to about one month over the same time period.

There is scant evidence regarding public disclosure of performance data, particularly about individual providers and practices. Major public reporting systems have not been rigorously evaluated (Hibbard et al., 2003). In the United Kingdom, the Quality and Outcomes Framework has stimulated general practitioner activity since detailed results for every practice are available on the Internet.

Barr et al., (2006) found that healthcare organizations were more likely to respond to public reports than individual providers. Organizations develop cultures and behaviours that are often at the root of quality issues, making it favourable to report at the level of the healthcare organization to achieve: accountability; quality improvement; or consumer choice.

There are several unintended consequences that can result from reporting to the public. Mannion and Davies (2002) argue that a public report may prompt providers and healthcare organizations to: focus on measured clinical areas to the detriment of others; focus on one narrow clinical area without co-ordinating with others; concentrate on short-term gains at the expense of long-term goals; be disinclined to experiment with new approaches to care; and alter behaviour to create an advantage at the expense of patients (Marshall et al., 2000). Other consequences, such as: public distrust of the system; misinterpretation of the report; and reduced staff morale, are more likely to occur when the report made public is difficult to understand (Shekelle, in press).

Wallace and colleagues (2007) suggest that public reporting must clearly address objective(s), audience, content, products, distribution and impacts (intended and unintended) and carefully consider any potential adverse outcomes. To enhance their credibility and usefulness, public performance reports should be created in collaboration with physicians and other legitimate interest groups (Agency for Healthcare Research and Quality, 2007; Marshall et al., 2000). When reporting data, careful risk adjustment should be implemented to offer accurate comparisons between providers and to ensure that the legitimacy of the comparisons is accepted by professionals (Marshall et al., 2003). Public disclosure of information should also be integrated with other quality improvement strategies (Marshall et al., 2000).

Given the paucity of evidence on the impact of public reporting at the practice level and the potential for unintended negative consequences, at the present time public reporting on primary healthcare should be conducted at the provincial and regional levels rather than at the practice or provider level.

Accreditation

Accreditation is a rigorous external evaluation process that comprises self-assessment against a given set of standards, an on-site survey followed by a report with or without

recommendations, and the award or refusal of accreditation status (Pomey et al., 2010). Accreditation can be a voluntary or a mandated process.

In Canada, accreditation is voluntary except for First Nations' facilities, university-affiliated hospitals and institutions in Quebec. Accreditation Canada is a national non-profit organization that was established to guarantee that healthcare organizations in Canada provide services of acceptable quality. This organization follows international accreditation protocols for the self-assessment of healthcare organizations against a given set of standards determined by professional consensus. An on-site survey is conducted and followed by a report with or without recommendations and the award or refusal of accreditation status.

There is limited evidence to suggest that external accreditation results in sustained quality improvement. Greenfield and Braithwaite (2008) reviewed and analysed the literature on accreditation and accreditation processes. The picture was complex, with improvements having been reported in some fields but not in others. Their review did not report on the design or the quality of the included studies, and did not give quantitative estimates of the effects of accreditation. The World Health Organization (2003) found the introduction of accreditation programs is directly tied to financial incentives and suggested more information is required before determining if accreditation is the most appropriate quality improvement enabler compared to other forms of certification. The consensus at the McMaster Health Forum (2010) was that the effectiveness of accreditation has not been adequately evaluated.

A synthesis of quality improvement and accreditation mechanisms in primary healthcare has been commissioned by the CHSRF and is expected to be completed by the fall of 2011.

Primary Healthcare Organization/Governance

To support the rollout of continuous quality improvement in primary care practices across the province, effective governance, administration and managerial structures are needed. In New Zealand, Australia and British Columbia, a community-level governance structure that allows for the coordinated planning and implementation of primary care sector initiatives has been instituted. Ontario currently does not have such local governance structures, which could play a key role in promoting, supporting and coordinating quality improvement activities at the local and regional level.

In New Zealand, District Health Boards (DHBs) and Primary Health Organizations (PHOs) have a collaborative partnership at the governance and management levels. This partnership strengthens both organizations in their respective delivery of healthcare in the region. PHOs are the local structures responsible for delivering and co-ordinating primary healthcare services. PHOs consist of physicians, nurses and other health professionals (such as Maori

health workers, health promotion workers, dieticians, pharmacists, physiotherapists, psychologists and midwives) to serve the needs of their enrolled populations. PHOs receive a set amount of funding from the government to subsidise a range of health services (New Zealand Ministry of Health, 2011). DHBs are responsible for funding health and disability services for their defined populations and work with local communities and provider organisations to establish PHOs in their regions. Their mandate is to achieve better health outcomes for their district populations. DHBs are working to build an integrated, quality driven culture as a means of achieving better clinical outcomes. DHBs provide an opportunity for clinical leadership to work with management to achieve quality improvement. In this model, accountability for clinical quality is vested with clinical divisions. Accountability for both quality and cost is vested with both managers and clinicians (Malcolm et al., 2008).

In 2005, the PHO Performance Programme was developed by DHBs, the Ministry of Health and the primary healthcare sector to support improvements in the health of people enrolled in a PHO (District Health Boards New Zealand, 2011). The Programme aims to encourage and reward improved performance by PHOs in line with evidence-based guidelines and measures and rewards progress in reducing health inequalities by including a focus on high need populations. The Programme has developed a number of performance indicators to measure PHO achievements over a six month period. These PHO achievements have been grouped together by DHB region so that the Programme is able to report on services accessed by PHO enrolled populations within each DHB region.

In Australia, Divisions of General Practice (DGP) are an established part of the primary healthcare infrastructure. These Divisions make an important contribution to improving the effectiveness of primary healthcare services and healthcare outcomes. A DGP network (Divisions network) consists of: the Australian General Practice Network; State Based Organisations; and Divisions of General Practice. The Division network improves population health in local communities by: providing support for general practice; endeavouring to increase the effectiveness of primary healthcare services; and monitoring and responding to local healthcare needs.

DGPs are expected to support each other to maintain a strong and effective network and provide a voice for primary care in local health service planning. They also facilitate collaboration with other parts of the healthcare system to ensure healthcare is responsive to the needs of local communities. All Divisions provide programs which address local and national issues such as: improving health access; improved prevention and population health activities; and better management of chronic disease (Australian Government, Ministry of Health and Aging, 2008).

In British Columbia, Divisions of Family Practice are member-driven, non-profit societies. Divisions are developed when groups of physicians express interest in forming a Division.

Divisions receive financial support to hire a coordinator and to support individual doctors who participate in: community meetings; program planning; and other activities not covered under fee-for-service payment schedules. Each Division, in partnership with the regional health authority, is expected to address priority issues such as hospital and residential care; facility medical coverage; mental health and addiction concerns; and finding family doctors for patients without a family doctor. Sixteen Divisions have been created in the province, encompassing 60 communities (CHSRF, 2010).

