

Externally-Informed Annual Health Systems Trends Report – 5th Edition

**An Input for Health System Strategy Development, Policy
Development, and Planning**

March 2014

Please note that the Externally-Informed Annual Health Systems Trends Report is a synthesis of information from other sources, not a representation of the policy position or goals of the Ministry of Health and Long-Term Care. If material in the report is to be referenced, the primary sources referred to in the report should be cited, rather than the report itself.

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Table of Contents

| | |
|---|----|
| ADM's Foreword..... | 5 |
| Introduction..... | 6 |
| Chronic Disease Prevention and Management..... | 7 |
| Sustainability, Productivity, and Innovation in the Health Care System..... | 13 |
| Mental Health and Addictions..... | 19 |
| Person-Centred, Coordinated Care..... | 23 |
| eHealth..... | 28 |
| Aging, End-of-Life, and Palliative Care..... | 31 |
| Evidence-Informed Practice, Standards, and Policy..... | 35 |
| Public and Population Health..... | 37 |
| Health System Accountability, Transparency, and Performance Measurement... | 39 |
| Disparities in Health Care..... | 41 |
| Appendix..... | 86 |

References available in a separate document

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ADM's Foreword

Welcome to the fifth edition of the Ministry of Health and Long-Term Care's Externally-Informed Annual Health Systems Trends Report (Trends Report), in which updated references and examples are provided for the trends originally identified in the fourth edition.

The Trends Report presents information on ten health systems trends that are occurring internationally, largely independent of the activities of governments and health system managers. The goal of the report is to raise awareness of these trends among health system policy professionals and managers in order to support evidence-informed policy development across the health system.

Since its inception, the Trends Report has been guided by input from external stakeholders; the first three editions relied heavily on input from a panel of 12 experts from Ontario, while the fourth and fifth editions reflect input received from individuals across Canada.

We hope that you find the Trends Report informative and useful. The Planning, Research and Analysis Branch of the Health System Strategy and Policy Division is committed to providing research evidence to support cooperative work and help provide a strong platform for evaluation and risk management.

I would like to thank all of the individuals from across Canada who provided input for both the fourth and fifth editions of the Trends Report; their contributions have greatly informed the content.



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Introduction

This report is designed to provide actionable information to support planners and decision makers throughout the health system. The report development process incorporated input from individuals across Canada to bring in perspectives from outside the Ministry of Health and Long-Term Care.

This is the fifth edition of the Trends Report. The trends included in this edition were originally selected in 2012 for the fourth edition with the help of stakeholders from across the country; the ten trends featured in this edition of the Trends Report have not changed, but have been updated with new information from the past year. The selection process for the featured trends is detailed in the Appendix. It is important to note that the top trends identified would naturally vary depending on respondents participating in the selection process. Therefore, the trends contained in this report should be viewed as “a list” of trends in the health system, rather than “the list.”

During the selection process, four of the trends were consistently identified by stakeholders as being among the most important health systems trends. For that reason, this report has the most detail on those top four trends and less detail for the remaining six. In addition, more detailed background briefs have been prepared for each trend.

The ten health systems trends identified by survey respondents are:

1. Chronic Disease Prevention and Management
2. Sustainability, Productivity, and Innovation in the Health Care System
3. Mental Health and Addictions
4. Person-Centred, Coordinated Care
5. eHealth
6. Aging, End-of-Life, and Palliative Care
7. Evidence-Informed Practice, Standards, and Policy
8. Public and Population Health
9. Health System Accountability, Transparency, and Performance Measurement
10. Disparities in Health Care

Much of the content of the Trends Report is drawn from research evidence; however, trend information was also obtained from other sources, including government publications, websites, and mainstream media. Many of the topics included in this report could fit under multiple trends, and subjective decisions were made about placement. The literature related to the ten trends in this report is vast and updated constantly. The report may overemphasize Ontario-based examples because the authors naturally have the most knowledge of them. For these reasons, the sources cited should be viewed as relevant examples rather than definitive sources, and suggestions for additional/alternative citations are welcome.*

The ministry’s Health System Strategy and Policy Division looks forward to continuing the consultation and input-seeking processes in the future. Current plans are to continue to update these ten trends annually and to conduct the complete modified Delphi process, with the possibility of identifying new trends, every three years.

* Please submit suggestions to PlanningUnit@ontario.ca

Chronic Disease Prevention and Management

Why is this Trend Important?

Canadian health care systems have their foundation in acute care, and perform their best when addressing urgent needs.^{1,2} However, successful medical advances now allow people to survive acute illness and live with chronic diseases for extended periods of time.³ As a result, it has been estimated that the major categories of chronic disease were responsible for over 65% of healthcare expenditures in Ontario in 2010/11,⁴ and that more than 75% of health care costs in the US were due to chronic conditions in 2009.⁵ The most prevalent chronic diseases (e.g., diabetes, heart disease, chronic respiratory illness, cancer) require regular and extended care,⁶ and are therefore mismatched with the episodic model of care.^{7,8}

As of 2010, over four million adults aged 45 years or older in Ontario had been diagnosed with at least one chronic condition.⁹ In 2008, 39% of Canadians reported having at least one of seven common chronic health conditions.¹⁰ In 2008, chronic illness was responsible for the deaths of over 200,000 Canadians (approximately 89% of all deaths that year in Canada).¹¹

The trend is global and increasing. A systematic analysis of the global burden of disease estimated that non-communicable disease accounted for 43% of global disability-adjusted life years (DALYs) in 1990, but that by 2010, they accounted for 54% of global DALYs.¹² In 2008, chronic diseases accounted for 63% of the 57 million deaths worldwide; the majority of these were attributable to cardiovascular diseases, diabetes, cancers, and chronic respiratory diseases.¹³ In most middle- and high-income countries, chronic diseases were responsible for more deaths than all other causes combined.¹⁴ The proportion of deaths worldwide due to chronic diseases is projected to rise to 69% in 2030.^{15,16}

Internationally, the likelihood of developing a chronic disease is further impacted by the social determinants of health, with individuals of lower socioeconomic status being more likely to have risk factors for chronic disease.^{17,18,19,20,21,22}

Growing Challenges

Chronic Disease and Aging

Chronic conditions become more prevalent with age; 72% of Canadians aged 45 to 64 years reported having been diagnosed with at least one chronic condition; the rates among individuals 65 to 84 years old and those 85 years and older were 91% and 94%, respectively.²³ As more people suffer from chronic disease, the costs associated with these diseases also increase.²⁴

A 2011 report on the factors that drive health care costs by the Canadian Institute for Health Information (CIHI) noted that one of the two factors that lead older seniors to consume more health care dollars is the size of the elderly population who have chronic illnesses, as these individuals tend to require more intensive medical attention with age.²⁵ The other factor is the cost of health care in the last few months of life.²⁶

Multimorbidity

Patients with multiple chronic conditions are particularly likely to have poorer quality of life and require considerable health care resources.²⁷ A 2010 survey of 3,309 Canadians found that 15% of respondents reported having two chronic conditions, 7% reported having three, and 4% reported having four or more.²⁸ Individuals with multiple chronic conditions often use a greater array of services than other consumers.²⁹ An analysis by CIHI found that, in each of three elder age groups (65 to 74, 75 to 84, and 85 and older), those with three or more reported chronic conditions had nearly three times more health care visits than those with no reported chronic conditions (13.3 million visits per year vs. 4.5 million visits).³⁰ Having multiple chronic conditions can also make coordination of care difficult and raise the likelihood of adverse drug reactions, since such patients see several different physicians and take several medications.³¹

Treatment for individuals with multiple chronic conditions may also present difficulties for health care providers, as treatment strategies have typically focused on single chronic conditions (e.g., diabetes, cancer, mental illness) rather than offering comprehensive approaches to simultaneously manage multiple conditions.³² Although system improvements in integrating care for the elderly are being implemented in Canadian provincial health systems, a 2011 review that examined integrated care for elderly Canadians (including elderly individuals with multimorbidity) found that providing an adequate supply of services was an ongoing issue in many provinces (due to either inadequate funding and/or poor targeting of scarce resources).³³ A 2012 systematic review found that community-based interventions aimed at improving the health of individuals with multimorbidity had mixed effects on the physical health of patients. The review further found that the research literature was small and indicated that it is difficult to improve health outcomes for this population.³⁴

Coordination of Care

Coordination of care is critical for patients with multiple medical conditions. Populations with complex care needs experience multiple transitions in care; 75% see six or more physicians in one year, while 25% see 16 or more.³⁵ Coordination across providers is crucial for such patients;³⁶ without communication and accountability when receiving care in different settings, these patients are at risk for complications, medical errors, and duplication of tests.³⁷ A 2011 survey of patients with complex care needs in 11 countries found that 40% of Canadian patients surveyed reported coordination gaps related to medical records or tests, or communication failures between providers.³⁸

Emerging Responses

Chronic Disease Prevention Efforts

Chronic disease prevention efforts have been undertaken in many jurisdictions. These efforts include a range of health promotion activities that encourage healthy living and aim to decrease the onset of chronic diseases³⁹ through primary prevention efforts focused on risk factors such as tobacco use, alcohol consumption, physical inactivity, and unhealthy eating.⁴⁰ Often these approaches aim to address the underlying determinants of population risks, promote multi-sectoral policies and programs, and reduce health inequities.⁴¹ Public policies that change the environment in which lifestyle choices are made (e.g., enacting laws prohibiting smoking in

restaurants) can help achieve long-term health improvements at the population level by modifying economic, physical, and social environments.⁴²

Screening for the primary prevention of certain chronic diseases is another approach being embraced by multiple jurisdictions, however, it has been noted that although screening can improve health, inappropriate application or interpretation of screening tests can negatively affect people's perception of their health, initiate harmful diagnostic testing, and result in the unnecessary use of health care resources.⁴³ In response, several jurisdictions – including the US,⁴⁴ UK,⁴⁵ Australia,⁴⁶ New Zealand,⁴⁷ and Canada⁴⁸ – have developed frameworks for advising policy makers about the effectiveness of existing and potential screening programs. For example, the advisory bodies from the US,⁴⁹ Australia,⁵⁰ New Zealand,⁵¹ and Canada⁵² all support screening for type 2 diabetes in certain high risk populations.

Providing dietary advice to healthy adults has been shown to have beneficial impacts on diet and some cardiovascular risk factors; one review found that dietary advice led to reductions in cholesterol and blood pressure over approximately 10 months.⁵³ One Ontario study found that implementation of the community-based Cardiovascular Health Awareness Program (CHAP) – which provides people with the opportunity to take blood pressure readings and receive education in a community pharmacy, and have their results forwarded to their physician or usual pharmacist for follow-up – was associated with a significant reduction in annual hospital admissions for cardiovascular disease among people aged 65 and over.⁵⁴ Systematic reviews have found that interventions that include physical activity and diet components have been shown to reduce the risk of type 2 diabetes,^{55,56} and have led to reductions in body mass index and waist circumference (two measures of obesity and overweight).^{57,58} Ontario's Primary Care Diabetes Prevention Program is an evidence-based, group based lifestyle intervention program designed to help adults identified as being at high-risk for type 2 diabetes to reduce this risk through healthier lifestyle living; the program is modeled after landmark clinical studies from the United States, China and Finland.^{59,60,61,62} These studies demonstrated that type 2 diabetes can be prevented or delayed in people identified as high-risk through lifestyle changes that focus on the following modifiable risk factors: overweight/obesity, physical activity, and healthy eating habits.

