Cutting through the health system information fog: Royal College environmental scan

2014 Spring Edition
**Introduction**

This environmental scan is an evergreen document. It synthesizes major health policy related events, data, and other information that were mostly released in 2013. In keeping with previous editions, this reference document provides a national overview of key indicators and trends in the following four domains:

- Socio-demographic environment,
- Political environment,
- Economic environment,

It is hoped that this summary provides a useful snapshot of information that affected our healthcare system in 2013. Information considered relevant from previous iterations of the report has also been retained. We encourage Fellows and all other readers to contact us at healthpolicy@royalcollege.ca if they have any comments, questions, or to suggest new content areas for future iterations of this environmental scan.

Research, analysis and writing team

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Socio-demographic environment

Health Conditions

Chronic Diseases in Canada

Chronic diseases are the leading causes of death in the world, accounting for 63% of deaths worldwide.\(^1\) The gross impact of these diseases on deaths and disability resonates in Canada as well. Major chronic diseases such as cancers, diabetes, cardiovascular and respiratory diseases attributed for 72% of deaths in 2008\(^2\), and in a 2011 survey 56% of Canadians aged 12 and over reported that they suffered from at least one common chronic condition.\(^3\)

**Graph 1: Canada, Leading causes of death by proportion, 2011**

![Pie chart showing the proportions of leading causes of death in Canada in 2011.](image)


Cancer

Cancer is the leading cause of death in Canada. Estimates project 187,600 new cases and 75,500 deaths in Canada due to cancer in 2013.\(^4\) Mortality rates are expected to be higher for males than females, with 51% of a new cases leading to deaths in males, in contrast to 49% in females.\(^5\)
Over half (52%) of all newly diagnosed cases were lung, colorectal, prostate and breast cancers. Lung cancers attributed to a little over a quarter of all cancer deaths. Prostate cancer is the most commonly diagnosed cancer in Canadian males and breast cancer is most commonly diagnosed in females. Overall, mortality rates in cancer have declined in the last two decades, with notable decreases in lung, colorectal and prostate cancers for men and decreases in deaths from breast, cervical, and ovary cancers for women. Incidence rates, however, have increased in select cancers such as liver and thyroid cancer over that same time period.

Cardiovascular Disease

Despite a dramatic decline in the rate of heart disease and stroke over the past 10 years (40%), cardiovascular diseases remain as one of the leading causes of death amongst Canadians. Statistics Canada reports that in 2009, cardiovascular diseases accounted for over 68,342 deaths. 315,000 Canadians suffer from the effects of a stroke and it still remains as the main reason for hospitalizations, accounting for 38,341 cases.

The Cardiovascular Health in Ambulatory Care Research Team (CANHEART) health index, a measurement for optimal heart health, analyzed responses from 464,883 Canadians that participated in the Canadian Community Health Survey from 2003-
2011. Maclagan et al. found that according to their CANHEART health index (which is based on health behaviours and factors that influence heart health), less than 10% of adults and 20% of youth met the criteria for ideal cardiovascular health. The researchers cited increasing trends of overweight/obesity, hypertension and diabetes as key factors that have influenced these scores.\textsuperscript{13}

**Diabetes**

Statistics Canada reports that in 2012, 1.9 million Canadians aged 12 and over reported living with diabetes.\textsuperscript{14} The prevalence rates of diabetes increased by a staggering 70\% from 1998-1999 to 2008-2009, with the greatest level of increase being observed in adults aged between 35-44 years.\textsuperscript{15}

A significant number of diabetics tend to have compounding chronic diseases to contend with. Over a third of Canadian adults with diabetes reported having two or more other serious chronic conditions. Diabetics are also over three times more likely to be hospitalized with cardiovascular disease than individuals without diabetes. It is perhaps no surprise that, although only 3.1\% of all deaths in Canada are solely attributed to diabetes, almost 30\% of all individuals who died in 2008-2009 suffered from diabetes along with other conditions.\textsuperscript{16}

Current incidence and mortality rates suggest that the number of Canadians living with diabetes will reach 3.7 million by 2018-19.