In the U.S., Kaiser Permanente has implemented an effective governance model to oversee the collection and management of primary care data used for quality improvement. This includes a steering committee which: oversees measurement of data; establishes targets; approves which data are mined; and handles security and privacy issues such as data access. The steering committee obtains advice from subject matter experts on matters such as data presentation, analytic methodologies, and data aggregation (Liang, 2010).

Ontario should consider creating local primary healthcare provider networks that, among other functions, can support and coordinate data management and quality improvement initiatives and allow for the sharing of quality improvement expertise and experience among local providers.

Leadership Development

HQO (2011) recognizes that change is hard to implement and resistance may occur when initiatives result in a shift in stakeholder roles. It is widely accepted that successful implementation of quality improvement initiatives, requires effective clinical, administrative and political leadership .

Dickinson and Ham (2003) found that several conditions need to be in place for quality improvement programs to be implemented. Key factors include top level leadership by chief executives and boards, receptive organizational contexts, supportive organisational cultures, team and micro-system development, preparation and training for change, and establishing and maintaining a consistent vision to guide change programs. This review concluded that a constellation of leaders are needed at different levels, and there must be alignment between top level leadership and those working in other parts of the organization. In addition, it is important to engage physicians by appointing them to leadership roles, and working with clinicians who are influential as a result of their personal credibility.

Other studies have also concluded that the factors influencing the success of the quality and safety improvement system include: the strong involvement of physicians as well as managers in leading the organization and in determining its strategic goals, the integration of both

inpatient and outpatient services, diagnosis, management and care; training and development for physicians who take on leadership roles; substantial investment in IT systems; and the employment of case managers to work intensively with high risk patients (Crosson 2003; Ham 2003; Tyndale-Biscoe 2004 as cited in Powell, 2008). Involving both a physician and a non-physician as co-leaders in primary care practices has also shown to result in progress both in the clinical content of their work and in the critical change management activities involved with creating a team, managing meetings, and coordinating work between meetings (Gallagher et al., 2010)

According to the HQO (2011), successful leadership requires: a compelling vision for quality; performance targets and timelines that incorporate a vision; a clear strategy that includes evidence-based practices and establishes clear accountabilities and expectations at the organizational and individual level; a culture of quality improvement which emphasizes learning, execution of new ideas and reporting quality problems; engagement of frontline staff and champions; and, celebration of successes and sharing of best practices.

Leadership development refers to any activity that enhances the quality of leadership within an individual or organization. These activities can range from informal on the job training to formal educational programs. In Ontario, the University of Toronto Department of Family and Community Medicine has introduced a quality improvement curriculum for family medicine residents. This course was developed to provide residents with an introduction to leadership, accountability, performance and quality improvement. The curriculum will prepare future FPs to incorporate continuous quality improvement and accountability into their clinical practice.

Leatt et al. (2003 as cited in CHSRF, 2009) suggest that leadership development programs in healthcare should include: competency-based development; interprofessional and team learning; and continuous assessment. They conclude that leadership development is not “solely to improve the leadership skills of one individual, but is an essential component of the development of the organization as a whole,” and investments in leadership development for senior team members will have a “significant return on investment in terms of organizational effectiveness”.

Given the widespread support for leadership development in quality improvement, programs should be put in place to build leadership capacity among primary healthcare providers and administrative staff.

Section 5: Guiding Principles for Quality Improvement in Primary Healthcare in Ontario

Guiding Principles

The Working Group developed Guiding Principles for quality improvement in primary healthcare in Ontario. Guiding Principles were reviewed using the Delphi analysis technique in two iterations. On the first iteration participants had the opportunity to suggest refinements to the principles. On the second iteration participants indicated if they Agreed or Disagreed. Seven Working Group members participated in the Delphi study. The findings are summarized in the following tables. There was 100% agreement with the guiding principles listed below.

- The ultimate purpose of quality improvement efforts is to improve patient experience, health outcomes and efficient use of resources. This is accomplished by providing the training, resources and support that enable primary healthcare practices and organizations to imbed continuous quality improvement in day-to-day clinical practice.
- Quality improvement efforts should emphasize enablers and supports rather than accountability requirements and voluntary rather than mandatory participation.
- Quality enablers and supports should be available to all primary healthcare practices and organizations irrespective of organizational or payment model.
- Quality improvement is driven first and foremost by pride in performance and a desire to meet patients' health needs rather than external rewards or penalties.
- Quality improvement occurs through incremental system change at the practice, organizational and health system levels.
- You cannot improve what you cannot measure. Data drives improvement by identifying where change is needed and assessing the impact of improvements and innovations.
- Successful and sustained quality improvement requires the willing commitment of clinical and administrative leaders and the ongoing engagement of clinical, administrative and support staff.
- An appropriate balance is needed between provincial, regional, and local or practice level targets and priorities to ensure responsiveness to the needs of practice populations and communities and to encourage innovation.
- Quality improvement efforts need to be practical and evidence-based.
- Quality improvement methods and tested innovations have been developed and are available for adaptation to specific practice and organizational contexts.
- Improvement is always possible based on the philosophy of "Start where you are. Use what you've got. Do what you can." (Arthur Ashe)

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- To avoid undermining intrinsic motivation, performance measurement and reporting for improvement purposes should remain separate from measurement and reporting for accountability purposes, health system management or access to funding or financial incentives. However, the same measure may sometimes be appropriate for more than one of these purposes.

Section 6 - Recommendations

After a review of the literature of the 13 quality enablers/strategies of quality improvement, a series of recommendations were developed during a brainstorming session. The draft recommendations were subsequently assessed using the Delphi analysis technique in two iterations. In the first iteration, participants had the opportunity to suggest refinements to the recommendations and were asked to indicate a time frame for implementation and a rating of importance of each recommendation. In the second iteration, participants indicated if they Agreed or Disagreed with the revised recommendations. In this iteration, a draft implementation plan was included. Participants were asked to indicate if they agreed, disagreed, or wanted to propose revisions or suggest additional action or evaluation items. Scores for each recommendation, action item and evaluation item are included below.

Prioritization is defined as Short-Term Priority (within one year); Medium-Term Priority (within two years); and Long-Term Priority (within three years). Level of Importance is defined as low, medium and high.

Seven Working Group members participated in the Delphi study. The findings are summarized in the following tables.