For the prevention of childhood obesity, one systematic review found that interventions which teach children about healthy eating, physical activity and positive body image, and give them more opportunities to be physically active at school, are promising.⁶³ Support for teachers and other school staff to implement health promotion strategies, as well as support for parents in implementing home-based activities to encourage increased exercise and healthier eating, are also important components.⁶⁴ In 2013, Ontario's multi-sectoral Healthy Kids Panel recommended a three-pronged approach to reducing childhood obesity: supporting young women to maintain their own health and start their babies on the path to health, changing the food environment so that is easier for parents to provide healthy meals, and creating healthy communities to reduce or eliminate the broader social and health disparities that affect children's health and weight.⁶⁵

When other treatments for obesity have failed, bariatric surgery can be considered to help weight loss.^{66,67} Compared to conventional medical treatment, bariatric surgery leads to greater weight loss,^{68,69,70} better control of blood glucose,⁷¹ and reductions in comorbidities (e.g., diabetes, hypertension) following surgery,^{72,73,74} though health care costs may not decline post-surgery.⁷⁵

High salt intake is a risk factor for hypertension⁷⁶ and heart disease,⁷⁷ though one large study found that the relationship between consumption and cardiovascular events may not be linear, with high levels of sodium (more than 7 g per day) being associated with increased risk of all types of cardiovascular events studied, and low levels of sodium (less than 3 g per day) being associated with an increased risk of cardiovascular mortality and hospitalization for congestive heart failure.⁷⁸ According to the World Health Organization, currently available evidence suggests that interventions to reduce population-wide salt intake have repeatedly been shown to be highly cost-effective.⁷⁹ In July, 2010, the Government of Canada released its Sodium Reduction Strategy for Canada, which set out recommendations aimed at achieving an interim goal of reducing the population mean daily intake of sodium from the then-current mean of 3,400 mg to 2,300 mg by 2016. The strategy was designed to be multi-staged, and to involve voluntary reduction of sodium levels by industry, education, research, and monitoring.⁸⁰ In May 2013, however, a Private Member's Bill supporting the implementation of the Strategy was defeated in the House of Commons.⁸¹

Care Coordination

Care coordination is the deliberate organization of patient care activities between two or more participants (including the patient) involved in a patient's care to facilitate the appropriate delivery of health care services;⁸² the goal is high-quality referrals and transitions that assure that all involved providers, institutions, and patients have the information and resources they need to optimize patient care.⁸³

In the US, the increasing prevalence of chronic diseases is helping to build momentum around the "medical home" model.⁸⁴ Patient-centred medical homes organize primary care so that patients receive care that is coordinated by a primary care physician, is supported by information technology, is delivered by a multidisciplinary team, and is adherent to evidence-based guidelines.⁸⁵ Patient-centred medical homes implement the Chronic Care Model⁸⁶ (CCM) which emphasizes the community, the health system, self-management support, delivery system design, decision support, and clinical information systems as essential elements for the delivery of a high-quality chronic disease management system.⁸⁷ Research on the patient-centred medical homes is still sparse, but is promising;⁸⁸ studies have found that the CCM is well suited to managing type 2 diabetes,⁸⁹ and has been associated with improved diabetes outcomes.⁹⁰ Ontario's Chronic Disease Prevention and Management Framework is an evidence-based approach to prevention and management that evolved from the CCM.⁹¹

In 2011, the College of Family Physicians of Canada laid out its vision for Canadian medical homes,⁹² and Ontario's Family Health Teams (FHTs) have already been likened to patient-centred medical homes.^{93,94} FHTs consist of family physicians, nurse practitioners, registered nurses, social workers, dietitians, and other professionals who work together to provide a wide range of health options for their community. FHTs focus on chronic disease management, disease prevention, and health promotion and work with other health care organizations, such as public health units and Community Care Access Centres.⁹⁵

In December 2012, Ontario launched community Health Links, which are designed to support local patient-care networks that are led by a coordinating partner and attempt to coordinate and optimize access to needed services. The target population of the initiative is the 5% of patients who consume about 66% of health care costs; these are most often patients with multiple,

complex conditions.⁹⁶ Community Health Links are intended to encourage greater collaboration and coordination between a patient's different health care providers, as well to encourage the development of personalized care plans.⁹⁷ Community Health Links were developed to help improve patient transitions within the system and help ensure patients receive more responsive care that addresses their specific needs with the support of a tightly knit team of providers.⁹⁸

For individuals in Ontario with diabetes and pre-diabetes, Regional Coordination Centres aim to improve access and health outcomes using preventative strategies, self-management education, and the promotion of best practice.⁹⁹ For Ontarians with diabetes who have complex needs, Ontario's Centres for Complex Diabetes Care (CCDC) provide comprehensive, specialized, and integrated services through the coordination of care among health care providers using an evidence-based interprofessional team approach. The CCDCs also provide a centralized location that incorporate access to specialist services with an ongoing relationship with a primary care provider to support comprehensive diabetes management.¹⁰⁰

Other models for providing coordinated chronic disease care include specialized diabetes care centres in the US,¹⁰¹ and the Hospital Admissions Risk Program in Victoria, Australia;¹⁰² both of which have been found to have positive impacts.^{103,104}

Home Telehealth for Remote Monitoring

Systematic reviews have examined the impact of home telemonitoring used in the home for chronic disease management and have found largely positive results.^{105,106,107,108,109} Specific benefits identified in these reviews include improvements in symptoms associated with asthma,¹¹⁰ hypertension,¹¹¹ and psychiatric conditions,¹¹² as well as reduced rates of hospitalizations and emergency department visits among patients with chronic obstructive pulmonary disease,¹¹³ reduced rates of rehospitalization among patients with heart failure,¹¹⁴ and a trend towards improvements in glycemic control among individuals with diabetes.^{115,116} However, not all studies relating to diabetes^{117,118,119} or heart failure^{120,121,122} have found significant benefits.

Research also suggests that home telehealth technologies support the consistent and timely transmission of patient monitoring results, which can assist providers in making prompt, efficient, and informed clinical decisions.¹²³ Further, home-based telehealth interventions (e.g., telemonitoring, telephone support, videoconferencing) were associated with the use of fewer services, such as hospitalizations,¹²⁴ readmissions,¹²⁵ and emergency department visits,^{126,127} and a decrease in days spent in the hospital;^{128,129} the use of other services (e.g., office visits), however, increased.¹³⁰

Patient Self-Management

Self-management is an important aspect of health care for people with chronic conditions.^{131,132} The onset of a chronic condition often means that patients will have to learn and follow complex medical regimens, and make challenging changes in lifestyle.¹³³ Patient self-management interventions focus on changing health behaviours through knowledge, goal setting, and development of action plans¹³⁴ that can be used to guide care at home and in the clinical setting.¹³⁵

The Chronic Care Model includes self-management support as one of its principle elements;¹³⁶ patients manage their health and health care and the patients' central role in managing the illness is emphasized in order to build patients' ability and interest in managing their conditions.¹³⁷

Several reviews have found that self-management interventions have led to positive outcomes in a number of chronic diseases such as diabetes,^{138,139,140,141} hypertension,¹⁴² heart failure,¹⁴³ epilepsy,^{144,145} and chronic obstructive pulmonary disease.¹⁴⁶ The use of mobile phones for disease management is a promising area; mobile phone-based tools have been shown to be beneficial in the management of conditions such as diabetes^{147,148,149,150} and heart failure,¹⁵¹ and mobile applications continue to be developed for conditions such as asthma¹⁵² and cancer¹⁵³ treatment. A recent Ontario study of a mHealth (also known as mobile health) application for adolescents with type 1 diabetes found that the daily average frequency of blood glucose measurement increased 50%.¹⁵⁴

A background document is also available for this trend.

Sustainability, Productivity, and Innovation in the Health Care System

Why is this Trend Important?

Health systems around the world – Canada's included – are facing financial pressures stemming from factors such as changing demographics, more advanced treatments, and the evolving needs and expectations of users.¹⁵⁵ In Canada, health care continues to consume an increasingly larger share of provincial and territorial budgets;¹⁵⁶ health care currently accounts for 42% of provincial program funding in Ontario – and the share continues to grow – leaving fewer resources for other important areas.¹⁵⁷

Boosting productivity, quality, and innovation in the health care system are avenues through which the sustainability of the system may be enhanced.

Growing Challenges

Sustainability

Though there is no agreed-on precise definition of sustainability with regard to health care,^{158,159} it can be examined through concepts such as fiscal affordability, value for money, productivity, health care's share of gross domestic product (GDP), and the proportion of government funds spent on health in relation to other services.¹⁶⁰ Often, the notion of health system sustainability is conceived of as an issue of fiscal balance,¹⁶¹ but several authors have suggested that the definition should be broader than a purely financial one.^{162,163,164} For instance, the Canadian Medical Association defines sustainability as “universal access to quality patient-centred care that is delivered along the full continuum in a timely and cost-effective manner.”¹⁶⁵ As such, it has been suggested that the issue is not about sustaining the health care system, but about sustaining its performance.¹⁶⁶ Growing cost pressures such as new technologies, and consumer expectations around health care coverage and quality are challenging governments' ability to adequately finance health care.¹⁶⁷ Work to ensure that health care systems can achieve sustainability is an urgent priority for governments globally.^{168,169}

Demographic factors are a contributor to fiscal concerns. The 2011 census revealed that the number of people in Canada aged 65 and over increased 14.1% between 2006 and 2011, to nearly 5 million; there was also an 11.0% increase in the population of children aged four and under.¹⁷⁰ Further, for the first time, there are more people in the age group that are 55 to 64, where people typically are about to leave the labour force than in the age group when people typically are about to enter it (ages 15 to 24).¹⁷¹

In Canada, the total health expenditure (both public and private) has increased from 7.0% of GDP in 1975 to a forecast of 11.2% in 2013; however it has declined since 2009, when it was 11.6%.¹⁷² In Ontario, the total health expenditure was expected to be 11.5% of GDP in 2013, down from 2011 when it was 11.9%.¹⁷³ In 2011, Canada's public-sector health expenditure was 7.9% of the GDP¹⁷⁴ – above the average for Organization for Economic Co-operation and

Development (OECD) countries (6.8%).¹⁷⁵ Despite the slowing in spending that has been occurring internationally since the economic crisis of 2008, government spending on health care continues to rise in Canada.¹⁷⁶ In 2011, Canadian governments and government agencies spent \$140.8 billion on health care; this figure is forecast to rise to \$148.2 billion in 2013, with \$50.9 billion of that amount forecast to be spent by Ontario's public sector.¹⁷⁷ When general inflation and population growth are accounted for, public sector health spending grew at an annual average rate of 3.4% in Canada between 1998 and 2008 – more than double the rate of the revenue growth of provincial, territorial, and federal governments.¹⁷⁸

The interrelated concepts of overdiagnosis, overtreatment, and overuse of the health care system are topics of national and international interest.^{179,180} Researchers have noted that, in some cases, screening programs and advances in the sensitivity of diagnostic tests have led to the detection and treatment of benign abnormalities that never progress to health problems.¹⁸¹ In addition, increasingly wide definitions of disease (e.g., osteoporosis, attention deficit hyperactivity disorder) can lead to people being diagnosed and treated for diseases that would not ultimately cause them to experience symptoms or early death.¹⁸² Overdiagnosis can result in overuse of health services (e.g., unneeded tests and therapies),¹⁸³ and lead to anxiety about health, drug side effects, and complications from surgeries.¹⁸⁴

Overuse of the health care system – which involves the provision of health care services for which the harms outweigh the benefits – leads to poor quality and contributes to high costs.¹⁸⁵ For instance, a recent article estimated that overtreatment cost the US health care system between \$158 billion and \$226 billion in 2011.¹⁸⁶

Productivity and Quality in the Health Care System

Evidence in Canada and the US suggests that productivity and quality rates have not kept pace with health care spending,^{187,188} though it has been suggested that the techniques used to measure price and quality of health care are not optimal.¹⁸⁹

Factors that may contribute to inefficiency in health care delivery include payment systems that reward medical inputs rather than patient outcomes,¹⁹⁰ inadequate focus on disease prevention,¹⁹¹ medical errors,¹⁹² the use of expensive equipment or personnel when less expensive alternatives would suffice,¹⁹³ duplication of services,¹⁹⁴ and high administrative costs.¹⁹⁵

There is some evidence that the use of electronic medical records (EMRs) can lead to efficiencies, including reductions in the amount of time spent on administrative paperwork,¹⁹⁶ and increases in productivity for physicians.¹⁹⁷ However, uptake of EMRs has been slow in Canada. A survey of primary care physicians from 11 countries found that Canadians had a lower percentage of reported use of EMRs than any of the other 10 countries. In seven of the 11 countries, reported usage/use of EMRs was 94% or more; in Canada the figure was 37%.¹⁹⁸

The Costs of Innovation: The Case of Personalized Medicine

The challenge to keep pace with innovation in the health sector is one that all jurisdictions are facing; personalized medicine is an example of one such innovation. Personalized medicine involves using knowledge of a patient's genetic makeup to enhance patient care and/or outcomes.^{199,200,201} The concept refers to the tailoring of medical treatment to the individual characteristics of each patient; the ability to classify individuals into subpopulations that differ in their susceptibility to a particular disease or their response to a specific treatment allows

preventive or therapeutic interventions to be focused on those who will benefit, sparing expense and side effects for those who will not.²⁰² For example, the drug herceptin may be used to treat breast cancer patients whose cancers are HER2-positive, but it is contraindicated for patients whose cancers are HER2-negative.²⁰³ Despite the potential of personalized medicine, its integration into the health care system could be disruptive.^{204,205,206,207} Personalized medicine could threaten the roles of traditional health industry organizations; pharmaceutical and diagnostic companies, hospitals, primary care providers, and payers may need to adjust their business models in an era of personalized medicine.²⁰⁸ Challenges related to the spread of personalized medicine include:

- The slow pace of validating the clinical utility of personalized diagnostics and treatments;^{209,210,211}
- The insufficient number of studies demonstrating the cost-effectiveness of therapeutics and diagnostics,^{212,213} and little agreement on whose responsibility it is to develop such data;²¹⁴
- Required changes to regulatory requirements,^{215,216,217,218} and reimbursement models;^{219,220,221,222}
- Ethical issues such as patient privacy,^{223,224,225,226} the potential for genetic discrimination,^{227,228,229,230} and inequities in the distribution of benefits and risks among various population groups;^{231,232} and
- Concerns about direct-to-consumer marketing of genetic tests.^{233,234}

Emerging Responses

Since the global financial and economic crisis, health spending has slowed markedly in almost all OECD countries;^{235,236} after years of continuous annual growth of over 4%, average health spending grew only 0.2% between 2009 and 2011 in OECD countries.²³⁷ Eleven of 34 OECD countries reduced health spending between 2009 and 2011, while the growth in health spending was reduced in other countries, such as the US and Canada,²³⁸ where the health expenditure-to-GDP ratio has dropped from 11.6% in 2009 to 11.2% in 2013.²³⁹

Jurisdictions around the world are addressing the challenge of sustainability in a variety of ways. A common approach to limiting spending is to refocus the way that health care providers and hospitals are paid so that quality is emphasized and rewarded.