**Injuries**

Personal injury is the leading cause of death amongst children and young adults. In 2007, intentional injuries, namely suicides, accounted for nearly a quarter of all injury related fatalities. More than four million Canadians aged 12 years and older suffered an activity-limiting injury. Falls were the leading cause of injury in 2009-
Specialty medicine must continue to strive towards enhancing the provision of health care to all Canadians, including those with mental illness. A commitment that the Royal College takes seriously – the College is partnering with the Mental Health Commission of Canada, Canadian Psychiatric Association, and the College of Family Physicians of Canada to explore approaches to support clinicians in providing optimal health care for patients with mental health conditions. The recently approved Mental Health Core Competencies lay the groundwork for future collaboration.

Graph 5: Injury related causes of death, 2007

Source: Statistics Canada, Injuries in Canada, 2011

Mental Illness

The World Health Organization estimates that over a quarter of the world’s population suffers from one of more mental conditions during their lifetime.

In terms of prevalence, mental illness arguably impacts the Canadian population at levels similar to major chronic diseases. Over a million Canadians are reported to experience a major depressive episode annually. In the 2012 iteration of the Canadian Community Health survey, 2.8 million Canadians (10.1% of the population) aged 15 years and older reported symptoms consistent with at least one mental or substance use disorder such as a major depressive episode, bipolar disorder, generalized anxiety disorder, and alcohol, cannabis or other drug abuse or dependence.

Various epidemiological studies have revealed higher rates of major depression among females, young adults, once-married individuals (widowed, separated or divorced), and low income peoples. The workplace environment has also elicited concerns over mental health; the Mental Health Commission of Canada estimates that mental illnesses account for nearly one-third of all short and long-term disability claims. Furthermore, the MHCC reports mental illness issues in the workplace costs $20 billion – nearly 40% of the total economic burden caused by mental illness annually.

The Royal College has formed the Advisory Committee on Injury Control and Reduction Advisory Committee (ICRAC). ICRAC’s membership includes physicians who are subject matter experts and the committee will provide advice and recommendations on injury reduction and control actions where the Royal College can have influence and effect under its mandate.
As part of efforts of developing a national approach on health promotion and prevention, the F/P/T governments (excluding Quebec) have established a joint framework to address Childhood obesity. Actualizing the framework may be a challenge however. The CIHI and Public Health Agency point out that there is a dearth of evidence on effective interventions, stating that “Relatively few population-level obesity prevention and management interventions, especially public policy approaches that target broader environmental factors, have been systematically evaluated either for their effectiveness or cost-effectiveness. The need for more research is particularly pressing for obesity prevention, for which evidence of efficacy is limited to a small number of studies. (Public Health Agency of Canada, Obesity in Canada, 34)


The preponderance of obesity is reflected in Canada as well. Looking at various Canadian surveys conducted between 1985 and 2011, Twells, Gregory, Reddington & Midodzi found that obesity rates have tripled during this time period. Based on linear regression analysis, the authors project that approximately 21% of adults will be obese by 2019.24

Provincially, Statistics Canada's Canadian Community Health Survey reports New Brunswick recorded the highest prevalence of obesity at 28% and British Columbia had the lowest rates at 14.1%. As the graph below shows, apart from Yukon, all provinces and territories have witnessed an increase in self-reported obesity over the last decade.

Graph 6: Prevalence (%) of self-reported obesity, by province, 2003, 2012, Canada

Source: Statistics Canada. Health Indicator Profile. 2013
**Smoking**

Smoking rates in Canada can be considered as a public health success story. Effective legislations and other interventions have been implemented at the F/P/T level\(^{25}\), and more households and workplaces have become smoke-free.\(^{26}\)

As few as 16% aged 15 and above classify themselves as smokers, which is a new record low in Canada.\(^{27}\) These rates are some of the lowest rates of smoking among OECD countries\(^{28}\) such as the US, where 28% of adults 18 and above reported smoking cigarettes in 2012.\(^{29}\)

Notwithstanding, smoking undoubtedly remains a major risk factor to health outcomes in Canada today. It is the primary risk factor in respiratory diseases such as chronic obstructive pulmonary diseases, asthma, and lung cancer\(^{30}\). Historical remnants of traditionally high smoking rates in Quebec and Atlantic Canada have been correlated to the high prevalence rates of lung cancer in the two regions today.\(^{31}\)