Performance Measurement

Recommendation #1

<p>Primary healthcare performance measurement at the practice, local, regional and provincial levels should be based on the Triple Aim Framework (improved population health outcomes, enhanced patient experience and reduction/control of per capita costs) and the Health Quality Ontario attributes of a high performing health system (safety, efficiency, effectiveness, person centredness, timeliness, equity, integration, population health focus, appropriately resourced).</p>	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority Short-Term</p> <p>Importance High</p>
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Recommendation #2

Capacity to measure primary healthcare performance at all levels needs to be developed, drawing on EMR/EHR, administrative and patient survey data.	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority Short or Medium Term</p> <p>Importance High</p>
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Recommendation #3

Performance measurement data should be disseminated widely to drive change and inform decisions at the local and system level.	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority Short-Term</p> <p>Importance High</p>
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Performance Targets

Recommendation #4

Performance priorities and targets should be set mainly at the practice and community levels taking into consideration regional/provincial/national targets if available.	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority Short-Term</p> <p>Importance High</p>
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Recommendation #5

<p>Provincial targets need to be carefully selected through a process of consultation with key stakeholders and should be based on short and long term health system goals, available capacity, evidence of potential for improvement and high quality data.</p>	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority Medium to Long Term</p> <p>Importance Medium</p>
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Electronic Medical Records/Electronic Health Records

Recommendation #6

<p>High quality primary healthcare requires EMR functionality recommended by the Agency for Healthcare Research and Quality and the Institute for Healthcare Improvement. The following attributes were identified as being critical elements of a highly functioning EMR.</p> <p>Proactive Patient Based</p> <ul style="list-style-type: none"> • All involved in quality improvement should be able to query the data • The system should support instant access to query results • The querying system should allow the user to ask any question • Users should be able to construct and run queries without technical assistance • Users should be able to specify the inclusion of any data elements in queries • The system should support “drill down” into data • Users should be able to save queries for re-use and/or refinement • The system should support the sharing of queries • The types of action taken on the lists of patients in a query should be flexible • The action taken on the list should incorporate and use patient data to further segment the action (e.g., 	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority Short-Term</p> <p>Importance High</p>
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<p>HbA1c follow up)</p> <ul style="list-style-type: none"> • The system should automate the actions whenever possible <p>Planned Care for Individual Patients</p> <p>The “whole patient” should:</p> <ul style="list-style-type: none"> • be displayed in one place • be dynamic • be used for planning, treatment and follow up • support care across all conditions and health issues, not just the complaint associated with a particular encounter • be the central location for other views of patient data, such as run charts of laboratory results and vitals • incorporate evidence-based prompts and reminders; • provide a portal for the patient for both input and viewing data, giving the patient some control over his/her record <p>Measurement</p> <p>The measurement module should allow the user to customize any report by adding or changing a filter</p> <ul style="list-style-type: none"> • The query and filter structures for measurement and reporting should be identical to those used for the population-based care tool and for reminders and prompts <p>Other</p> <ul style="list-style-type: none"> • Ability to customize the data presented • Ease of use • Interoperability • Data available across the continuum of care (including the social determinants of health) • Appropriate data structures provide information that supports improvement • Automation 		
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Recommendation # 7

Common data standards, capacity for data sharing, and appropriate training and support for providers in meaningful use of EMRs need to be developed and implemented.	Working Group Delphi Analysis Agree 7 of 7 Responses	Working Group Delphi Analysis Priority Short-Term Importance High
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Primary Healthcare Teams

Recommendation #8

Continue expanding the number of collaborative interprofessional primary healthcare teams. Teams should vary in size, composition and organizational structure to meet local community needs.	Working Group Delphi Analysis Agree 7 of 7 Responses	Working Group Delphi Analysis Priority Medium-Term Importance Medium to High
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Recommendation #9

Interprofessional collaborative practice opportunities that are consistent with the needs of the population being served be made available to all primary healthcare models regardless of funding or provider payment methods.	Working Group Delphi Analysis Agree 7 of 7 Responses	Working Group Delphi Analysis Priority Medium-Term Importance High
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Recommendation #10

Support coordination, collaboration and/or integration of primary healthcare teams/practices with other community health and social services to allow for effective and efficient patient navigation through the healthcare system.	Working Group Delphi Analysis Agree 7 of 7 Responses	Working Group Delphi Analysis Priority Medium-Term Importance High
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Recommendation #11

<p>To achieve efficiencies and improved outcomes, team members should function at their level of competency, focusing on the patient's needs and recognizing the importance of continuity in building trusting provider-patient relationships.</p>	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority Short-Term</p> <p>Importance Medium</p>
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Patient Enrolment

Recommendation #12

<p>Formal patient enrolment re-enforces patient-provider relationships and responsibilities and is foundational to proactive, population-based preventive care and chronic disease management and to systematic practice level performance measurement and quality improvement. Ontario should continue the spread of Patient Enrolment Models.</p>	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority No Consensus</p> <p>Importance No Consensus</p>
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Patient Engagement

Recommendation #13

<p>Patient engagement in the form of both patient self-management and patient involvement in services design and planning is widely believed to be a critical driver of quality improvement in primary healthcare. More information from evaluative studies on the best approaches to engaging patients is required.</p>	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority Medium-Term</p> <p>Importance High</p>
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Research and Evaluation

Recommendation #14

<p>A continuing flow of research and evaluation to inform primary healthcare policy and practice is an essential underpinning of a high-performing primary healthcare system and needs to be supported by adequate funding of research, evaluation and research training.</p>	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority Short-Term</p> <p>Importance Low</p>
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Recommendation #15

<p>Specific areas requiring focused evaluation include: Approaches to patient engagement; Approaches to quality Improvement training and support; Costs and benefits of primary care accreditation; Physician versus team-based incentives.</p>	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority Medium-Term</p> <p>Importance High</p>
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Recommendation #16

<p>Promising but untried quality-related innovations should be implemented and evaluated on a small scale prior to system-wide implementation.</p>	<p>Working Group Delphi Analysis</p> <p>Agree 5 of 7 Responses Disagree 1 of 7 Responses Abstain 1 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority Medium-Term</p> <p>Importance High</p>
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Financial Incentives

Recommendation #17

<p>Given the ambiguity of current evidence and the potential for perverse effects of pay-for-performance (P4P) in primary healthcare, primary care P4P incentives should be pursued with caution and be carefully evaluated.</p>	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority Medium-Term</p> <p>Importance Medium</p>
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Training and Support

Recommendation #18

<p>QI training and support should be made available over time to all primary care providers and organizations.</p>	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority Medium-Term</p> <p>Importance Medium</p>
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Recommendation #19

<p>QI training should be embedded in all healthcare professional training programs.</p>	<p>Working Group Delphi Analysis</p> <p>Agree 6 of 7 Responses Abstain 1 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority Short-Term</p> <p>Importance Medium to High</p>
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Public Reporting

Recommendation #20

<p>Public reporting of primary healthcare performance at the regional and provincial levels should track changes over time and include comparison across regions, taking differences in population characteristics into account.</p>	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority Short-Term</p> <p>Importance High</p>
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Recommendation #21

<p>Mandatory public reporting of performance is not recommended for primary care practices and/or organizations.</p>	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority No Consensus</p> <p>Importance High</p>
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Accreditation