The effective use of health human resources (HHR) is another promising approach; interprofessional collaboration, the introduction of midlevel practitioners (e.g., nurse practitioners),^{240,241} and multidisciplinary primary care teams^{242,243,244} have been taken up in several jurisdictions, and have been found to reduce emergency room use,²⁴⁵ improve health care process and outcomes,²⁴⁶ and positively impact Canadians' perceptions of the overall quality of the health care system.²⁴⁷ Common types of HHR initiatives being used increasingly in international jurisdictions include skill-mix changes, job widening (the expansion of the content of the role, for example by bringing together functions which may have been done by different individuals in the past), and job deepening (the enrichment of the content of a role, for example by giving it more significant and substantial responsibilities, greater autonomy, or opportunity for development).²⁴⁸ A fourth common approach is the expansion of non-physician providers' scope of practice, which is being pursued or investigated in Canadian^{249,250,251} and international^{252,253,254} jurisdictions.

Funding Reform

Funding reforms, such as modifications to payment methods and other financial incentives have been shown to have a powerful influence on provider, hospital, and health plan performance.^{255,256}

Patient-based payment (also referred to as case mix funding, activity-based funding, diagnosis related group funding, unit-based payment, or payment by results) is a funding approach that reimburses providers for the care they deliver, using evidence-based rates set for different types of patient groups.²⁵⁷ These systems are thought to enhance incentives for hospitals to operate more efficiently.²⁵⁸ Patient-based payment systems are the emerging standard for hospital payment worldwide,^{259,260} and have been adopted to varying degrees in several OECD member countries, including Australia, Italy, Norway, Sweden, the US, and the UK,²⁶¹ as well as in South Korea.²⁶² Shifts towards patient-based payment systems have been associated with increased efficiency,^{263,264,265} decreased costs per discharge,^{266,267} decreased unit costs,²⁶⁸ reductions in average length-of-stay,^{269,270,271} and system cost savings.²⁷² Some economic reports have recommended shifting hospital funding towards patient-based systems^{273,274} as a way to reduce the cost of procedures.²⁷⁵ There has been movement towards patient-based payment in several provinces; in 2011/12, approximately 18% of funding for each of British Columbia's five regional health authorities was converted to activity-based funding,²⁷⁶ and a shift from a global hospital budgeting system toward a patient-based system is underway in Ontario.^{277,278} Under the new model, Ontario's hospitals, Community Care Access Centres, and long-term care homes are compensated based on how many patients they look after, the services they deliver, the evidence-based quality of those services, and the specific needs of the broader population they serve.²⁷⁹

Another common funding reform is episode-based payment – in which all costs of a clinical condition (for a defined period) are bundled to include care in all settings (e.g., office visits, acute care in hospital, post-acute rehabilitation, and home care). In essence, patient-based payments are a narrower form of episode-based payment focussing on a single institution, while episode-based payments cross multiple institutions. As a result, this type of payment provides incentives for hospitals and physicians to better coordinate care from preadmission through post-discharge activities, thereby leading to higher quality outcomes, improved efficiency, and reduced costs.^{280,281} In the US, Accountable Care Organizations are designed to reward groups of providers who succeed in delivering high-quality care while containing costs, by enabling them to share the Medicare savings they achieve.^{282,283}

Increasing Quality in the Health Care System

Health quality indicators are a tool for measuring the quality of care patients receive, and several organizations such as Health Quality Ontario, the OECD and the Agency for Healthcare Research and Quality (AHRQ) have published these indicators in a variety of health care areas (e.g., patient safety, prevention).^{284,285,286,287,288} The most widely-used indicators were developed by AHRQ and are based on best practices that have been proven to lead to improvements in health; the indicators are used to assess, track, and monitor provider performance²⁸⁹ on measures such as annual rates of incidence of death among surgical inpatients, pressure ulcers, postoperative sepsis, and mortality from inpatient pneumonia.²⁹⁰

Pay-for-performance (also known as P4P or Results-Based Financing) schemes are another common quality initiative in health care.²⁹¹ In these programs, incentives (e.g., bonus payments)

are provided for a broad range of quality-related improvements (e.g., investment in technology, vaccination rates, patient satisfaction) or increased efficiency.²⁹² Many of the OECD countries have instituted P4P programs, including the UK,²⁹³ Australia,²⁹⁴ the US,²⁹⁵ New Zealand,²⁹⁶ and they are emerging in countries such as Brazil²⁹⁷ and Zambia²⁹⁸ as well. Since most programs lack a rigorous evaluation component, the effects of P4P programs on quality are largely unclear,²⁹⁹ and a study on physician's responses to a P4P scheme in Ontario found that incentives led to increases in provision of four of five targeted preventive care services (though increases were less than 10% in three of these), but had no effect on the provision of six other incentivized services.³⁰⁰ Another Ontario study found that the introduction of an incentive to improve the quality of diabetes care led to minimal improvement at both the population and patient level.³⁰¹ However, a recent study suggests that raising performance thresholds in P4P schemes improved physician performance in Scotland, especially among low-performing general practitioners.³⁰²

In Ontario, the *Excellent Care for All Act, 2010* mandated that hospitals develop quality improvement plans, link executive compensation to the achievement of goals in the plans, and establish quality committees to monitor and report on quality issues.³⁰³

In response to the growing concerns about overuse, and building on existing cases where evidence-based analysis has been used to inform funding and policy decisions about new products and services,³⁰⁴ international jurisdictions are increasingly looking to apply health technology assessment (HTA) methodologies to existing funded products and services.^{305,306} The move towards ensuring that patients do not undergo unnecessary tests, procedures, or diagnoses³⁰⁷ is at an early stage, but has been bolstered by efforts by medical leaders³⁰⁸ and physicians' groups.³⁰⁹ For example, the Choosing Wisely initiative aims to help patients choose care that is evidence-based, and that reduces duplication of tests and procedures, by encouraging discussions between patients and their physicians.³¹⁰ The initiative was launched in 2012³¹¹ in the US, and – with funding from the Ontario Ministry of Health and Long-Term Care³¹² – Choosing Wisely Canada is set to launch in April, 2014.³¹³

Innovation

Innovations in health care delivery – such as personalized medicine – offer the potential to positively transform health care.^{314,315} Transformations in drug development,³¹⁶ the prevention, diagnosis, and treatment of disease,³¹⁷ clinical practice,^{318,319,320} medical outcomes,³²¹ and the nature of the medical system from a reactive system to a proactive system³²² have all been forecast, and each could positively affect the system's sustainability. For example, personalized medicine could allow diagnosis to be made earlier in disease development,^{323,324,325} allowing more effective interventions or treatment options,³²⁶ and the pre-emption of the progression of a disease.³²⁷ Further, the ability to stratify patients by disease susceptibility or their likely response to treatment could help to reduce the size, duration, and cost of clinical trials;^{328,329,330,331} potentially bringing useful medicines to patients more quickly and decreasing the economic burden of clinical development,³³² while facilitating the development of new treatments, diagnostics, and prevention strategies.³³³

Advances in technology and practice that allow procedures that once had to be performed in a hospital environment to be offered in the community through a provider specializing in the procedure are another area of innovation with potential consequences for the organization of the health care system,³³⁴ including reduced wait times.^{335,336,337} The Shouldice Hospital in Ontario,

for example, treats patients requiring simple uncomplicated hernia repair, and averages over 7,000 operations a year in a 90-bed facility, with surgeons treating patients at approximately 20 times the annual volume for a typical surgeon.³³⁸ Ontario's legislative and funding model for "independent health facilities" enables the provision of publicly funded diagnostic and/or surgical/treatment services (e.g., ultrasound, dialysis) in community-based non-hospital facilities.³³⁹ For example, the Kensington Eye Institute – a not-for-profit outpatient cataract surgery centre³⁴⁰ – provides over 7,200 surgeries each year, contributing to reduced wait times for cataract surgery.³⁴¹ In December 2013, Ontario announced its plan to establish non-profit community-based specialty clinics in communities across the province; the clinics will provide routine health services, beginning with cataract and colonoscopy procedures, with additional procedures to be considered in the future.³⁴²

Other efforts to promote innovation in the health care system include the US Center for Medicare and Medicaid Innovation, which was established to identify, develop, support, and evaluate innovative payment and service delivery models under Medicare, Medicaid, and the Children's Health Insurance Program (CHIP).³⁴³ The Center's Health Care Innovation Challenge will award up to \$1 billion in grants to applicants who seek to implement innovative ideas for delivering better health, improved care, and lower costs to individuals enrolled in the health plans, with emphasis on those with the highest health care needs.³⁴⁴ The AHRQ Health Care Innovations Exchange was created to promote the development and adoption of health care innovations that improve the quality of health care.³⁴⁵ The website provides health professionals and researchers with a platform to share, learn about, and adopt evidence-based innovations and tools that are appropriate for a variety of health care settings and populations.³⁴⁶

A background document is also available for this trend.

Mental Health and Addictions

Why is this Trend Important?

Though it can be difficult to determine the prevalence of mental illness,³⁴⁷ it has been estimated that one in five Canadians will experience mental illness,^{348,349,350,351} and prevalence rates have been climbing in recent years.³⁵² Mental illness causes distress, can interfere with a person's ability to cope with daily life, and may disrupt their work, social, and family life.³⁵³ Mental illness is also associated with significant costs to the health care system and employers, as well as to families and to those individuals affected by mental illness. The World Health Organization estimates that depression will be the second leading cause of disability by the year 2020.³⁵⁴

Growing Challenges

In 2011 alone, Canadians spent over 3.2 million days in hospital for mental health issues; almost 1.8 million of these days were spent in facilities in Ontario.³⁵⁵ Included in these totals were over 222,000 hospital days due to substance-related disorders in Canada (and over 138,000 days in Ontario).³⁵⁶ In 2007/08, a total of at least \$14.3 billion of Canadian public expenditures went towards mental health services and supports; in Ontario this figure was \$5.9 billion.³⁵⁷ In the same year, 7.2% of total government health expenditures in Canada went to mental health.³⁵⁸ One report estimated that in 2011, \$42.3 billion was spent in Canada on direct costs related to mental illness (i.e., health care, some social services, and income support); this is likely an underestimate since the costs do not include those to the justice system, all social service and education systems, costs for child and youth services, informal caregiving costs or costs associated with losses in health-related quality of life.³⁵⁹

In considering the impact of mental illness on productivity in the workplace (i.e., indirect costs), it was estimated that an additional \$6.3 billion would be lost due to absenteeism and under-performance.^{360,361} These costs are expected to rise over the next several decades, with direct and indirect costs potentially increasing to \$290.9 billion and \$16.0 billion, respectively, in 2041.³⁶²

In Ontario alone, the burden of mental illness and addiction (as measured by health-adjusted life years) is more than 1.5 times that of all cancers and over seven times that of all infectious diseases, as individuals with mental illness and addiction tend to live with a low quality of life for a long time; depression was found to have the largest impact.³⁶³

Access to Services

Access to mental health services is a critical issue nationwide. The need for timely access to integrated mental health services has been frequently highlighted.^{364,365,366,367,368,369} The accessibility of services is particularly an issue among children and youth, of whom only 25% receive specialized treatment.³⁷⁰ Accessing mental health resources is a challenge outside of Canada as well; it is estimated that 80% percent of people with serious mental disorders living in low or middle income countries do not have access to needed services.³⁷¹

Substance Abuse and Addictions

Substance abuse and addictions are growing areas of concern for health policy development. The use of illicit drugs (e.g., marijuana, heroin, cocaine) may lead to serious health issues such as unintentional injuries, car accidents, and overdoses, which may require acute emergency care.³⁷² Current areas of concern include problem gambling,³⁷³ the misuse of prescription drugs (particularly opioids),³⁷⁴ substance misuse, and alcohol abuse among youth^{375,376} and Aboriginal communities.^{377,378,379}

The number of prescription opioid-related treatment admissions in publicly funded addiction treatment services in Ontario rose by 60% between 2004 and 2009,³⁸⁰ and continues to increase.³⁸¹ In 2011, 40.0% of Ontario students in grades nine to twelve reported that they had used an illicit drug in the past year; this includes 15.2% of students who reported having used a prescription drug for non-medical purposes.³⁸²

Mental Illness and the Justice System

Over the past thirty years, the shift away from institutions to community-based treatment has resulted in an increased role for police in addressing mental illness.³⁸³ Now, police services are commonly the first point of contact for individuals in mental health crisis.^{384,385} The increased involvement of individuals with mental illness in the criminal justice system has led to higher policing costs³⁸⁶ and strains on the court system.³⁸⁷ Despite the frequency of police contact with individuals with mental illness, police training on how to deal with the mentally ill varies across the country – from a few hours to intensive week-long courses.^{388,389}

A 2011 report on collaborations between police and mental health bodies in Ontario identified 15 key issues currently impeding police/mental health collaboration, including a shortage of funding and resources for police/mental health collaborations, and lack of mental health services in rural and northern communities.³⁹⁰

Emerging Responses

Mental Health Promotion and Mental Illness Prevention

There is growing recognition of the need for the promotion of positive mental health and wellbeing, as well as for prevention of the onset of mental illness. Reviews of the literature have found that mental health promotion and mental illness prevention strategies can reduce the individual and social impacts of poor mental health,³⁹¹ and can be effective and cost-effective,^{392,393} especially when interventions target children and adolescents.^{394,395} Mental illness prevention interventions occur before the onset of a clinical episode,³⁹⁶ and have targeted individuals at risk (e.g., depression treatment in older people following hip surgery³⁹⁷), groups of individuals (e.g., all the members of one grade in high school,³⁹⁸ employee assistance programs at a place of work³⁹⁹), and health care providers (e.g., providing education to assist in the assessment and management of suicidal patients⁴⁰⁰).