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**Graph 7: Obesity and smoking rates, 2003-2012, Canada**

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**Hypertension**

Globally, high blood pressure is the leading risk for mortality\(^{32}\), linked to a host of issues to the arteries (ex. aneurism), heart (coronary heart disease, heart failure etc.), brain (stroke, dementia etc.) and kidneys (failure, scarring etc.).\(^{33}\) Of Canadians aged 12 and above, 17.6% reported high blood pressure in 2011. Historically, females have reported higher blood pressure; however in recent years there has been a convergence between the two sexes.\(^{34}\)
Medical conditions such as obesity have been linked to high blood pressure; in 2011, 32.4% of Canadians who were obese reported having high blood pressure, compared to 15.8% of those who were not obese.35

Health Indicators – How we compare

The Conference Board of Canada, an independent research organization, publishes an annual report card on Canada’s performance on various socio-economic indicators compared on a global scale. The report, titled How Canada Performs, assesses population health status through an A-B-C-D grading system, based on the countries’ relative ranking to other peer countries identified in the report.

As the table below shows, Canada ranked strong (A grade) compared to its peers in regards to self-reported health status, premature mortality, and mortality due to circulatory diseases. However, in indicators such as infant mortality and mortality due to cancer, diabetes and musculoskeletal diseases, Canada received a ‘C’ grade – potentially areas that merit further consideration moving forward.

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<th>Denmark</th>
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Source: Conference Board of Canada, How Canada Performs, 2013
Populations at Risk

**Seniors**
Although Canada’s seniors are living longer, the physical and mental health of the population is an area of concern. The graph below highlights some of the health concerns facing this population group.

Select health concerns facing seniors

- Three out of every four Canadians aged 65 and older reported having at least one chronic condition*
- 43% of all new cancer cases will occur in people aged 70 and above**
- From 1998-99 to 2008-09, seniors aged between 60-64 years had the highest increase in incidence of diabetes***
- Nearly half of seniors living in residential care are estimated to live with a diagnosis or symptoms of depression****

* CIHI, *Health Care in Canada, 1*
** Canadian Cancer Society, *Canadian Cancer Statistics 2013, 27*
*** Public Health Agency of Canada, *Diabetes in Canada: Facts, 17*
**** Public Health Agency of Canada, *Report on the State, 18*

Canada, like many other nations, has had a notable shift in age distributions towards older ages. The 2011 Census shows that seniors accounted for 14.8% of population in 2011, up from 13.7% in 2006. From 2011 to 2031, Canada’s largest birth cohort, known as the ‘baby boom’ generation (born between 1946-1965), will turn 65 and the proportion of seniors will thus grow at a higher rate.36

Concerns have been expressed over the impact of this cohort on the health care system as a whole. According to the latest available data published in 2013, seniors aged 65 and older, who comprised approximately 15% of the total population in 2011, accounted for 45% of all health care spending in that year.37 While population aging at the aggregate level has been a very modest cost driver overall (contributing an annual average growth of only 0.9%), the patterns are quite variable across Canada, having greater effect in the Atlantic provinces and Quebec compared to Ontario and Western Canada for example.38
Keeping an eye on demographics will be all the more important in years to come. The increasing number of those aged 80 and over has proven to be an important driver of health expenditure growth.

Within this subset of the population, seniors aged 80 and above will be of particular concern, given the high costs of care for those near the end of life and those with multiple chronic conditions (which tends to be more prevalent amongst older seniors). In 2011, per capita spending by provincial and territorial governments for those 80 and older was $20,387, compared to $6,431 for those aged 65 to 69. As the graph below shows, seniors aged 80 and over are expected to double in numbers over the coming decades.

**Graph 8: Population projection, older seniors aged 80 and over (millions), 2016 - 2036**

*Population estimate based on Medium-growth and historical migration trends from 1981-2008
Source: Statistics Canada, Population Projections for Canada, Provinces and Territories, 2010

Keeping these demographic shifts in mind, experts such as Samir Sinha, geriatrician and lead of the Ontario Senior Care Strategy, point out that hospital care needs to evolve accordingly. He states that “our current acute care model ... was developed years ago when most adults tended not to live past 65 ... and usually had only one active issue that brought them to hospital”.