Recommendation #22

<p>Primary healthcare accreditation is a potential driver of quality. However, evidence of lasting impact is required before a definitive recommendation can be made. A synthesis of international experience with primary healthcare accreditation and the evidence regarding its impact is currently underway under the auspices of the Canadian Health Services Research Foundation and should inform future decision making.</p>	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority Medium-Term</p> <p>Importance Medium</p>
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Primary Healthcare Organization/Governance

Recommendation #23

<p>Local primary healthcare provider networks that engage patients and the public could play a key role in promoting, supporting and coordinating quality improvement initiatives and in sharing quality improvement expertise and experience among local providers</p>	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority No Consensus</p> <p>Importance High</p>
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Leadership Development

Recommendation #24

<p>Create programs to support the development of quality improvement leadership capacity among primary healthcare clinicians and administrative staff.</p>	<p>Working Group Delphi Analysis</p> <p>Agree 7 of 7 Responses</p>	<p>Working Group Delphi Analysis</p> <p>Priority No Consensus</p> <p>Importance High</p>
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Section 7: Implementation Plan

Action Plan

Strategy/ Enabler	Activity	Responsible Agent(s)	Working Group Delphi Analysis
Performance Measurement and Public Reporting	A Working Group is established under the auspices of Health Quality Ontario to design a performance measurement infrastructure for primary healthcare at the practice, local and regional, provincial levels. The Working Group could include the Ministry of Health and Long Term Care (MOHLTC), Institute of Clinical Evaluative Sciences, eHealth Ontario, Canada Health Infoway, Canadian Institute of Health Information, Canadian Primary Care Sentinel Surveillance Network, Ontario MD, LHIN representatives, key stakeholder organizations (e.g., Ontario Medical Association, Ontario College of Family Physicians, Nurse Practitioners' Association of Ontario, Association of Ontario Health Centres, Association of Family Health Teams of Ontario), regulatory bodies, academics with relevant interest and frontline primary care providers. A process would need to be employed to obtain input from patients and the public.	Health Quality Ontario	Agree 5 of 7 Responses Revise 2 of 7 Responses
Performance Measurement, Public Reporting, Financial Incentives and Performance	Health Quality Ontario initiates a process that engages the MOHLTC and key stakeholders to plan the application of the Excellent Care for All Act to the primary healthcare sector.	Health Quality Ontario	Included as a new action item after receiving Delphi feedback

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Strategy/ Enabler	Activity	Responsible Agent(s)	Working Group Delphi Analysis
Targets			
Performance Targets	The MOHLTC establishes a process for collaborative development of performance priorities and targets for primary healthcare.	MOHLTC	Agree 7 of 7 Responses
Primary Healthcare Teams	The MOHLTC in consultation with key stakeholders develops a process for funding interprofessional primary healthcare teams that are aligned with the needs of the population being served and can be applied across different practice models.	MOHLTC; primary care stakeholders	Agree 5 of 6 Responses Revise 1 of 6 Responses
	The MOHLTC ensures that coaching and other supports are available to interprofessional primary healthcare teams to assist in the process of team development.	MOHLTC	Agree 6 of 6 Responses
Research and Evaluation	MOHLTC establishes a funding program for quality improvement research and evaluation. Priority topics would include: <ul style="list-style-type: none"> • Approaches to patient engagement • Approaches to quality improvement training and support • Costs and benefits of primary care accreditation • Physician versus team-based incentives • Relationship between team composition and structure and outcomes of care 	MOHLTC	Agree 5 of 7 Responses Abstain 2 of 7 Responses
Financial Incentives	The MOHLTC establishes a Working Group to examine payment methods and financial incentives in primary healthcare.	MOHLTC	Agree 7 of 7 Responses

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Strategy/ Enabler	Activity	Responsible Agent(s)	Working Group Delphi Analysis
Training and Support	The MOHLTC continues and expands funding for QI training and support in primary healthcare.	MOHLTC	Agree 6 of 7 Responses Revise 1 of 7 Responses
	Universities and colleges include quality improvement curriculum in their healthcare professional training programs through HQO and other quality initiatives.	Universities and Colleges; HQO	Agree 6 of 7 Responses Revise 1 of 7 Responses
Leadership Development	The MOHLTC supports leadership development programs for quality improvement delivered through Health Quality Ontario, professional associations and universities.	MOHLTC; Health Quality Ontario, professional associations and universities	Agree 6 of 7 Responses Revise 1 of 7 Responses

Evaluation Plan

Activity	Working Group Delphi Analysis
Track the implementation of recommendations, action items and evaluation activities.	Agree 6 of 7 Responses Abstain 1 of 7 Responses
Track overall success of quality improvement at the system level with respect to patient experience, health outcomes, healthcare utilization and costs.	Agree 6 of 7 Responses Abstain 1 of 7 Responses
Research and evaluation to assess specific initiatives (e.g., experience with interprofessional teams from the provider and patient perspective).	Agree 5 of 7 Responses Abstain 1 of 7 Responses Revise 1 of 7 Responses

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Appendix A: Terms of Reference for Improving Quality in Primary Healthcare in Ontario

1. Background

At the McMaster Forum on the topic of “Supporting quality Improvement in Primary Healthcare in Ontario” dialogue participants agreed that Ontario, while having witnessed significant improvements in access to primary healthcare over the past decade, lacks a system-wide and sustained approach to supporting quality improvement in primary healthcare.

2. Objectives

To develop a proposal for the appropriate application of evidence in primary care practice and to enhance quality in the primary healthcare sector for the benefit of Ontarians.

3. Key Areas of Focus

- Quality improvement planning, training and support in the primary healthcare sector
- Clinical and organizational best practices and evidence-informed delivery of services
- Quality measurement framework for primary care practices
- Barriers and enablers of quality of care

4. Areas of Discussion for All Working Groups

1. Review and validate the current state and business case for change
2. Identify long-term vision and goals for each of the proposed areas
3. Identify short- and medium-term priorities for 2011-2014
4. Develop an action plan for achieving goals and priorities identified above
5. Develop monitoring and evaluation plan to monitor progress against the goals and priorities identified above

5. Specific Questions

1. How is quality defined in the primary healthcare sector?
2. What are the quality needs in the primary healthcare landscape?
3. How can these quality needs be addressed at the system and organizational level?
4. How can we promote the appropriate application of evidence in the primary healthcare sector?

6. Communications

The communication and sharing of any materials developed by the Working Group will require prior approval by the Primary Healthcare Planning Group.

7. Reporting and Support

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Working Group participants will report to the Co-Chairs. The Co-Chairs will resolve dispute and disagreement as they arise. The Co-Chairs are:

Brian Hutchison

Suzanne Strasberg

The working Group Co-Chairs will report to the Primary Health Care Planning Group, chaired by Susan Fitzpatrick, ADM, Negotiations and Accountability Management Division, Ministry of Health and Long-Term Care (MOHLTC). Secretariat support is provided by the Quality Improvement and Innovation Partnership (QIIP).