There is a large research literature on school-based mental health and addictions programs. Literature reviews have found positive impacts from some (but not all) interventions targeting alcohol misuse,⁴⁰¹ use of illicit drugs,^{402,403,404} smoking prevention,^{405,406} depression,^{407,408,409} and anxiety.⁴¹⁰ It has been suggested that school nurses are providers who have the potential to greatly impact the mental health of students.^{411,412,413,414} Mental health educational resources for

school nurses and other school personnel have been developed and made freely accessible on the internet.^{415,416,417,418} Case management provided directly by school-employed registered nurses or counselors is a growing area for the provision of support to students and their families.⁴¹⁹

In 2012, the Mental Health Commission of Canada released Canada's first national mental health strategy.⁴²⁰ Among its six strategic directions, the strategy recognizes the need to promote mental health across the lifespan, to prevent mental illness wherever possible and to foster recovery for people living with mental illnesses. In 2011, Ontario launched its Comprehensive Mental Health Strategy, which takes a long-term view to transforming the mental health system.⁴²¹

Workplace Mental Health

Promoting positive mental health and well-being in the workplace has gained increased attention recently, with workplaces being identified as important settings for mental health interventions.⁴²² From an employer's perspective, the economic consequences^{423,424} of mental illness and employers' growing legal obligations⁴²⁵ related to mental health safety are strong drivers for organizations to create healthy workplaces and proactively assist employees in maintaining their mental health. From the perspective of employees with a mental health problem, stigma and discrimination associated with mental illnesses is also an important concern.^{426,427} Internationally and within Canada, several resources are available to assist employers in developing work environments that promote positive mental health.^{428,429,430}

Recovery and Harm-Reduction

Increasingly, a recovery-oriented approach is being taken with respect to the long-term efforts of people with mental illness or addictions.⁴³¹ Characteristics of recovery-oriented care include patient empowerment,^{432,433,434} a focus on self-management,^{435,436,437} cultural sensitivity,^{438,439,440} and a strengths-based orientation.^{441,442,443,444} The Mental Health Commission of Canada suggests that recovery should build on individual, family, cultural and community strengths, and enable people living with mental health problems and illnesses to lead meaningful lives in the community, despite any limitations imposed by their condition.⁴⁴⁵ The recovery concept has been introduced into national mental health policies in New Zealand, Australia, and England,⁴⁴⁶ and recovery-oriented initiatives have been launched in jurisdictions such as Scotland,⁴⁴⁷ South Australia,⁴⁴⁸ and New York State⁴⁴⁹ and Connecticut⁴⁵⁰ in the US.

In Canada and many other countries, harm reduction strategies are used to minimize death, disease, and injury related to substance abuse.⁴⁵¹ Harm reduction approaches accept that abstinence may not be a realistic goal for some drug users,⁴⁵² particularly in the short term, and instead seek to reduce drug-related harm without requiring the cessation of drug use.⁴⁵³ Common harm reduction interventions include needle exchange programs, drug substitution (e.g., methadone maintenance therapy), and supervised injection sites.⁴⁵⁴

Telepsychiatry and Specialist Access

Telepsychiatry and telemental health approaches link specialist mental health support to local health care workers (e.g., mental health workers and general practitioners) in the care of psychiatric patients in their local community,⁴⁵⁵ and have the potential to be useful treatment alternatives for patients without ready access to face-to-face consultation (e.g., in rural and remote areas).^{456,457,458,459} Research suggests that telepsychiatry can be used by a variety of local health care providers such as primary care providers,⁴⁶⁰ nurses,⁴⁶¹ psychologists,⁴⁶²

psychiatrists,⁴⁶³ and, moreover, teachers,⁴⁶⁴ school counsellors,⁴⁶⁵ and administrators⁴⁶⁶ in regions without access to specialist psychiatric care. Telemental health support may be provided by a psychiatrist, psychologist, psychiatric nurse, or social worker, or, in some cases, a multidisciplinary team consisting of some or all of these types of practitioners.⁴⁶⁷

The Ontario College of Family Physicians' Collaborative Mental Health Care Network connects family physicians with mental health specialist mentors to support easy access to case-by-case support regarding mental health care.⁴⁶⁸ Physicians can contact their mentors on an informal basis⁴⁶⁹ to receive guidance on diagnosis, psychotherapy, and pharmacology.⁴⁷⁰

Supportive Housing and Housing First Programs

Supportive housing is permanent affordable housing coupled with supportive services for individuals who have serious and persistent issues, including mental illness and substance use, that enables them to achieve long-term housing stability.⁴⁷¹ Although findings have been mixed,^{472,473,474,475} evaluations of supportive housing interventions among those with severe addiction and/or mental illness have found that such initiatives are associated with cost savings in both health and prison systems^{476,477,478,479} due to increased levels of housing stability^{480,481} and reduction in several important outcomes such as the number of hospitalizations,^{482,483,484,485} length of stay per hospitalization,^{486,487} use of emergency medical services,^{488,489} use of shelters,^{491,492,493} and the amount of time spent incarcerated.^{494,495}

A Housing First approach provides housing to people who need it and then provide them with treatments and supports, rather than providing housing once an individual with mental illness has achieved a certain level of recovery.⁴⁹⁶ The At Home/Chez Soi demonstration project offers Housing First programs to people with mental illness who are experiencing homelessness in five cities across Canada, with the aim of providing evidence on what services could best help people who are homeless and living with mental illness.⁴⁹⁷ Reported impacts of the project have included individuals spending more time in stable housing (73% for participants vs. 30% for non-participants), allowing the possibility of better long-term health and social functioning outcomes.⁴⁹⁸ The program has also been shown to reduce costs for high users of social services – one analysis found that for every dollar spent on Housing First for these individuals, \$1.54 was saved through the reduction of use of other shelter, health and justice services.⁴⁹⁹ At the individual level, participants have reported greater feelings of hope,⁵⁰⁰ and healthier relationships.⁵⁰¹ The Canadian Institutes of Health Research recently announced that it would provide funding for an additional four years of the project's Toronto site.⁵⁰²

Police Mental Illness Training

In 1988, the Memphis Police Department joined in partnership with mental illness researchers and stakeholders to develop a specialized unit – the Crisis Intervention Team – that can be called upon to respond to crisis calls involving issues related to mental illness.⁵⁰³ The model has since been adopted by other jurisdictions in the US,⁵⁰⁴ Australia,⁵⁰⁵ and Canada (Edmonton, and York Region, Ontario).⁵⁰⁶ Jurisdictions in the US have reported that the number of officers injured during “mental disturbance” calls has dropped by 80%, and that there had been a decrease in police-related shootings.⁵⁰⁷ The Mental Health Commission of Canada has launched a Police Project that aims to develop comprehensive guidelines for police training and education programs across Canada.⁵⁰⁸

A background document is also available for this trend.

Person-Centred, Coordinated Care

Why is this Trend Important?

Person-centred care – sometimes referred to as patient-centred care – has several definitions.^{509,510,511,512,513,514} Elements frequently mentioned in definitions of person-centred care include: comprehensive, coordinated and integrated care; timeliness and ease of access; clear and reliable communication; respect for patients' values and preferences; smooth transitions and continuity of care; and the use of eHealth.⁵¹⁵

A shift to a more person-centred health care system can help to improve individuals' experience with care,^{516,517} improve health outcomes,⁵¹⁸ and better control costs and utilization of the health care system.⁵¹⁹ For example, patients treated by interdisciplinary health care teams enjoy better health outcomes, shorter wait times, and a greater degree of patient empowerment, all of which lead to an increase in patient satisfaction rates and cost savings to the health care system.⁵²⁰

One study found that Canadians with chronic health conditions were more likely to rate their care as “excellent” if their regular doctor knew their history and helped to coordinate their care.⁵²¹ These patients also reported better monitoring of their conditions, better access to care, and fewer errors in their care.⁵²² A 2012 systematic review found that patients of providers who had been trained to promote a person-centred approach to clinical consultations were significantly more likely to have health status improvements than patients of providers who had not been trained in a person-centred approach.⁵²³

Growing Challenges

Gaps in Coordination of Care

Conventional health care systems were designed to manage short episodes of acute care and traditionally have not responded well to the challenges of chronic care. In coping with chronic conditions, the Acute Care Model, an example of a conventional health care system, is costly, fails to get at root causes of illness or disease, and lacks continuity. It is one that has also proven frustrating and expensive for patients.⁵²⁴

A survey of patients with complex care needs in 11 countries, including Canada, found that care is often poorly coordinated.⁵²⁵ Further, 50% of Canadian patients reported experiencing gaps in hospital or surgery discharge planning, such as not receiving a written care plan after discharge (27%), having no arrangements for follow-up visits (26%), and not receiving clear instructions on which medicines to take (11%).⁵²⁶

Around two-thirds of OECD countries report that difficulties exist at transitions from ambulatory care and four-fifths at the level of transitions from acute care.⁵²⁷ More than half of all hospital medication errors occur at the interfaces of care, for example, when patients are transferred from the emergency department to an inpatient bed, are transferred between units within the hospital, or are in transit between hospital and home or an extended care facility.⁵²⁸

Access to Primary Care and Care in Appropriate Settings

Primary care gatekeepers are well positioned to improve care coordination by helping guide patients through the health system.⁵²⁹ In 2010, approximately 82% of Canadians reported having a regular doctor or place they went to for care,⁵³⁰ and 90% of Ontarians reported having a regular family physician in 2007,⁵³¹ however, issues with access to primary care providers remain. For example, one survey found that 63% of Canadians experienced difficulty getting after-hours care without going to the emergency room (the highest rate of the 11 countries surveyed), while only 51% were able to arrange for a same- or next-day appointment with a doctor or nurse when they were sick or needed care.⁵³²

Difficulties in ensuring that patients receive care in appropriate settings persist, despite high-level recognition of the importance of the issue.⁵³³ A 2008 international survey found that Canada had the highest proportion of respondents indicating that they had used the emergency department for primary care – 39% of Canadians who had visited an emergency department in the prior two years believed that they could have been treated by their primary care physician, instead.⁵³⁴ In 2010/11, over 271,000 emergency room visits were made to Ontario hospitals that could have been treated in alternative primary care settings.⁵³⁵ Alternate level of care (ALC) in acute care refers to patients who occupy hospital beds but no longer need acute care services.^{536,537} In 2007-2008, there were more than 74,000 ALC hospitalizations and over 1.7 million ALC days in Canada (not including Manitoba and Quebec); during the same period, ALC patients accounted for 5% of hospitalizations in Canada, and 7% in Ontario.⁵³⁸ In Ontario, the largest proportion of ALC days is for those waiting for placement in long-term care homes.⁵³⁹

An Aging Population

According to Dr. David Walker's report on ALC in Ontario, our society now confronts a growing phenomenon – that of a burgeoning aging population of individuals living with frailty, and/or multiple co-morbidities, all of which may be confounded by the challenges of dementia.⁵⁴⁰ The frail elderly are an example of a group which may have more difficulty accessing, navigating, and negotiating the health care system. Other groups, including those individuals who are less educated, those who do not speak English as a first language, and those with mental illness, may also have difficulty compared to those who are well educated and health literate.⁵⁴¹

One Ontario analysis found that seniors with even a single chronic condition can expect, on average, 50 to over 100 non-institutional provider visits (i.e., physician, pharmacy, home care) in the one year following an acute care discharge. Moreover, 30 to 40% of the elderly in the analysis had six to thirteen or more different non-institutional physicians connected to their care. About 25% were involved with three or more separate pharmacies, presenting enormous coordination challenges in terms of overall care coordination.⁵⁴²

Emerging Responses

Boosting Coordination of Care

The Ontario Action Plan for Health Care has identified the need for a person-centred system that has better integrated health providers — such as family health care, community care, hospitals, and long-term care — that move patients more seamlessly from one care setting to another.⁵⁴³