Indeed, innovative models of geriatric care need to be incorporated across the continuum, from acute care to community and continuing care settings. It merits strong consideration for federal, provincial, territorial and municipal governments (who are now increasingly involved in providing long term care services) to establish a pan-Canadian senior strategy moving forward.

**Rural populations**

Canadians in rural areas have higher mortality rates due to high rates of circulatory and respiratory diseases, injury and suicide. Higher risk factors such as smoking, obesity and higher blood pressure have also been reported in rural areas and this has been reflected in higher risks of hospitalization.
There are caveats however - research has intimated that certain rural areas, namely strong Metropolitan Influenced Zones (municipalities with more than 30% of residents who commute to work in an urban core) enjoy better health status to the extent that they are in fact less susceptible to certain health conditions than populations in urban areas.

**Indigenous peoples**

Indigenous Peoples, who made up close to 4.3 per cent of the total Canadian population in 2011, suffer the worst health of any population in Canada. They face higher burdens of health issues in early childhood development, maternal health, community health, mental health, chronic disease and infectious diseases.

The prevalence of diabetes has been shown to be significantly higher among First Nations individuals (17.2%) on reserve compared to the general population (5%). The HIV infection rate for Indigenous Peoples is more than three and a half times higher than the non-Indigenous population. Suicide and major depression rates are high and over a quarter have reported problems with alcohol and a third have experienced sexual abuse during childhood. Obesity is also more prevalent among Indigenous Peoples with over a quarter of off-reserve Indigenous adults being obese in 2007/08 compared to 17.4% of non-Indigenous adults. A 2006 study showed that 39% of Métis, 46% of First Nations not living on a reserve and 68% of Inuit were daily or occasional smokers, compared to 19% of the general Canadian population. One in 20 Indigenous people are former students of the oppressive Residential School System; these victims touch most Indigenous families and communities, perpetuating historical traumas from one generation to the next.

**Low income peoples**

Low socio-economic status groups have poorer health status, reporting lower life expectancy rates and higher hospitalization rates for conditions including mental illness, diabetes, epilepsy, chronic obstructive pulmonary disease, asthma, heart failure and pulmonary edema and hypertension. The growing income inequality that has occurred since the late 1990s in Canada does raise concerns that wealth distribution may continue to influence long term health outcomes in the future.

Utilizing mortality data from the 1991-2006 Canadian censuses, Tjepkema and Wilkins highlight the disparity in life expectancy amongst indigenous Canadians and low income peoples in comparison to the general population. As the graphs below illustrate, there is significant disparity in life expectancy at age 25 for males and females from the highest income quintile than those of indigenous ancestry and low income.
Graph 9: Males, Remaining life expectancy at age 25, by income adequacy quintile and indigenous ancestry

Source: Statistics Canada. Tjepkema and Wilkins, 2011

Graph 10: Females, Remaining life expectancy at age 25, by income adequacy quintile and aboriginal ancestry

Source: Statistics Canada. Tjepkema and Wilkins, 2011
Political environment

2014 Canadian federal budget

With a majority government, the Conservative government passed its 2014 budget on February 11th, 2014. It has been billed as a ‘stay the course’ type budget, keeping spending at $279 billion 2014-2015, compared to $280 billion from the year before.55 56

The Conservative government has stated that the budget is framed around reducing the federal deficit to $2.9 billion in 2014-15, and eventually balancing out to a $6.4-billion surplus in 2015-16. Segments of the media 57 speculate this will likely be hailed as a speaking point for fiscal responsibility in the next federal election, which is slated for fall 2015.