8. Meeting Frequency

Meetings will be held every month during the period of April-June 2011 with the final report of the Working Group to be submitted to the Primary Healthcare Planning Group by June 30th, 2011.

Appendix B: Trends

Health System Views

The 2010 Commonwealth Study of Adults showed that 10% of Canadian adults and 7% of Ontario adults felt the system should be completely rebuilt. This number has declined from 23% for Canadian adults in 1998.

Patient-Centred

In 2007, the Health Council of Canada (HCC) partnered with Statistics Canada to develop and conduct a survey asking approximately 2,200 Canadians about their experiences with primary healthcare. The survey indicated that there is room for improvement in providing patient centred care:

- One-quarter (27%) report that their primary care providers always talk to them about specific things they could do to improve their health or prevent disease; an equal proportion (25%) report that their providers rarely or never discuss these things
- Approximately half of respondents report that when a physical exam (55%) or medical test (57%) was conducted, their providers always took time to clearly explain the results
- Just over half of Canadian adults (57%) taking prescription medication report that their providers always explain the side effects of their medications; 21% report that this rarely or never occurs
- Many Canadians with chronic conditions reported that they are not actively engaged in planning and managing their care. For instance, only 34% of Canadians reported that their primary care provider asks about their goals in caring for their chronic condition; less than half (44%) reported that they have received assistance with the development of a treatment plan
- One third reported that they have been given a written plan to help them manage their care, and 55% reported that their primary care provider regularly considers their values and traditions when recommending treatment
- Many Canadians with chronic conditions also reported that they were not connected to helpful educational resources and community supports. Only 15% of Canadians indicated that they were regularly encouraged to use specific services to help cope with their chronic condition; to attend programs such as support groups and exercise classes; or to see a dietician, health educator or counsellor

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The 2010 Commonwealth Study of primary care physicians showed:

- 16% of Canadian physicians and 13% of Ontario physicians reported that their practices routinely gave chronically ill patients written instructions on managing care at home. This is much lower than the top performer (Italy with 63%)

The 2007 survey of Canadians did show that Canadians gave high scores to primary care providers (regular medical doctor or place of care) on communication:

- Most Canadians with chronic conditions say their regular primary care provider usually: explains things in a way they can understand (90%); knows important information about their medical history (85%); spends enough time with them (80%); takes their concerns very seriously (84%)
- 92% feel confident they can tell their regular doctor about their concerns even when he or she does not ask

This finding was validated in the 2010 Commonwealth Study of Adults which showed:

- Of those Canadian adults with a regular doctor, the majority reported that their regular doctor always/often gives them an opportunity to: ask questions about recommended treatment (85%); explains things in a way that is easy to understand (89%); involves them as much as they want in care decisions (83%); and, spends enough time with them (80%)
- Almost three-quarter of Canadians (74%) who received care in the last year reported that the quality of care they received from their regular doctor was very good or excellent

Efficient

The 2010 Commonwealth Study of Adults showed the majority of Canadians (80%) reported: that they did not receive conflicting information from different professionals; could not remember a time when their test results information were not available at the time of their appointment (89%); or when duplicate tests were conducted (92%) (this number declined from 95% in 2007).

The 2009 Commonwealth Study of primary care physicians showed that over half of Canadian physicians (66%) and Ontario physicians (69%) reported that information from specialists was always available when needed (France had the highest performance (87%)) and over half of Canadian physicians (66%) and Ontario physicians (72%) reported that information from hospitals was available within 14 days of discharge (New Zealand had the highest performance (96%)).

Accessible

The 2010 Commonwealth Study of Adults showed:

- 77% of Canadians and 81% of Ontarians report having a regular medical doctor. This number has declined from 84% for Canadians since 2007. The top performer was the Netherlands (94%)
- 86% of Canadians and 87% of Ontarians reported that they have a regular place of care. This number has declined from 91% for Canadians since 2007. Top performer was the Netherlands (99%)
- 26% of Canadians and 30% of Ontarians reported that it was very easy to contact their doctor's practice by phone during regular practice hours. This number has declined from 44% for Canadians in 2007. New Zealand was the top performer with 51%
- 28% of Canadians and 30% of Ontarians reported obtaining an appointment the same day when sick. Canada had the worst performance on this indicator with Switzerland being the top performer (86%)
- 32% of Canadians and 26% of Ontarians reported waiting 6 or more days or never being able to get an appointment when sick. This number has increased from 30% for Canadians in 2007. Canada had the worst performance on this indicator with Switzerland being the top performer (3%)
- 34% of Canadians and 39% of Ontarians reported that it was very or somewhat easy to get after hours care without going to the ER. This is significantly different from the top performers (Netherlands, New Zealand and UK, 61%)

The 2009 Commonwealth Study of primary care physicians showed that Canada was in the bottom three countries for the following access indicators:

- 47% of Canadian physicians reported that their patients often have difficulty getting specialized diagnostic tests (Norway was the best performer with 11%)
- 75% of Canadian physicians reported that their patients often face long waiting times to see a specialist (UK was the best performer with 22%)
- 43% of physicians reported that their practice had an after-hours arrangement to see a doctor or nurse without going to a hospital emergency room (Netherlands was the best performer with 97%)

Effective

The 2010 Commonwealth Study of Adults showed that of the 44% of respondents who visited an emergency department in the past two years prior to the survey, more than one-third (45%) of Canadians and (48%) of Ontarians believe their condition could have been treated by a regular provider if he or she had been available. This has increased from 41% in 2007. France was the top performer with 22%.

Chronic Disease Management

- 94% of Canadian diabetic patients and 93% of Ontario diabetic patients had their blood pressured measured in the last year. Canada slightly trailed the best performers (France and New Zealand with 99%)
- 88% of Canadian diabetic patients and 87% of Ontarian diabetic patients had their cholesterol tested in past year. Canada came close to matching the best performer in 2010 (Australia with 89%)
- 42% of Canadian diabetic patients and 41% of Ontarian diabetic patients are very confident in their ability to control and manage health problems
- 95% of Canadians and 97% of Ontarians with hypertension had their blood pressure measured in past year. Canada slightly trailed the best performer (France with 99%)
- 72% of Canadians and 73% of Ontarians with hypertension had their cholesterol tested in past year. Canada came close to matching the best performer (US with 80%)
- 36% of Canadians and 41% of Ontarians with hypertension were very confident in their ability to control and manage health problems
- 91% of Canadians and 92% of Ontarians with high cholesterol had their blood pressure measured in past year. Canada slightly trailed the best performer (France with 98%)
- 79% of Canadians and Ontarians with high cholesterol had their cholesterol measured in the past year. Canada slightly trailed the best performer in 2010 (Australia with 85%)
- 40% of Canadians and 46% of Ontarians with high cholesterol were very confident in ability to control and manage health problems
- 40% of Canadians and 45% of Ontarians with asthma, diabetes, heart disease, hypertension or high cholesterol were very confidence in their ability to control and manage health problems; whereas 91% of Canadians and 93% of Ontarians were very confident/confident. Canada slightly trailed best performers (New Zealand with 48% and Switzerland with 96% respectively)

The 2009 Commonwealth Study of primary care physicians showed:

- 16% of Canadian physicians and 13% of Ontario physicians reported that their practices routinely gave chronically ill patients written instructions on managing care at home. This is much lower than the top performer (Italy with 63%)
- 76% of Canadian physicians reported that their practice routinely use written guidance to treat asthma or chronic obstructive lung disease, 82% for diabetes, 81% for hypertension, and 45% for depression.