Care coordination is a conscious effort to ensure that all key information needed to make clinical decisions is available to patients and providers.⁵⁴⁴ Communication and accountability between different care settings is particularly important for patients with multiple medical problems, as they typically receive care in multiple settings, and are therefore at greater risk for complications, undergoing duplicate tests,⁵⁴⁵ and medication errors associated with potential harm.⁵⁴⁶ Hospitals employing person-centred principles have found improvements in patient outcomes in areas ranging from decreased length of stay, fewer medication errors, and enhanced staff recruitment,⁵⁴⁷ to cost-savings,⁵⁴⁸ and fewer hospital admissions.⁵⁴⁹

Case management and facilitated access to a range of health and social services has been associated with reductions in hospital use, cost-effectiveness or cost savings, and increased client satisfaction or quality of life.⁵⁵⁰ Case management service providers use a collaborative, client-driven approach to align health care and support services for their clients in the most economical and effective manner possible.⁵⁵¹ Case management is also associated with reduced use of nursing homes and long-term care homes. Multidisciplinary teams, active physician involvement, and access to a range of health and social services have also been associated with reductions in utilization of nursing and long-term care homes.⁵⁵²

Medication reconciliation has a role at all transitions in care, because drug errors at transitions in care are so frequent. Specifically, medication reconciliation is a process by which a clinician reviews the patient's medication orders and tracks the medications actually administered before and after the transition in site of care so as to identify and correct any discrepancies between the intended regimen and the regimen actually received.⁵⁵³ Identification of unintended medication discrepancies and potential drug-related problems, as well as increased follow-up during care transitions, can improve patient safety and quality of care while saving health care resources.⁵⁵⁴

Ontario's Family Health Teams (FHTs) provide primary care services, which focus on patient advocacy and coordination of care. Specifically, this includes episodic and acute care, mental health care, chronic disease care, prevention, and education for self-care. The teams provide care in the home, hospital, and community, and serve as the focus for all patient care, providing the majority of care and coordinating the services that are provided by specialists and by other community resources.⁵⁵⁵ In addition to resembling the Patient's Medical Home proposed by the College of Family Physicians of Canada,⁵⁵⁶ FHTs closely mirror the US Patient-Centered Medical Home model,⁵⁵⁷ which has been described as "an enhanced model of primary care in which care teams attend to the multi-faceted needs of patients and provide whole-person comprehensive and coordinated patient-centered care."⁵⁵⁸ The medical home model has been piloted in more than 30 US states since 2006,⁵⁵⁹ with a focus on teams to manage care for those with chronic conditions,^{560,561} and has been adopted as the future standard of care by the US Department of Veterans Health Affairs.⁵⁶²

Patient Participation and Access to Data

Patients and their allies often have different perspectives on the health care system than those who work in the system, such as health care workers, policy makers, administrators, and researchers,^{563,564} and there are several initiatives that seek to expand patient participation both in their own care, and in shaping the health system.⁵⁶⁵ Patients Canada (formerly the Patients' Association of Canada) has been established to promote the participation of patients in their health care and to promote the inclusion of the patient perspective in clinical care, service

planning, and policy development.⁵⁶⁶ In British Columbia, the Patients as Partners initiative collaborates with Impact BC to manage the Patient Voices Network, a mechanism to recruit, train, and support patients and their caregivers to participate in suggesting changes that may benefit the health care system.^{567,568}

Participatory medicine is a person-centred approach to health care that has been defined as “a cooperative model of health care that encourages and expects active involvement by all connected parties (e.g., patients, caregivers, health care professionals) as integral to the full continuum of care.” The concept applies to health, as defined broadly – including fitness, nutrition, mental health, and end-of-life care. This model of health care encourages patients to shift from being passive about their health to being active drivers, and supports providers to encourage and value patients as full partners.⁵⁶⁹

In the US, patient satisfaction is a small but growing component of emergency physician compensation; a 2009 survey of non-academic hospitals found that 20% of physicians reported that at least part of their pay was tied to patient satisfaction (compared with 11% of physicians in 2006).⁵⁷⁰ For example, under the new incentive system at the Hospital of Central Connecticut, physicians receive incentive compensation related to patient satisfaction, though in order to do so the entire physician group must be at or above the 70th percentile in quarterly reports on patient satisfaction.⁵⁷¹

Effective care coordination begins with ensuring that accurate clinical information is available to support medical decisions by patients and providers. Further, giving patients and caregivers self-management support after discharge has been shown to reduce readmissions to the hospital and lower costs.⁵⁷²

Using eHealth to Boost Access and Coordination

A report on telehealth benefits and adoption conducted for Canada Health Infoway found that telehealth has the potential to enhance quality of care by better supporting chronic disease management, application of best practices, improvement of knowledge and skill development in local care providers, and improvement of care coordination; with the use of telehealth wait times for a variety of services decreased markedly.⁵⁷³ For example, the implementation of a telecare management program employing an internet-based home messaging device was associated with reductions in some measures of resource utilization among a group of high-use veterans over the age of 60 with either congestive heart failure, or diabetes.⁵⁷⁴

Stratified Care – Targeting Patients with the Highest Needs

Analyses indicate that in both Canadian^{575,576,577,578} and international jurisdictions^{579,580,581,582,583} a small number of individuals use a large percentage of health care services. A recent Ontario analysis examined most, but not all, health system expenditures and found that 1% of the population accounted for 34% of costs, and that 10% accounted for 79% of system-wide costs.⁵⁸⁴ A growing body of evidence suggests, however, that health system quality improvements can be obtained through focused initiatives that improve coordination and continuity of care for populations that are high users of health care services.^{585,586,587} For example, Ontario’s community Health Links were launched with an initial focus on the 5% of patients who consume about 66% of health care costs in Ontario. Health Links were designed to support local patient-care networks and to coordinate and optimize access to needed services for these patients.⁵⁸⁸

Health Links are intended to encourage greater collaboration and coordination between a patient's different health care providers, as well as to promote the development of personalized care plans.⁵⁸⁹

Ontario's Health Care Connect program, which helps individuals without a family health care provider find one, prioritizes individuals with the most need for family health care.⁵⁹⁰ Since being launched, the program has referred over 238,000 of the 298,000 patients registered (79.9%) with the program to a family health care provider, including 79.5% of high needs patients registered with the program.⁵⁹¹

In the US, the Patient Protection and Affordable Care Act included provisions for the creation of "independence at home" medical practices, which are multidisciplinary practices that provide home-based primary care to high-need populations.⁵⁹²

A background document is also available for this trend.

eHealth

Why is this Trend Important?

Health care experts, policy makers, payers, and consumers consider eHealth technologies, such as electronic health records and computerized provider order entry, to be critical to transforming the health care industry.⁵⁹³ Health information technology has also been shown to improve quality by increasing adherence to care guidelines, enhancing disease surveillance, and decreasing medication errors.⁵⁹⁴

Prominent reports highlight the importance of electronic medical records (EMRs) to the future of health care.^{595,596} However, concerns remain about the high costs of implementing an effective electronic health records system and patient privacy.^{597,598}

Growing Challenges

Despite a consensus that the use of eHealth technologies could yield more efficient, safer and higher-quality care,⁵⁹⁹ adoption of the technologies has been relatively slow in Canada.⁶⁰⁰ According to an organization that tracks hospitals in their progress towards creating a paperless patient record, in 2011 Canadian hospitals had an average score of 1.85, whereas US hospitals scored 3.14⁶⁰¹ (on a scale of one to seven⁶⁰²). Reasons identified for slow uptake of EMRs included capital requirements and maintenance costs,^{603,604} lack of interoperability with other applications,^{605,606} difficulty in learning how to use EMRs,⁶⁰⁷ and concerns with privacy and security,⁶⁰⁸ among others.

Interoperability is considered a prerequisite and a facilitator in the deployment of eHealth,⁶⁰⁹ but progress has been limited, and, internationally, many projects to address this concern have been limited to a regional scale.⁶¹⁰ Suggested strategies to promote the adoption of electronic health records by hospitals have included a focus on financial support, interoperability, and training of information technology support staff.⁶¹¹

Similarly, mHealth, which uses mobile communication devices, in conjunction with Internet and social media, represents a promising opportunity to enhance disease prevention and management by extending health interventions beyond the reach of traditional care. However, it has been suggested that mHealth could benefit from more coordinated development, as it is currently at risk of emerging as a series of applications with limited compatibility.⁶¹²

Emerging Responses

The use of EMRs is associated with improvements for both health care providers and for patients. For providers, the use of EMRs is associated with better documentation,⁶¹³ reductions in time spent on administrative work,^{614,615,616} and an increase in physician productivity.⁶¹⁷ For patients, the use of EMRs has been associated with reduced length of stay,⁶¹⁸ fewer office visits,^{619,620,621} and greater satisfaction.⁶²² Further, the use of EMRs is associated with reduced expenditures,⁶²³ and may have an indirect positive effect on quality by increasing flow of information, compliance with regulations, and the ability to integrate graphic data.⁶²⁴

Various jurisdictions are attempting to encourage the uptake of eHealth technologies through the use of large incentive payments to practitioners,^{625,626,627,628,629,630,631,632} one-time grants to help practices acquire computers,^{633,634} providing computers without cost,⁶³⁵ imposing financial penalties for non-use,⁶³⁶ or mandating the use of eHealth for activities such as billing or prescribing.^{637,638,639,640}

Computer-based clinical systems are another promising avenue. Laboratory information systems are designed to store, manipulate, and retrieve information for planning, organizing, and controlling clinical laboratory services.⁶⁴¹ Advantages of eHealth systems include increased efficiency and productivity in the laboratory department,^{642,643,644} rapid turnaround times for test results,^{645,646} reduced costs,⁶⁴⁷ and improved quality through a reduction in technical errors,⁶⁴⁸ and mistakes.⁶⁴⁹ In one Quebec hospital, the implementation of a software system that monitors and optimizes the quality and safety of antibiotic prescriptions has resulted in significant improvements in monitoring effectiveness and pharmacist efficiency, and was associated with direct savings of \$300,000 in its first year of use – an 18% reduction in the hospital's antibiotic expenses.⁶⁵⁰

Patient-to-provider e-consultations may have the potential to increase efficiency^{651,652} and quality⁶⁵³ of care, by allowing physicians to see fewer low-acuity patients, and increasing the amount of patient-physician communication. Patient-to-provider e-consultations have been implemented in many different technological forms (e.g., email, secure web messaging systems at a patient portal),^{654,655,656,657,658,659} and some studies have found promising effects of their use in terms of process improvements, quality of care,^{660,661,662,663} and patient satisfaction.^{664,665,666,667,668}

Provider-to-provider e-consultation programs have also been implemented in various jurisdictions,^{669,670,671,672,673,674,675} many of these programs allow primary care providers to consult specialists for advice without a face-to-face patient visit. One recent Ontario study examined the impact of a regional e-consultation service designed to give primary care providers access to specialist advice, and found that specialists were able to respond to 75% of the requests within three days (with over 90% of requests taking specialists 15 minutes or less to complete), and that in 43% of cases submitted to the service, a traditional referral was originally contemplated but was avoided.⁶⁷⁶

The use of cellular communications technology is growing quickly.⁶⁷⁷ In 2011, there were 5.9 billion global mobile subscriptions.⁶⁷⁸ With a global penetration rate of 87% – including a rate of 79% in the developing world⁶⁷⁹ – the opportunities for using these technologies in health care applications are growing.

The use of mobile phone text messaging in health care for communication between patient and caregiver has been a promising area of investigation in the past few years. Studies and reviews have found that the use of text messaging may help to improve HIV patients' compliance with antiretroviral therapy,^{680,681} encourage attendance at medical appointments,⁶⁸² improve diabetic patients' blood glucose monitoring rates and hemoglobin A1c levels,⁶⁸³ reduce smoking rates,^{684,685} help with weight loss among obese adults,⁶⁸⁶ and improve symptoms among women with bulimia nervosa.⁶⁸⁷ The use of text messaging to aid patient treatment has also been studied in relation to conditions such as malaria⁶⁸⁸ and depression,⁶⁸⁹ and as a tool to deliver reminders for patients undergoing vaccination series.⁶⁹⁰

In Ontario, recent studies have examined the use of mobile phones for disease management. In one case, a mHealth application was developed and piloted with a group of adolescents with type 1 diabetes. The application allowed participants to upload blood glucose readings wirelessly, receive information about adverse blood glucose trends, and earn reward points for managing their condition that are redeemable for applications and music. Over the course of the pilot study, the daily average frequency of blood glucose measurement increased 50%, and 88% of participants indicated that they intended to continue using the system.⁶⁹¹ Another study examined the effects of mobile phone-based telemonitoring on the management of heart failure, and found that its use was associated with greater increase in quality of life and in self-care maintenance among patients,⁶⁹² and greater ability to manage patients effectively among clinicians.⁶⁹³

A background document is also available for this trend.

Aging, End-of-Life, and Palliative Care

Why is this Trend Important?