From a health care lens, some highlights include:

- The Territorial Health Investment Fund: A $70 million investment over three years to the three territories (Nunavut, Northwest Territories and Yukon), to reduce their reliance on outside health care systems and medical travel for care.
- Goods and Services Tax/Harmonized Sales tax exemption for Canadians receiving professional services from acupuncturists’ and naturopaths, similar to what is already in effect for other health providers such as doctors, dentists, nurses and optometrists.
- Enhanced funding (specific increase not revealed) for the federal Nutrition North Canada program, which provides subsidies to retailers that provide health foods to isolated Northern Communities. The program has been receiving 60 million a year since 2011.
- $44.9 million over five years to the government’s National Anti-Drug Strategy. The budget points out that prescribed opioid usage has increased by 200% since the year 2000, and the strategy is in response to the concurrent increase in prescription drug abuse that has been witnessed among Canadians aged 15 and above. The budget states that the funding will “educate Canadian consumers on the safe use, storage and disposal of prescription medications, enhance prevention and treatment services in First Nations communities, increase inspections to minimize the diversion of prescription drugs from pharmacies for illegal sale, and improve surveillance data on prescription drug abuse in Canada.” 58
End of the 2004 F/P/T Health Accord

In December 2011, the federal government surprisingly announced significant changes to the Canada Health Transfer (CHT), following the expiration of the 2004 Federal/ Provincial/ Territorial (F/P/T) Health Accord on March 31st, 2014. The federal government announced that following the 2016-2017 fiscal year, there will no longer be an automatic 6% annual increase (termed as the annual escalator) in health care funding. Instead, annual increases in the Canada Health Transfer will be tied to nominal Gross Domestic Product (GDP), with a minimum 3% guaranteed. Based on long term trends, the Department of Finance projects annual increases of 4% annually.\(^\text{59}\)

The 2004 accord formalized a ten year agreement by First Ministers on a series of commitments to improve Canada’s health care system. The accord established a funding scheme that the federal government agreed to transfer to provincial/territorial governments mostly through the Canada Health Transfer.

Graph 11: Federal funding scenarios

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In response, the Council of the Federation (COF), a joint body comprised of Canada’s thirteen provincial and territorial health ministers, determined it needed to explore collaborative efforts in transforming the delivery of health care services across the country. The COF formed the Health Care Innovation Working Group, which released a report in 2012 recommending a pan-Canadian approach for provinces/territories in a myriad of areas including clinical practice guidelines, competitive pricing for pharmaceutical drugs, and team based models in areas affecting senior, aboriginal
While a change in the status quo is welcomed, the expiry of the 2004 Health Accord raises numerous questions around the fiscal burden being placed on provinces/territories.

The Federal government’s decision to redesign intergovernmental transfers is arguably merited. Experts have suggested that the automatic 6% escalator in 2004 Accord has encouraged “inflationary spending”\(^\text{62}\). Bodies such as The Health Council of Canada, an independent national agency created following accord talks in 2003, have reported that although accord commitments around wait times have been promising, insufficient progress has been made around pharmaceuticals management, electronic health records and health innovation. The agency cited disparate levels of progress across jurisdictions in these areas and suggests that a lack of concrete targets established during the accord contributed to this inequity.\(^\text{63}\)

These concerns have also been highlighted by the Senate Social Affairs, Science and Technology, which tabled its progress report on the 2004 health accord in March 2012.

These issues notwithstanding, the federal government’s changes to the Canada Health Transfer do raise a number of concerns. For instance, the Office of the Parliamentary Budget Officer (PBO), which provides independent financial analysis to Parliament, has voiced concerns in its annual Fiscal Sustainability Report, stating that “the federal fiscal room created by the change in the CHT escalator has transferred the fiscal burden to provinces and territories and raised the fiscal gap of the PTLA [provincial, territorial, local and aboriginal governments].”\(^\text{64}\) The COF has also echoed these fears - projecting that over a ten year span, provinces/territorial governments lose up to $36 billion in CHT funding due to changes to the annual escalator, which leaves them in a “less sustainable” fiscal situation.\(^\text{65}\)