Focused on Population Health and Equitable

Preventive Care:

The 2010 Commonwealth Study of Adults showed:

- 68% of Canadian seniors and 78% of Ontario seniors received a flu shot in the past year (for patient \geq age 65)
- 82% of Canadians and 84% of Ontarians had their blood pressure checked in the past year
- 70% of Canadian women (age 25-64) and 72% of Ontarian women had a pap smear within the past 2 years; 80% of Canadian women and 82% of Ontarian women had a pap smear within the past 3 years. Canada tied with Switzerland and the US as the best performer in the 2 year category and trailed slightly to Switzerland (85%) in the 3 year category
- 76% of Canadian women (age 50-64) and 77% of Ontarian women received a mammogram within the past 2 years; 84% of Canadian women and 83% of Ontarian women received a mammogram within the past 3 years
- 38% of Canadians (50+) and 49% of Ontarians had colon cancer screening within the past 3 years; 65% of Canadians and 61% of Ontarians had colon cancer screening within the past 5 years
- 39% of Canadians and Ontarians received preventive care reminders
- 52% of Canadians reported discussing at regular place of care a healthy diet and healthy eating, 56% reported discussing exercise or physical activity and 44% reported discussing things in their life that worry them or cause stress. Canada was in the top three countries in this area

On the other hand, the HQO Monitor Report (2011) indicated that people with low levels of income and education are less likely to receive preventive care or monitoring of their chronic diseases.

Appropriately Resourced

Information Technology

The 2009 Commonwealth Study of primary care physicians showed:

- 37% of Canadian physicians and 43% of Canadian physicians use electronic medical records, which can enable performance measurement and feedback. This number is

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lower than any of the other 10 other countries with the Netherlands being the top performer (99%)

- 18% of Canadian physicians and 25% of Ontario physicians reported using electronic test ordering. This number was significantly lower than the top performer (Italy with 91%)
- 27% of Canadian physicians and 33% of Ontario physicians reported using electronic prescribing. This number was significantly lower than the top performer (Netherlands with 98%)
- 20% of Canadian physicians and 33% of Ontario physicians reported using computerized drug alerts. This number was significantly lower than the top performer (Netherlands with 95%)
- 13% of Canadian physicians and 16% of Ontario physicians reported using electronic tracking of test results. This number was much lower than the top performer (Australia with 69%)
- 10% of Canadian physicians and 16% of Ontario physicians reported using computerized patient reminders. This number was significantly lower than the top performer (New Zealand with 92%)
- 9% of Canadian physicians and 16% of Ontario physicians reported using computerized physician reminders. This number was much lower than the top performer (Australia with 67%)
- 37% of Canadian physicians and 44% of Ontario physicians reported using computerized list of patients by diagnosis. This number was much lower than the top performer (New Zealand with 97%)
- 23% of Canadian and 28% of Ontario physicians reported using computerized list of patients by lab result. This number was significantly lower than the top performer (Australia with 88%)

Healthcare Teams

- 52% of Canadian and Ontario physicians work with non-physician staff such as nurses to manage care (with a lower percentage only identified in France). This was significantly lower than the top performer (Sweden with 98%)
- 21% of Canadian physicians and 22% of Ontario physicians reported receiving financial support or incentives for adding non-physician clinicians to the practice. This was much lower than the top performer (Netherlands with 60%)

Safety

The 2009 Commonwealth Study of primary care physicians showed 16% of Canadian physicians and 13% of Ontario physicians reported that their practices routinely gave patients a written list of medications. This was significantly lower than the top performer (UK with 83%).

The 2010 Commonwealth Study of Adults showed:

- Canadians with chronic conditions reported: someone from regular place of care did not review all medications including those prescribed by other doctors (31%); did not explain the potential side effects of a medication (26%); and did not give them a written list of all prescribed medications (52%). Canada performed in the bottom three countries on these indicators.
- Canadians with chronic conditions reported: in the last two years that the wrong medication or dose was administered (6%); medical mistake in treatment (8%) (increased from 7% in 2007); incorrect diagnostic/lab test results (4%); and delays in receiving abnormal test results (10%). 86% of these Canadians reported that the wrong medication, medical mistake, incorrect lab test result or delay in receiving results took place outside of the hospital. Canada performed in the bottom three countries on these indicators.

Performance Monitoring and Quality Improvement

The Commonwealth survey of physicians conducted found that only:

- 17% of Canadian physicians and 16% of Ontario physicians reported that their practice routinely received and reviewed data on clinical outcomes. This was significantly lower than the top performer (UK with 89%)
- 17% of Canadian and Ontario physicians reported that their practice routinely received and reviews data on patient satisfaction and experience. This was significantly lower than the top performer (UK with 96%)
- 11% of Canadian physicians and 9% of Ontario physicians reported that their clinical performance was routinely compared with other practices. This was significantly lower than the top performer (UK with 92%)
- 10% of Canadian physicians and 13% of Ontario physicians reported that their practice has a process that works well for identifying and following up on adverse events. This was much lower than the top performer (UK with 56%)
- 62% of Canadian physicians are offered any financial support or incentives to improve the quality of care and only 1% are offered incentives based on high patient satisfaction ratings, 16% for non-face-to-face interactions with patients, and 21% for each of achieving clinical care targets and adding non-physician providers to their practice team

Appendix C - Defining Quality, Quality Improvement, Quality Assurance, Accreditation and Knowledge Transfer