By 2031, seniors will account for 25% of Canada's total population;⁶⁹⁴ by 2056, 10% of Canadians are expected to be over 80 years of age.⁶⁹⁵ Canadians have one of the highest life expectancies in the world,⁶⁹⁶ and demographic patterns show that seniors in Ontario are living longer; while the percentage of seniors in the population has increased gradually over time, the number of the oldest seniors – those aged 85 years and older – has grown more quickly (a 36% increase between 2002/03 and 2008/09).⁶⁹⁷ This is notable in light of a 10-year cohort study of 7,915 community-dwelling adults that indicated that health-related quality of life for Canadians remained generally stable until approximately age 70, when it began to decline.⁶⁹⁸

Growing Challenges

The population of elderly people in Canada is growing,^{699,700,701} and though aging itself accounted for only 10.8% of total public sector health spending growth from 1998 to 2008⁷⁰² (adding less than 1% to public sector health spending each year),⁷⁰³ health expenditure per capita in Canada is high for the elderly.^{704,705} For example, in 2011, average per capita health care spending in Canada was close to \$18,000 more for those aged 80 years and older than it was for those aged 15 to 64.⁷⁰⁶ Population aging heightens demand for health care and increases the level of health care expenditure;⁷⁰⁷ these issues are compounded by the implications of an aging tax base – as baby boomers retire the sources of revenue in Canada will diminish.^{708,709}

For many chronic diseases, prevalence increases with age.^{710,711,712} An analysis of Canadian health care cost drivers found that one of the two factors that lead older seniors to consume more health care dollars is the population of the elderly with chronic illnesses,⁷¹³ as individuals with these conditions require more intensive medical attention.^{714,715,716,717}

The second of the two factors that lead older seniors to consume more health care dollars is the cost of health care in the last few months of life, as end-of-life care is particularly expensive.⁷¹⁸ Evidence suggests that end-of-life care is a greater driver of costs than costs associated with living longer.^{719,720,721} A comparison of end-of-life care services in 40 countries concluded that, while Canada compares favourably in terms of the quality of end-of-life care, this is not the case for cost of end-of-life care, where Canada is among the more expensive, ranking 27th.⁷²² End-of-life care is also complicated by the fact that terminally ill patients have priorities such as managing pain and symptoms and maintaining mental awareness, which may be in conflict with aggressive medical treatments (e.g., mechanical ventilator, electrical defibrillation, chemotherapy);⁷²³ such treatments may lead to lower quality of life for terminally ill patients.⁷²⁴ There may also be instances where there are trade-offs between the length of life remaining and the quality of that life.⁷²⁵ Provision of adequate palliative care services earlier on in the trajectory of advanced chronic disease not only better enables people to die in the place of their choice,⁷²⁶ but is expected to reduce the costs associated with end-of-life care.⁷²⁷ Although most Canadians

with life-threatening illnesses would prefer to die at home, 75% continue to die in hospitals and long-term care facilities.⁷²⁸

Informal caregivers provide the majority of care for seniors in the community.⁷²⁹ It is estimated that nearly 3.1 million Canadians provided over 1.5 billion hours of unpaid home and community care in 2007; this was more than 10 times the number of paid hours provided in the same year.⁷³⁰ A separate report estimated that 2.7 million of those providing informal care were 45 years and older – an increase of over 670,000 from 2002.⁷³¹ A conservative estimate of the imputed economic contribution of unpaid caregivers for Canada in 2009 was \$25-26 billion.⁷³² Offsetting this, a separate study found that this care was costly to Canadian businesses; absenteeism and turnover related to providing unpaid care were estimated conservatively to cost Canadian businesses over \$1.28 billion in 2007.⁷³³ Studies have found that caregivers themselves are often suffering from an illness or distress,^{734,735} and may be at risk for burnout.⁷³⁶

About 16% of Canadians over 65 will experience some cognitive impairment, such as memory loss, and another 8% will be diagnosed with a degenerative brain disease, such as Alzheimer's disease or another dementia.⁷³⁷ The risk of cognitive impairment increases with age. Over the age of 85, one of every three Canadians has Alzheimer's disease or a related condition.⁷³⁸ Over half of individuals with dementia experience behavioural and psychological symptoms of dementia.⁷³⁹ These behaviours are a major source of distress both to the person who is presenting them and to others (e.g., the caregiver, the family members, primary health and community care service providers). In cases where the individual is being cared for in the community, challenging behaviour and the resulting caregiver burn-out can lead to a request for placement in a long-term care home; this sometimes occurs when the situation has reached a crisis point.⁷⁴⁰ A 2009 assessment found that over 16% of individuals who had been diagnosed with Alzheimer's disease or dementia and were receiving home care between 2003 and 2008 were assessed with serious behaviours, including being verbally or physically abusive, exhibiting socially inappropriate behaviour, and resisting care.⁷⁴¹

Seniors who are admitted to hospital are at risk for functional decline⁷⁴² – a new loss of independence in self-care activities (e.g., bathing, dressing) or deterioration in self-care skill.⁷⁴³ Functional decline is associated with higher mortality rates,⁷⁴⁴ increased lengths of stay,^{745,746} higher hospital costs,⁷⁴⁷ and higher rates of admission to long-term care facilities.⁷⁴⁸ According to some studies, 30-40% of hospitalized seniors experience functional decline while hospitalized.^{749,750,751}

Cancer is the most common cause of death in Canada – causing an estimated 75,700 deaths in Canada in 2012 – and the number of cases is expected to rise as the population grows and ages.⁷⁵² A recent study found that approximately 45% of cancer deaths among adults aged 20 and older (71% of whom were seniors) occurred in acute care hospitals (40% in Ontario), but that this number could be reduced with more access to community-based end-of-life services, such as hospice or home care.⁷⁵³

Other areas where care for seniors needs improvement include falls and injuries, abuse and neglect, social connectedness, healthy living, and care and services.⁷⁵⁴

Emerging Responses

In response to population aging, jurisdictions across Canada,^{755,756,757,758} and internationally^{759, 760,761,762,763} have been producing seniors strategies and action plans in an effort to help maintain seniors' health as they age. The development of Ontario's Seniors Strategy was guided by research and consultations across the province, and emphasizes matching seniors with primary care providers and improving access to home care by expanding personal support worker services.⁷⁶⁴

Surveys have repeatedly found that people prefer home care,⁷⁶⁵ believe that it provides better quality of life,⁷⁶⁶ and should be supported.^{767,768} Further, analyses have concluded that home and community care costs less than residential care,⁷⁶⁹ and can lead to reductions in hospital admissions, readmission rates, long-term care facility stays, and lengths of stay.^{770,771} An Ontario analysis found that the net impact of a \$48 million investment in home and community care could be \$13 million in overall savings per year.⁷⁷²

Integrated care delivery models targeted at populations requiring complex care have shown positive results in improving access to home and community care and support, while increasing quality of life and satisfaction without increasing overall health care costs. Programs such as the Program of Research to Integrate the Services for the Maintenance of Autonomy (PRISMA)⁷⁷³ in Quebec, the COordination Personnes Âgées (COPA) in France, and the On Lok Lifeways in California provide a range of coordinated services to the elderly in the community.^{774,775,776} On Lok Lifeways is an example of a PACE (Program of All-inclusive Care for the Elderly), a Medicare and Medicaid program in the US that helps people meet their needs in the community.⁷⁷⁷

Efforts to prevent or slow functional decline among hospitalized seniors have led to calls for more senior-friendly acute care environments.^{778,779,780} Senior-friendly hospitals (also referred to as elder⁷⁸¹ or age-friendly hospitals⁷⁸²) are institutions where the physical design, social behavioural climate, policies and procedures, and care systems and processes have been rethought in order to promote safety, minimize functional decline, and mitigate adverse social and medical outcomes for seniors,⁷⁸³ as well as to increase their ability to transition safely from the hospital to the community.⁷⁸⁴ Initiatives to promote senior-friendly hospitals – as well as guidance on how to move towards a senior-friendly environment – have been developed by many jurisdictions, including Ontario,⁷⁸⁵ British Columbia,^{786,787} Netherlands,^{788,789} India,⁷⁹⁰ the US,^{791,792} and the UK.⁷⁹³ Tools have also been developed for assessing how senior-friendly health care settings are.⁷⁹⁴ In Ontario, the Senior Friendly Hospital Strategy provides a systematic approach to quality improvement for seniors which complements and directly contributes to the achievement of hospitals' quality improvement goals.⁷⁹⁵ In hospitals, Acute Care for Elders (ACE) units aim to create specially designed environments for seniors, as well as to provide patient-centred multidisciplinary care, with an emphasis on discharge planning, and enhanced review of medical care.^{796,797,798} Studies have found that the ACE program results in a positive trend in activities of daily living performance improvement, and that patients in ACE units have shorter lengths of stay, and spend less time in nursing homes post-discharge than patients in non-ACE units.^{799,800,801}

Palliative home care interventions offer several benefits over hospital-based care, including fewer hospitalizations,^{802,803,804, 805,806,807} emergency room visits,^{808,809,810} and hospital

deaths^{811,812,813,814,815,816} than usual care, as well as lower costs,^{817,818,819,820} improved satisfaction, and pain and symptom control compared to conventional care.⁸²¹

Behavioural support systems have been gaining attention as a way to address challenging behaviours that can be associated with Alzheimer's disease or dementia.^{822,823} Behavioural Support Systems (BSSs) are "integrated networks of people, services and supports, across the continuum of care that provide quality care for those with behaviours associated with complex and challenging mental health, dementia, or other neurological conditions."⁸²⁴ The purpose of BSSs is to develop a continuous care model that will maximize and maintain the older adults' highest level of functioning and independence for as long as possible, and there is evidence that with early supports from specialized geriatric community supports in place, the majority of older persons with responsive behaviours can be managed at home.⁸²⁵ The National Behavioural Support Systems community of practice – a group of leaders in seniors' mental health and dementia from across Canada – are currently working on a set of practical recommended guidelines for decision makers to consider when developing these systems.⁸²⁶ The Behavioural Supports Ontario Program was created to enhance services for Ontarians with challenging behaviours whether they live at home or elsewhere; the funding for new health human resources provided through the program is expected to enable local provision of expert assistance and enhance existing local resources through the creation of mobile multi-disciplinary teams, local behavioural services, and community supports.⁸²⁷

Respite services provide a break for the caregiver, and include a range of services such as adult day care, in-home respite care, overnight or longer-term respite stays in facilities, or a mixture of services.⁸²⁸ One systematic review of respite care suggested it can have a positive effect on caregivers⁸²⁹ and benefits of respite care include reduced caregiver burden at two to six months, positive effects on morale and anger and hostility, and reduced depression in the short term.⁸³⁰ Australia has prioritized providing supports for caregivers, and has had a National Respite for Carers Program for over a decade.⁸³¹ Over 600 community-based respite services are delivered by a wide variety of community organizations in metropolitan, rural, and remote regions across the country;⁸³² short-term counseling and support services are also available to caregivers to reduce stress, improve coping skills, and facilitate continuation of the caregiver role.⁸³³

A background document is also available for this trend.

Evidence-Informed Practice, Standards, and Policy

Why is this Trend Important?

Evidence-based care is a treatment philosophy focused on using the very best current evidence to support decision-making about the care of individual patients. Evidence-based care also supports better use of resources by focusing them on delivery of care that is known to be effective.⁸³⁴

In recent years, there has been an increasing focus on the role of evidence in clinical practice,^{835,836,837} and policy development.^{838,839} Despite the fact that evidence-based practice has become a policy imperative, the use of best evidence in practice remains patchy.⁸⁴⁰ Further, policy makers face challenges in shifting to evidence-informed policies.⁸⁴¹

Growing Challenges

Clinical practice guidelines (CPGs) are systematically developed statements designed to help practitioners and patients to make decisions about appropriate health care.⁸⁴² CPGs have the potential to improve the care received by patients by promoting interventions of proven benefit and discouraging ineffective interventions.⁸⁴³ Despite this potential, many barriers to the implementation of evidence-based practice have been identified at the individual, organizational, and national levels;⁸⁴⁴ often, multiple challenges occur at different levels of the health care system.⁸⁴⁵ Findings from the research literature on the effectiveness of strategies to encourage knowledge translation and uptake of CPGs have been mixed.⁸⁴⁶ Generally, the results are positive, but the effectiveness of specific interventions was variable, and often modest.^{847,848}

Further, despite the fact that comorbidities are common among individuals with chronic disease,^{849,850} few CPGs address comorbidities,^{851,852,853,854,855} leading several researchers to question the applicability of CPGs to individuals with comorbidity,^{856,857,858} in part because individuals with comorbidities are typically excluded from the research trials on which the CPGs are based.^{859,860,861} Treating individuals who have multiple conditions based on several disease-specific guidelines may be impractical,⁸⁶² lead to missed opportunities to treat co-occurring conditions synergistically,⁸⁶³ and lead to adverse medication effects;^{864,865,866} for example, a treatment option might be suitable for someone with chronic obstructive pulmonary disease, but not in the patient's best interest if he or she had diabetes as well.⁸⁶⁷

Health systems guidance is defined as systematically developed statements to assist decisions about appropriate options for addressing health systems challenges, and to assist with the implementation, monitoring, and evaluation of these options.⁸⁶⁸ Despite its potential, health systems guidance can be poorly developed due to lack of experience in developing guidance for entire health systems, complications including factors related to the complexity of health systems, and the weight placed on contextual issues (e.g., local applicability, equity, political context) when policy options are being considered.⁸⁶⁹