Looking beyond the changes in the annual escalator, there are also tensions regarding the revamped transfer formula utilized in the new CHT model. The Martin government’s CHT model was redistributive in nature, considering provinces’ capacity to raise tax revenues as part of their funding formula. In contrast, the Harper government’s CHT model abandons these equalization-type measures and adopts a purely per capita based formula (funding based on population numbers). Unlike the annual escalator which comes into effect in 2017-18, this new non-equalized formula is phased in 2014-2015. The graph below highlights the differences in distribution between the Martin government’s CHT and the Harper government’s CHT in 2014-2015. Under Harper’s CHT, all provinces are expected to receive $899 per resident. Therefore, British Columbia and Newfoundland and Labrador (who received a larger share of dollars per capita under the Martin CHT) are expected to incur the largest loss, losing $56 and $107 per resident respectively. Whereas wealthy Alberta, which received the lowest per capita transfer under the Martin CHT, will be the sole gainer under the Harper CHT with an increase of $235 per resident ($954 million in total absolute terms). Not surprisingly, this discrepancy has drawn the ire of certain provincial governments, who claim that the Harper CHT
model does not acknowledge the distinct costs and population health needs (e.g. higher proportion of seniors in provinces such as PEI and British Columbia) unique to their respective provinces.

Lastly, there is the overarching question around what should be the appropriate role of the federal government in health care. The Royal College strongly believes that the federal government has an important role to play. The Harper Government’s decision to revamp the CHT without conditional funding (which was also a shortcoming of the 2004 Accord-agreed CHT and an overall lack of direction on fundamental reforms needed in Canada’s health care system are disconcerting.

The Canadian public has also appealed for further federal leadership. In a survey conducted for Health Canada by the Strategic Counsel, participants believed the federal government could play a role in a wide array of areas, including audits of the provincial health care systems, acting as a bulk purchaser of drugs, regulating the drug market more effectively, and accelerating the integration of foreign trained doctors other health professionals. Thus far however, the Federal government has steadfastly resisted such calls, pointing out “it will play a leadership role in areas where it has clear jurisdiction”.

Changes to the CHT transfers also puts into question the overarching role of the federal government in health care moving forward. The Royal College believes the federal leadership has an important role to play. You can check out various government submissions where the Royal College’s calls for a national human resources for health observatory, among other pan-Canadian initiatives, online at the following URL (http://www.royalcollege.ca/portal/page/portal/rc/advocacy/submissions.)

Graph 12: Distributional impact of Harper and Martin governments’ CHT formula, 2014-2015

Source: Marchildon and Mou, The Conservative 10-year Canada
Economic environment

Canadian economy: Overview

The Bank of Canada reports that Canada’s economy has benefited from improvements in global financial markets. There has been an increase in long-term interest rates in advanced economies and Europe has stabilized following the debt crisis that occurred a few years ago. The Bank of Canada notes that Canada’s domestic markets have been relatively stable, with Canadian banks having continued access to funding markets at attractive rates, and healthy balance sheets. 71

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Source: Scotiabank Group, Global Forecast Update, 2013

Notwithstanding, the central bank warns that Canada remains vulnerable to the external pressures of the euro crisis and low interest rate environment in major advanced economies. Internally, the Canadian housing market, namely rising prices and high debt, pose a risk to the stability of the Canadian financial system moving forward. 72

Health expenditure

Total spending on healthcare in Canada is estimated to be $205.9 billion in 2012, and is forecasted to reach $211.2 billion in 2013. Canada spent $5,902 per capita in 2012 and is forecasted to spend $5,988 per capita in 2013. 73

As a proportion of GDP, total health expenditure in Canada was 11.3% in 2012 and it is expected to stay consistent at around 11.2% in 2013. 74
In international comparisons, statistics from 2011 show that Canada’s health expenditure as a proportion of GDP was above the United Kingdom’s and Scandinavian countries’ such as Sweden, Norway and Denmark. However, the divergence is much more significant in the United States, which recorded the highest ratio to GDP at 17.7%.75

**Public-Private expenditure**

The public-private sector share of total health expenditure has remained stable, maintaining approximately a ‘70-30’ split proportionately since 199776. In 2013, it is forecasted that the public sector will spend $148.2 billion (70.1%) on health care. The private sector, which primarily consists of health expenditures by households and private insurance companies, will account for $63 billion of spending. The annual growth rates in private sector spending are forecasted to expand at 3.4% and 2.9% in 2012 and 2013 respectively, outpacing growth rates projected in the public sector.77

**Use of funds**

Hospitals remain the largest component of health care spending, forecasted to amount up to $62.6 billion, 29.6% of total health expenditure in 2013.78 Drug expenditures and physician services follow, with the former accounting for 16.3%
Fee-for-service (FFS) payments represent about 75% of total payments to physicians in Canada, but will it continue to do so in the future? The 2010 National Physician Survey (NPS) suggests otherwise – while nearly half of all specialists report using FFS exclusively, only a third of specialist physicians aged under 35 report doing so, and instead prefer a blended method of payment.