Source	Quality Improvement
McMaster Health Forum, 2010	A sustained effort to improve quality of primary healthcare delivery, which incorporates performance measurement and feedback and which may or may not include additional elements. This definition covers both the primary healthcare programs and services that are delivered (i.e., access to them, their cost-effectiveness relative to one another and to other programs and services that could be offered, and the quality and safety with which they are provided) and how they delivery of these programs and services is organised (e.g., its patient-centeredness and efficiency)
Riley et al, 2010	A distinct management process and set of tools and techniques that are coordinated to ensure that departments consistently meet the health needs of their communities The use of a deliberate and defined improvement process, such as Plan-Do-Check-Act, which is focused on activities that are responsive to community needs and improving population health. It refers to a continuous and ongoing effort to achieve measurable improvements in the efficiency, effectiveness, performance, accountability, outcomes, and other indicators of quality in services or processes which achieve equity and improve the health of the community
McLaughlin, C. and Kaluzny, A., cited in Ministry of Health and Long Term Care, 2011	A structured organizational process for planning and executing a continuous flow of improvements to provide quality health care that meets or exceeds expectations
Harrigan, M., 2000	CQI is a management philosophy and system which involves management, staff and health professionals in the continuous improvement of work processes to achieve better outcomes of patient/client/resident care. It involves the application of statistical methods and group process tools to reduce waste, duplication, and unnecessary complexity in work. The goal of CQI is to consistently meet or exceed the needs of patients, families, staff, health professionals and the community
Baker cited in Canadian Working Group on Primary Health Care Improvement, 2009	A term that is used in relation to: continuous improvement; organizational and provider involvement in changing systems; processes and behaviour; evidenced-based review and change; and collaborative interprofessional teams
Kahan, B. and Goodstadt, M., 1999	CQI is a term that can be defined briefly as 'a comprehensive management philosophy that focuses on continuous improvement by applying scientific methods to gain knowledge and control over variation in work processes' (Tindill and Stewart, 1993). Translating CQI's notion of 'continuous

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Source	Quality Improvement
	improvement' into concrete terms requires that, 'Once processes and problems have been identified, improved, and evaluated, the cycle begins again' (Buccini, 1993)
The Medical Quality Improvement Organization for Pennsylvania, 2011	<p>Organizations committed to the process of CQI are motivated to not only meet regulations imposed by outside regulators but are also driven to meet the expectations of their customers. Their goal is to provide high quality care, compete and excel, and not just meet regulatory expectations</p> <p>CQI approach that is proactive and deliberate</p> <p>In CQI, prevention – not inspection – is the primary method used. Even if the organization meets national and local performance standards, it strives to improve its performance, always driven by a —good is never enough mentality</p> <p>CQI focuses not only on special causes of low performance by low-performing people and departments, but energy and resources are also directed to identifying and acting on the common causes of current performance level. In other words, the focus is on improving processes and reducing variation of the process so that performance increases for all staff</p> <p>CQI emphasizes doing the right things right. If problems are identified, the attention is directed to the process, not the people. Improvement efforts investigate and attempt to identify the root cause of the problem. Once identified, you would reduce or eliminate the causes, then take steps to correct the process</p>
Dawda et al, 2010	Continuous quality improvement (CQI) and related terms, such as total quality management, have come to describe a paradigm for systems change that, in UK health care, is now generally referred to simply as 'quality improvement' or 'improvement'. This comprises a set of values and tools for setting goals and planning, implementing and measuring change. The components that are most influential in health care stem from the work of quality gurus such as Deming (8) and Juran (9), who worked primarily within manufacturing industries.
Woodward, 2000	Quality improvement (QI) represents a paradigm shift away from a major concern with inspection of activities and detection of those care providers (clinics, health care teams, hospitals, etc.) who fail to meet minimal criteria or standards to an emphasis on continuous positive change in performance. The underlying philosophy of QI is that no matter how good care is, it can always be improved. QI assumes that health care providers are concerned about doing a good job and want to do the best job possible. Processes, particularly interfaces between different aspects of the process of care, are often problematic and, when these are identified, solutions can be found to make care more effective, efficient, humane, and geared to the preferences of patients and their families
Clinical and Laboratories Standards Institute, 2011	Quality improvement is also described as the continuous process of seeking opportunities for system improvement based on the planned processes of monitoring, interpretation, implementation of required action for change, and re-monitoring;

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Source	Quality Assurance
The Medical Quality Improvement Organization for Pennsylvania, 2011	<p>QA functions have been shaped by accreditation requirements promulgated through regulatory bodies</p> <p>In QA the focus is on identifying outliers as —bad apples and improving their performances so they meet standards. The emphasis is on monitoring to see that things are done correctly. It looks at individual performance and makes correction to that performance to improve result</p> <p>Traditional QA function is defensive and reactive,</p> <p>In QA, organizations measure performance against an established set of standard. They inspect performance and repair or correct performance that is below standard.</p>
Bilawka, E., & Craig, B.J., 2003	<p>A system in which the quality and appropriateness of care is ensured by all members of a professional group.</p> <p>Focuses on the effectiveness of treatment, the acceptability of the treatment to the patient, the accessibility of care, and the efficacy and continuity of care...The focus of QA is on the consumer of health care</p> <p>The goal of QA is to ensure that health care is delivered in a consistent manner of high quality across all members of a professional group</p> <p>QA activities include: standards of practice, feedback, accreditation, annual reports on practice activities, audit and peer review, clinical practice guidelines, utilization management, benchmarking, self-assessment techniques, intense continuing education</p>
Roemer, M.I. & Montoya-Aguilar, 1988	<p>An important component of the planning, management, and evaluation processes for health care. In this context, there are two complementary ways of looking at it. The first way is to place quality assessment and assurance as steps in the overall system of monitoring, evaluating, and reprogramming of health care based on a comprehensive (but manageable) health information system...A second, more specific approach to quality assurance, complementary to the one described above, consisted of the systematic monitoring and correction of quality. Again, this process is relevant to the central and provincial levels and as well as to districts and individual units</p>
Vuori, H., 1982	<p>The measurement of the actual level of the quality of services rendered plus the efforts to modify when necessary the provision of these services in the light of the results of measurement</p>
Woodward, 2000	<p>Quality assurance (QA), the older of the approaches, emphasizes meeting or exceeding agreed upon minimum standards of performance which are usually set by an individual or group external to those who are to be assessed. The criteria it uses may be implicit or explicit. When explicit criteria for performance are set, these are usually based on the best available scientific and clinical evidence. Agreement of experts may also be used to set criteria but serious questions have been raised about the validity of this approach because their consensus does not always coincide with the best available medical evidence. This approach is useful when the evidence is conflicting, ambiguous or lacking. The aim of quality assurance is to make certain that the criteria set are being met. Thus, action on the part of the health</p>

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	<p>professional (to improve performance to reach the level of the standard or criterion) is only demanded when the facility, service or person whose performance is assessed does not meet the minimal standard. Sometimes, failure to meet the standard results in reprimands, close monitoring, fines or other sanctions such as temporary loss of licence to carry out such activities. Usually, some remedial action plan is developed that is agreed upon by the parties and performance is reassessed after a given time period. Because QA emphasizes finding and correcting problems, it can be perceived as a negatively-oriented process. Many health care professionals are unenthusiastic about it as they perceive it as a threat to, rather than as a support for, their work activities.</p>
<p>Clinical and Laboratories Standards Institute, 2011</p>	<p>Quality Assurance is part of quality management focused on providing confidence that quality requirements will be fulfilled</p>