When policy is developed without an evidence base, it runs the risk of being based on ideology, conventional wisdom, theory, or intuition; policies developed in this way can go astray.⁸⁷⁰ Even when evidence is considered during policy development, there are challenges related to its incorporation into policy. It has been suggested that there is a lack of understanding among the scientific community about the policy making process, and differences in both the time-horizons and geographical specificity considered by scientists and policy makers.⁸⁷¹ Further, science is only one element in decision-making and policies are often based more on social and economic considerations than on evidence alone.⁸⁷² A 2010 study found that health care consumers' perceptions of higher-quality care were at odds with evidence-based care; rather, consumers perceived more, newer care to be better care.⁸⁷³

Emerging Responses

Many jurisdictions have implemented strategies to help with the dissemination and implementation of CPGs among health care practitioners. Organizations that develop and/or disseminate clinical practice guidelines have been established in several countries, including England and Wales,^{874,875} and Scotland,⁸⁷⁶ as well as in the department of Veterans Health Affairs in the US.⁸⁷⁷ Internet-based databases and repositories for CPGs have also been established by both governmental and non-governmental bodies, and exist in several jurisdictions in Canada,^{878,879,880,881} and internationally.^{882,883,884,885,886,887} For example, one US-based database – the National Guideline Clearinghouse – houses several thousand guidelines, including multiple guidelines for several conditions (e.g., as of January, 2014, the site included 613 CPGs related to type 2 diabetes, and 213 concerning chronic obstructive pulmonary disease).⁸⁸⁸ In Canada, provinces and territories have been working collaboratively with health care practitioners and experts to overcome barriers related to quality, coordination and use of CPGs. These groups have also collaborated to identify three to five specific CPGs which can achieve better care and costs savings and be the focus of a nation-wide effort.⁸⁸⁹

Supports for evidence-informed decision-making are increasingly common. The Canadian Foundation for Healthcare Improvement's Executive Training for Research Application (EXTRA) program aims to help teach leaders within health to become change agents in health care improvement by offering opportunities for participants to conduct evidence-informed improvement projects in their organizations, with the goal of enhancing patient outcomes, quality of care, and cost-effectiveness.⁸⁹⁰ Websites aimed at easing the adoption and implementation of effective policies, programs and interventions have been developed; for example, Canadian websites offer free access to summaries of policy-relevant systematic reviews,⁸⁹¹ research evidence about the effects of interventions to improve drug prescribing practices and medication uses,^{892,893} and information about validated public health interventions aimed at chronic disease prevention and health promotion.⁸⁹⁴ Advisory bodies that make evidence-based recommendations to government about which policies and practises to pursue exist in Canada,⁸⁹⁵ as well as in the UK,⁸⁹⁶ Australia,⁸⁹⁷ France,⁸⁹⁸ Germany,⁸⁹⁹ Sweden,⁹⁰⁰ and the EU.⁹⁰¹

The Government of Ontario is both a direct funder and end-user of research. The Health System Research Fund (HSRF) was launched in 2012 by Ontario to support research and knowledge translation and exchange activities to address important and complex health issues in Ontario; the cornerstones of the HSRF are research excellence and policy relevance.⁹⁰²

A background document is also available for this trend.

Public and Population Health

Why is this Trend Important?

The Public Health Agency of Canada defines a population health approach as a strategy that aims to improve the health of the entire population and to reduce health inequities among population groups.⁹⁰³ Population health builds on a tradition of public health and health promotion.⁹⁰⁴

It has been known for decades that changes in behavioural risk factors or social and physical environments have the potential to provide greater health improvements than new investments in existing health care delivery systems,⁹⁰⁵ though a recent analysis suggests that across the OECD, spending cuts have been greatest for the public health and prevention services sectors in the wake of the global economic crisis that began in 2008.⁹⁰⁶

Growing Challenges

Poor performance in achieving population health goals is widespread internationally. Of the 281 measurable public health performance targets that were tracked for Healthy People 2010 – a comprehensive, national health promotion and disease prevention agenda in the US – only 10% met their targets by five years into the campaign, while 20% moved away from the target.⁹⁰⁷

Contributing factors included a lack of cooperation and collaboration in achieving population-level goals, and a lack of knowledge of what works.⁹⁰⁸ Public and population health issues that have been targeted in the past include obesity,⁹⁰⁹ smoking,⁹¹⁰ alcohol,⁹¹¹ infectious disease,⁹¹² and climate change.⁹¹³ A recent report found that 60% of Ontario deaths in 2007 could be attributed to smoking, unhealthy alcohol consumption, poor diet, physical inactivity, and high stress, and that, taken together, these five risks reduced the life expectancy in Ontario by 7.5 years.⁹¹⁴

Overweight and obesity have been found to be associated with many chronic conditions such as type 2 diabetes,^{915,916,917} several types of cancer,^{918,919} hypertension,⁹²⁰ and cardiovascular diseases,^{921,922} among others. Obesity is also associated with stigma,^{923,924} reduced psychological wellbeing,⁹²⁵ and discrimination,⁹²⁶ and severely obese people may have a greater risk of premature death compared with people of normal weight or who are overweight but not obese.^{927,928} In 2008, 62.1% of Canadian adults were overweight or obese.⁹²⁹ Childhood obesity has both immediate and long-term negative effects on health, and is linked to a variety of conditions, including risk of adult obesity,⁹³⁰ hypertension,^{931,932} type 2 diabetes,⁹³³ and heart disease.⁹³⁴ Recent analyses have indicated that the economic burden of overweight and obesity is significant,^{935,936,937,938} and there is evidence that the obesity problem is becoming more severe.^{939,940,941}

According to the World Health Organization, tobacco use is the leading global cause of preventable death.⁹⁴² If current trends continue, it is estimated that tobacco will kill more than eight million per year by 2030.⁹⁴³ Globally, more than 600,000 premature deaths per year are attributable to second-hand smoke; in 2004, 31% of these were among children.⁹⁴⁴ In 2002, tobacco was responsible for over 13,000 deaths in Ontario and over 37,000 deaths nationally, as

well as over 782,000 days of acute hospital care for tobacco-related illness in Ontario, and over two million hospital days nationally.⁹⁴⁵

Alcohol,^{946,947,948} illicit drugs,^{949,950,951} infectious disease,^{952,953} air pollution, and climate change,⁹⁵⁴ as well as dietary concerns such as elevated sodium consumption,⁹⁵⁵ are other areas of concern for public and population health.

Emerging Responses

One of the main goals announced in Ontario's Action Plan for Health Care is to help people stay healthy by putting efforts into promoting healthy habits and behaviours, supporting lifestyle changes and better management of chronic conditions.⁹⁵⁶ Several jurisdictions are attempting to improve public and population health by introducing policies that change the environment in which lifestyle choices are made; various initiatives both in Canada and abroad are aimed at promoting healthy behaviours such as physical activity and healthy eating. Other interventions such as advertising bans,⁹⁵⁷ taxing unhealthy foods,^{958,959,960} unhealthy beverages,^{961,962,963,964,965} or cigarettes,⁹⁶⁶ providing financial incentives for immunizations,⁹⁶⁷ and establishing intensive lifestyle intervention programs⁹⁶⁸ may also have positive impacts. Recently, organizations making up Ontario's public health sector came together to release a joint plan laying out a vision for public health in the province for the next 15 to 20 years; focus areas of the plan include early childhood development, immunization, physical activity and healthy eating, among others.⁹⁶⁹

The use of the internet as a surveillance tool may be one way for researchers and governments to identify disease outbreaks early and raise public awareness of emerging disease trends. Researchers have been able to reliably predict influenza-like illness using search queries submitted to Google.⁹⁷⁰ Several platforms disseminate disease surveillance to the public, either through regular surveillance reports^{971,972,973,974} or through other platforms. For example, Google Flu Trends provides near real-time estimates of flu activity based on aggregated search queries, and reports the general activity level as minimal, low, moderate, high, or intense for a number of countries and regions around the world.⁹⁷⁵

The importance of addressing the social determinants of health to improve population health is also being increasingly recognized. British Columbia's Expanded Chronic Care Model (ECCM) was created to better integrate aspects of prevention and health promotion into the Chronic Care Model. The ECCM includes elements of the population health promotion field so that broad-based prevention efforts, recognition of the social determinants of health, and enhanced community participation can be part of health system efforts concerning chronic disease.⁹⁷⁶ Further, in 2012, the Standing Senate Committee on Social Affairs, Science and Technology recommended that governments throughout Canada work together to develop a pan-Canadian public health strategy that centres on addressing the underlying social determinants of health.⁹⁷⁷

A background document is also available for this trend.

Health System Accountability, Transparency, and Performance Measurement

Why is this Trend Important?

There has been an increased focus on the interrelated issues of transparency, accountability, and performance management in the health care system. Prominent reports by Senator Kirby and the Romanow Commission emphasized the need for transparency and accountability in the health care system in Canada, and recommended regularly reporting results to Canadians.^{978,979} Since the publication of these reports in 2002, public reporting of data has been used as a method to track changes in health outcomes, report on services being provided, inform planning, and drive quality improvement.⁹⁸⁰ One survey found, however, that 69% of Canadian health care consumers felt that there has been no change in the health care system's performance as compared to two years ago. Further, 36% of respondents reported believing that 50% or more of health care spending is wasted.⁹⁸¹

Growing Challenges

In the years since the Kirby and Romanow reports called for increased accountability in the health care system, there has been considerable growth in the collection and reporting of health data in Canada.⁹⁸² According to a report by the Health Council of Canada, however, despite this growth, progress towards achieving better accountability for health care spending and performance has been limited.⁹⁸³ The report notes that part of the difficulty is due to an inability to effectively compare data from across Canada, due to variations in the data sources, collection methods, analytic approaches, and reporting formats being used in various regions.⁹⁸⁴

Recently, there has been an increased focus on the use of performance management for addressing issues of accountability and transparency, but there is debate as to whether it is effective in the public sector.⁹⁸⁵ One review of 112 studies on performance management in the public sector noted that the expected improvements in performance, accountability, transparency, quality of service, and value for money have not materialized for the public sector.⁹⁸⁶ Similarly, the effects that evaluations have on improving the performance of public sector policies and programs are unclear.⁹⁸⁷ In the UK, the NHS implemented a performance management system in which NHS trusts were given a rating based on their ability to achieve key targets. However, analyses found evidence of gaming in order to meet the targets.⁹⁸⁸

Patient safety has been described as “a constant battle between the complexity of health care and the defences and barriers that guard against error.”⁹⁸⁹ Patient safety is about managing and reducing risk to ensure that the care patients receive is as safe as possible,⁹⁹⁰ as the price paid when errors are made is often high, on both a human and health system level.⁹⁹¹

Adverse events are unintended injuries or complications resulting in death, disability or prolonged hospital stay that arise from poor health care management.⁹⁹² A 2004 study estimated that an adverse event occurred in 7.5 of every 100 hospital admissions in Canada, adding approximately 1,521 additional hospital days.⁹⁹³ Challenges to patient safety identified in the literature include communication breakdowns and teamwork failures among health care providers,^{994,995} giving the patient the wrong medication,⁹⁹⁶ procedural mistakes,⁹⁹⁷ labelling or storage of drugs,⁹⁹⁸ and failure of health providers to wash their hands,⁹⁹⁹ among others.

Emerging Responses

In recent years, the public reporting of information from health indicators has become a key tool for health system accountability. Reporting occurs at all levels of the health care system as a way to track changes in health outcomes, report publicly on services being provided, inform planning and drive quality improvement,¹⁰⁰⁰ and health indicators provide evidence for discussions about whether health services are appropriate, safe, and effective.¹⁰⁰¹ Reports on health care indicators are produced regularly by multiple levels of government,^{1002,1003,1004,1005} independent organizations,^{1006,1007} and by international organizations,¹⁰⁰⁸ and several searchable databases of indicator data are available online.^{1009,1010} Governments are using health indicators to monitor the effectiveness and quality of the services they fund. Through accountability agreements and other arrangements, some governments are flowing money to hospitals based on indicator results.¹⁰¹¹

Emerging responses to concerns over transparency, accountability, and performance management in Ontario include: requirements for publicly-posted quality improvement plans,¹⁰¹² hospital accountability agreements,¹⁰¹³ linking of hospital executives' compensation improvement targets,¹⁰¹⁴ and public reporting generally, and on patient safety indicators specifically,¹⁰¹⁵ among others.

In the US, Accountable Care Organizations (ACOs) are networks of providers, who manage and coordinate care for their patients – especially the chronically ill – and are held accountable for the cost and quality of the full continuum of care delivered to their patients; when an ACO is successful in delivering high-quality care while containing costs, it will share in the saving it achieves for the Medicare program.^{1016,1017}

Patient safety initiatives have been an area of focus in recent years. The use of surgical checklists has been shown to reduce rates of death and complications among patients,^{1018,1019} and have now been expanded beyond the operating room to cover the entire surgical pathway from admission to discharge,¹⁰²⁰ as the majority of surgical errors occur outside the operating room.^{1021,1022,1023}

A Quebec hospital has put software in place to monitor and optimize the quality of antibiotic prescriptions. The implementation of the software has resulted in significant improvements in monitoring effectiveness and pharmacist efficiency.¹⁰²⁴ The “Do Bugs Need Drugs?” program is an education program operating throughout British Columbia and Alberta which aims to cut the unnecessary use of antibiotics and increase hand washing.¹⁰²⁵ In March, the Toronto General Hospital launched an 18-month pilot project that uses ultrasound technology to paint a detailed picture of staff hand washing practices, potential “hot spots” for disease transmission, and points of contact between staff and patients.¹⁰²⁶

A background document is also available for this trend.

Disparities in Health Care

Why is this Trend Important?

Health inequities are systematic differences in the health status of different population groups. These have significant social and economic costs for both individuals and societies,¹⁰²⁷ and often arise from the societal conditions in which people are born, grow, live, work, and age.^{1028,1029} These conditions are known as social determinants of health,¹⁰³⁰ and include factors such as education,¹⁰³¹ income level,¹⁰³² gender, and ethnicity.¹⁰³³ It may not be the absolute level of income of a society that determines health, but rather how evenly income is distributed that affects mortality and health in an industrialized society.^{1034,1035,1036}

Growing Challenges

There are several population groups facing health care disparities in Canada; these include: immigrants,^{1037,1038,1039,1040} Aboriginal groups,^{1041,1042,1043,1044,1045} women,^{1046,1047} people in rural and remote areas,^{1048,1049,1050} lower income groups,^{1051,1052,1053,1054,1055} and adults with developmental disabilities,^{1056,1057,1058,1059} among others.

Poverty is widely recognized as a major determinant of poor health.^{1060,1061,1062} A recent CIHI analysis found that total public sector health expenditure is related to income, with lower income groups having higher health care costs.¹⁰⁶³ A Canadian study using census data found that the probabilities of survival to age 75 for men and women in the lowest income group were 50% and 70% respectively, compared to 73% and 83% in the highest income group.¹⁰⁶⁴ For residents of shelters, rooming houses and hotels, probability of survival to age 75 was 31% for men, and 56% for women.¹⁰⁶⁵ Inadequate housing and homelessness has been identified as a major issue affecting the health of Aboriginal Peoples, immigrants, low-income earners and marginalized youth.¹⁰⁶⁶ Further, food insecurity – the inability to afford nutritionally adequate and safe foods – has been found to be associated with chronic disease among low-income adults,¹⁰⁶⁷ and with issues such as chronic illness,¹⁰⁶⁸ behavioural problems,^{1069,1070} developmental risk,¹⁰⁷¹ and decreased general health¹⁰⁷² in children.

Where we live can influence our health through environmental and climatic conditions, socio-economic factors, occupational activities, ethnic composition, culture, and community features.¹⁰⁷³ Living in a rural community has been shown to be associated with higher hospitalization rates for chronic conditions that could potentially be managed in the community,¹⁰⁷⁴ less access to some forms of cancer care (e.g., palliative radiation),¹⁰⁷⁵ and greater likelihood of being admitted to hospital due to injury.¹⁰⁷⁶

Disparities in health between Indigenous and non-Indigenous populations exist worldwide.^{1077,1078} In Canada, social, economic and environmental conditions have had a profound effect on the health of Aboriginal peoples.¹⁰⁷⁹ In addition to the challenges associated with the social determinants of health,^{1080,1081,1082} and access to health care^{1083,1084,1085} Aboriginal peoples typically have a holistic concept of health, which reflects highly inter-related physical, spiritual, emotional, and mental dimensions; this outlook can be at odds with the mainstream, silo-ed, approaches to prevention and treatment of illness.¹⁰⁸⁶

Research indicates that immigrant and minority groups generally face problems accessing health care services, including preventive care (e.g., cervical cancer screening, flu vaccinations),^{1087, 1088, 1089, 1090, 1091} and mental health services.^{1092, 1093, 1094} Qualitative studies of diverse groups of immigrants living in the Greater Toronto Area, suggest that obstacles faced by immigrants in accessing health care services include geographic, socio-cultural, and economic barriers.^{1095, 1096} In addition, individuals who arrive in Canada as refugees face further barriers as their status in Canada is uncertain and their lack of networks and social connections may make them less able to find support and care when it is required.¹⁰⁹⁷ Data show that refugees experience a decline in health status after arrival in Canada,¹⁰⁹⁸ and refugees have been shown to have higher age-standardized mortality rates than other immigrants.¹⁰⁹⁹

Emerging Responses

In Canada, various governmental and non-governmental initiatives have been established to reduce health disparities and disseminate knowledge of these barriers. Initiatives include the Sick Kids Translation Project,¹¹⁰⁰ Integrated Pan-Canadian Healthy Living Strategy,¹¹⁰¹ The Eskasoni Primary Care Project,¹¹⁰² the POWER study,¹¹⁰³ Rainbow Health Ontario,¹¹⁰⁴ Toronto's Women's Health in Women's Hands Community Health Centre,¹¹⁰⁵ and the Aboriginal Nurses Association of Canada's Educational Framework for First Nations, Inuit, and Métis Nursing.¹¹⁰⁶ Several US, Australian, and European-based initiatives have the same goals, including: the UN's Global Strategy for Women's and Children's Health,¹¹⁰⁷ the US's Office for Research on Disparities and Global Mental Health,¹¹⁰⁸ New York City's Cancer Awareness Network for Immigrant Minority Populations,¹¹⁰⁹ the Improving Capacity of Workers in Indigenous Communities Initiative (an Australian initiative to train Aboriginal and Torres Strait Islander health workers, counsellors and other clinic staff in Indigenous-specific health services),¹¹¹⁰ and the US-based CLEAN Look checklist (Culture, Literacy, Education, Assessment, and Networking).¹¹¹¹

Canadian and international jurisdictions are increasingly recognizing the need for comprehensive poverty reduction strategies^{1112, 1113, 1114, 1115, 1116, 1117, 1118, 1119} to reduce disparities in many areas, including health. Such strategies may include components such as early child development programs,^{1120, 1121} housing initiatives,^{1122, 1123} as well as employment^{1124, 1125} and income^{1126, 1127, 1128} supports.

Health equity impact assessments (HEIAs) are decision support tools which walk users through the steps of identifying how a program, policy or similar initiative will impact population groups in different ways. HEIAs are increasingly being promoted as a mechanism for taking health equity into consideration during the development of policies, programs and projects.¹¹²⁹ Internationally, these tools have been implemented in jurisdictions including Australia,^{1130, 1131} New Zealand,¹¹³² and the UK^{1133, 1134} to identify the potential impacts a policy or project may have on the health of marginalized or disadvantaged populations. The Ontario Ministry of Health and Long-Term Care publicly launched its HEIA tool in 2011, and released an updated HEIA 2.0 version in 2012 to support public health units in collaboration with Public Health Ontario.¹¹³⁵ The tool supports users in improving the health equity of initiatives and improved targeting of health care investments. The HEIA tool has been incorporated into the corporate strategic planning structures of the Centre for Addiction and Mental Health, as well as the planning processes of several Local Health Integration Networks (LHINs - organizations responsible for

planning, integrating and funding local health services in 14 different geographic areas of the province).¹¹³⁶

Telehealth technologies are playing an increasing role in moderating the consequences of living in rural and remote areas. Telehealth technologies provide an alternative and/or supplemental vehicle for traditional clinical referrals that would be otherwise inaccessible due to distance or a shortage of specialists in a region.¹¹³⁷ According to a 2011 report, specific examples of increased access include:

- Telehealth events saved Canadians living in rural or remote communities an estimated 47 million kilometres of travel in 2010, which also means \$70 million in personal travel costs, 5.6 million litres of gasoline and almost 13 million kilograms of CO₂ emissions avoided — the equivalent of removing 2,760 cars off the road.
- By providing emergency mental health services at the location where the patient presented (rather than transferring the patient) wait times for crisis services were reported to be reduced from 48 hours to two hours.
- By reducing the need for individual patients to travel for care, there was estimated to be nearly \$34 million in savings in 2010 to provincial and federal medical travel subsidy or grant programs.¹¹³⁸

The Nutrition North Canada Program aims to improve access to healthy perishable food in isolated northern communities that lack year-round surface transportation.¹¹³⁹ The Food Mail Program, on which Nutrition North Canada was built,¹¹⁴⁰ was associated with reductions in the prices of priority perishable foods while being associated with increases in their quality, availability, and variety.¹¹⁴¹

In 2010, the Health Council of Canada began a multi-year project to learn about programs and initiatives with the potential to reduce disparities between Aboriginal and non-Aboriginal Canadians; maternal and child health was identified as a crucial programming area. Common features of promising practices in this area included a holistic approach with a focus on wellness and the incorporation of traditional knowledge and cultural practice.¹¹⁴² For example, the Six Nations of the Grand River –Tsi Non:we lonnakeratstha Ona:grahsta’ Maternal and Child Centre in Ontario provides a continuum of traditional and contemporary services and programs,¹¹⁴³ including an Aboriginal Midwifery Training Program,^{1144,1145} and the Toronto Birth Centre, which has a particular focus on supporting Aboriginal families through pregnancy, opened in January 2014.^{1146,1147}

A background document is also available for this trend.

Appendix

The fifth edition of the Trends Report represents a “Year 2” edition of the report (see figure below). It contains updated information on trends that were included in the fourth edition. The trends in this edition of the Trends Report were originally identified in 2012 using input from individuals and organizations across Canada in two phases.

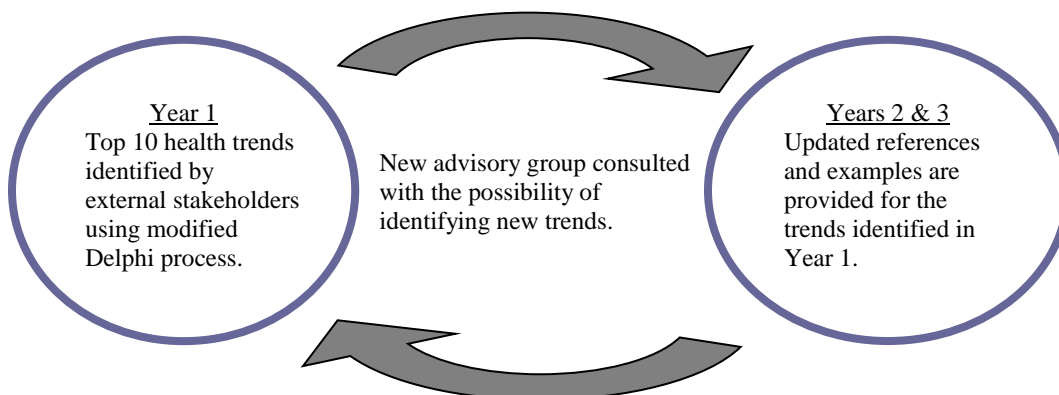
In the first phase of “year 1” (2012), an email was sent to research stakeholders and provincial/territorial colleagues inviting them to complete an online survey. The survey invited respondents to nominate new health systems trends and to provide commentary on the ten trends that were included in the first three editions of the Trends Report. The email also invited recipients to forward the survey link to any other potentially interested health stakeholders in their jurisdiction.

Based on the suggestions received from 33 individuals in the first round, eight new candidate trends were identified for a total of 18 candidate trends.

In phase two of “year 1”, colleagues and stakeholders participated in another online survey, in which they were asked to score the 18 candidate trends on a scale of 1-10, and then to rank their top five trends according to their importance. Seventy-six individuals from across Canada responded to the second survey; their ten top-ranked trends are included in this report.

In this “year 2” edition of the Trends Report, the trends included have not been changed, but more research evidence related to growing challenges and emerging responses has been added. Research stakeholders, provincial/territorial colleagues, and Health Canada contributed input for updated content.

Trends Report Process



Trends Included

| Years 1-3 | Years 4-6 |
|---|---|
| 1. Person-Centred Care | 1. Chronic Disease Prevention and Management |
| 2. Sustainability, Productivity, and Innovation in the Health Care System | 2. Sustainability, Productivity, and Innovation in the Health Care System |
| 3. Chronic Disease Prevention and Management | 3. Mental Health and Addictions |
| 4. Health Human Resources Management | 4. Person-Centred, Coordinated Care |
| • Mental Health and Addictions | • eHealth |
| • eHealth | • Aging, End-of-Life, and Palliative Care |
| • Public and Population Health | • Evidence-Informed Practice, Standards, and Policy |
| • Disparities in Health | • Public and Population Health |
| • Consumerism in Health Care | • Health System Accountability, Transparency, and Performance Measurement |
| • Health Care Facility Infrastructure | • Disparities in Health Care |

Trends were identified two times: in 2008/2009 (for Years 1-3) and in 2011/2012 (for Years 4-6). In both trends identification processes four clear dominant trends were identified. In both cases, the remaining six trends were clustered closely together in terms of importance, and their order of presentation in the report was decided based on contextual and flow considerations. For this reason, the relative positioning of the final six trends should not be taken as an indication of their comparative importance.