Source	Accreditation
Shaw, 2000	<p>Accreditation, having acquired three different meanings, causes some confusion. Each meaning is correct in its own context; users need to be aware of the difference between contexts. Used by professional bodies the intended meaning is – recognition of specialty training; used by consortia of clinicians and managers the intended meaning is – recognition of service delivery; and used by the International Organization for Standardization the intended meaning is – recognition of agency competent to certificate health care providers</p>
Pomey, M.P. et al, 2010	<p>Accreditation has the ability to improve quality and safety. Accreditation is a rigorous external evaluation process that comprises self-assessment against a given set of standards, an on-site survey followed by a report with or without recommendations, and the award or refusal of accreditation status.</p>

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Source	Knowledge Translation
Graham et al, 2006	An effective exchange of knowledge involves interaction between decision makers and researchers, and results in mutual learning for all participants through the processes of planning, producing, disseminating, and applying existing or new research
Canadian Institute for Health Research, 2005	<p>The term knowledge exchange...is recognized as an interactive approach to knowledge translation and is defined by CHSRF as collaborative problem solving between researchers and decision makers that happens through linkage and exchange. It brings together the instrumental knowledge of the knowledge user and his or her experiential, tacit knowledge of the context in which that instrumental knowledge will be used</p> <p>A dynamic and iterative process that includes synthesis, dissemination, exchange and ethically sound application of knowledge to improve the health of Canadians, provide more effective health services and productions and strengthen the health care system</p> <p>This definition has been adapted by others, including the United States National Center for Dissemination of Disability Research and the World Health Organization (WHO).</p> <p>The common element among these different terms is a move beyond the simple dissemination of knowledge into actual use of knowledge</p>
Canadian Institute for Health Research, 2004	<p>Process of KT includes: knowledge dissemination, communication, technology transfer, ethical context, knowledge management, knowledge utilization, two-way exchange between researchers and those who apply knowledge, implementation research, technology assessment, synthesis of results with the global context, and development of consensus guidelines. Therefore, KT appears to be a larger construct that encompasses most previously existing concepts related to moving knowledge to use</p> <p>The exchange, synthesis and ethically-sound application of knowledge - within a complex system of interactions among researchers and users - to accelerate the capture of the benefits of research for Canadians through improved health, more effective services and products, and a strengthened health care system</p>
Lang, E.S., Wyer, P.C., Haynes, R.B., 2007	Describes any activity or process that facilitates the transfer of high-quality evidence from research into effective changes in health policy, clinical practice, or products

Appendix D - Triple Aim Framework

1. Individuals and Families

- A. For medically and socially complex patients, establish partnerships among individuals,
- B. families and caregivers, including identifying a family member or friend who will be supported and developed to coordinate services among multiple providers of care.
- C. Jointly plan and customize care at the level of the individual.
- D. Actively learn from the patient and family to inform work for the population.
- E. Enable individuals and families to better manage their own health.

2. Definition of Primary Care

- A. Have a team for basic services that can deliver at least 70% of the necessary medical and health-related social services to the population.
- B. Deliberately build an access platform for maximum flexibility to provide customized health care for the needs of patients, families, and providers.
- C. Cooperate and coordinate with other specialties, hospitals, and community services related to health.

3. Prevention and Health Promotion

- A. Work with the community to advocate and provide incentives for smoking prevention, healthy eating, exercise, and reduction of substance abuse.
- B. Develop multi-sector partnerships, utilize key stakeholder resources (worksites, schools, etc.) and align policies to provide community-based support for all who wish to make health-related behavior change.
- C. Integrate healthcare and publicly available community-level data utilizing GIS mapping to understand local context to determine where and for whom health-related strategic community-level prevention, health promotion and disease-management support interventions would be most useful.

4. Per Capita Cost Reduction

- A. Achieve < 3% inflation yearly for per capita cost by developing cooperative relationships with physician groups and other health care organizations committed to reducing the waste of health care resources.
- B. Achieve lowest decile performance in the Dartmouth Atlas measures by breaking or countering incentives for supply-driven care.
- C. Reward health care providers, hospitals, and health care systems for their contribution to producing better health for the population and not just producing more health care.
- D. Orient care over time - the “patient journey” - targeted to the best feasible outcomes.

5. Integration, Social Capital and Capability Building

- A. Match capacity and demand for health care and social services across suppliers.
- B. Insure that strategic planning and execution with all suppliers including hospitals and physician practices are informed by the needs of the population.
- C. Develop a system for ongoing learning and improvement.
- D. Institute a sustainable governance and financial structure for the Triple Aim system
- E. Efficiently customize services based on appropriate segmentation of the population.
- F. Use predictive models and health risk assessments that take into account situational factors, medical history, and prior resource utilization to deploy resources to high-risk individuals.
- G. Set and execute strategic initiatives related to reducing inequitable variation in outcomes or undesirable variation in clinical practice.

Appendix E - HQO Quality Attributes

ONTARIANS want their health system to be:

Accessible	People should be able to get timely and appropriate healthcare services to achieve the best possible health outcomes. For example, when a special test is needed, you should receive it when needed and without causing you extra strain and upset. If you have a chronic illness such as diabetes and asthma, you should be able to find help to manage your disease and avoid more serious problems.
Effective	People should receive care that works and is based on the best available scientific information. For example, your doctor (or healthcare provider) should know what the proven treatments are for your particular needs including best ways of coordinating care, preventing disease or using technology.
Safe	People should not be harmed by an accident or mistakes when they receive care. For example, steps should be taken so that elderly people are less likely to fall in nursing homes. There should be systems in place so you are not given the wrong drug, or the wrong dose of a drug.
Patient-Centred	Healthcare providers should offer services in a way that is sensitive to an individual's needs and preferences. For example, you should receive care that respects your dignity and privacy. You should be able to find care that respects your religious, cultural and language needs and your life's circumstances.
Equitable	People should get the same quality of care regardless of who they are and where they live. For example, if you don't speak English or French it can be hard to find out about the health services you need and to get to those services. The same can be true for people who are poor or less educated, or for those who live in small or far-off communities. Extra help is sometimes needed to make sure everyone gets the care they need.
Efficient	The health system should continually look for ways to reduce waste, including waste of supplies, equipment, time, ideas and information. For example, to avoid the need to repeat tests or wait for reports to be sent from one doctor to another, your health information should be available to all of your doctors through a secure computer system.
Appropriately Resourced	The health system should have enough qualified providers, funding, information, equipment, supplies and facilities to look after people's health needs. For example, as people age they develop more health problems. This means there will be more need for specialized machines, doctors, nurses and others to provide good care. A high-performing health system

	will plan and prepare for this.
Integrated	All parts of the health system should be organized, connected and work with one another to provide high quality care. For example, if you need major surgery, your care should be managed so that you move smoothly from hospital to rehabilitation and into the care you need after you go home.
Focused on Population Health	The health system should work to prevent sickness and improve the health of the people of Ontario.