What impact will a shift away from FFS and one towards alternative compensation models have on the overall costs of health care in Canada?
**Provincial Overview**

In 2012, provincial and territorial government health expenditures are forecast to amount to approximately $135 billion.\(^{80}\) As the table below shows, total health expenditure per capita varies across the provinces and territories. The territorial governments reported the largest per capita spending in the country. Newfoundland and Labrador and Alberta are forecast to spend more per person than any other province, while Quebec and British Columbia will record the lowest per capita expenditures at $3,651 and $3,721 respectively.\(^{81}\)

<table>
<thead>
<tr>
<th>Province</th>
<th>Provincial/Territorial Expenditure $ 000,000</th>
<th>$ per capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.L.</td>
<td>$2,685.2</td>
<td>$5,249.31</td>
</tr>
<tr>
<td>P.E.I</td>
<td>$622.4</td>
<td>$4,245.15</td>
</tr>
<tr>
<td>N.S.</td>
<td>$3,914.6</td>
<td>$4,124.13</td>
</tr>
<tr>
<td>N.B.</td>
<td>$3,153.2</td>
<td>$4,166.81</td>
</tr>
<tr>
<td>Que.</td>
<td>$29,630.4</td>
<td>$3,651.24</td>
</tr>
<tr>
<td>Ont.</td>
<td>$50,864.2</td>
<td>$3,722.57</td>
</tr>
<tr>
<td>Man.</td>
<td>$5,602.6</td>
<td>$4,380.81</td>
</tr>
<tr>
<td>Sask.</td>
<td>$4,986.9</td>
<td>$4,565.75</td>
</tr>
<tr>
<td>Alta.</td>
<td>$18,410.4</td>
<td>$4,661.84</td>
</tr>
<tr>
<td>B.C.</td>
<td>$17,481.3</td>
<td>$3,721.57</td>
</tr>
<tr>
<td>Y.T.</td>
<td>$253.0</td>
<td>$6,909.56</td>
</tr>
<tr>
<td>N.W.T</td>
<td>$310.7</td>
<td>$7,104.71</td>
</tr>
<tr>
<td>Nun.</td>
<td>$357.0</td>
<td>$10,498.86</td>
</tr>
</tbody>
</table>

**An Uncertain Future Ahead**

In the environs of an growing and aging population, chronic diseases, wait times, and decline in federal dollars following the expiry of the 2004 Health Accord funding agreement in 2014, provincial/territorial governments will face difficulties regarding spending and questions on how to achieve sustainability of the health care system moving forward. Projected growth rates of private sector spending (pg.17) may further expand as a counter-point to these ongoing public spending pressures.

As technology progresses, more services may shift from expensive hospital settings – the traditional sphere of Medicare coverage – to homes and communities. “Passive privatization” in healthcare funding is arguably already taking shape. For instance, in mental health there has been a shift from treating patients in the hospital (e.g., hospital employed psychiatrists) towards treating patients in the community (e.g. psychologists in private practice). Home care and access to outpatient prescription drugs are also two examples outside of the hospital setting where Canadians often assume out of pocket costs.\(^{82}\)
While the Royal College recognizes that the involvement of the private sector in health care is a reality in Canada, the Royal College has also long affirmed its support for Canada’s public health care system and the principles enunciated in the Canada Health Act. In light of this, the Royal College will closely monitor these potential trends moving forward.

Passive Privatization is not only reflected in increased private spending (pg.17) but a number of previously covered services are also being delisted from provincial health insurance plans such as select psychological and optometry services.
Health System Environment: Access, Quality and Human Resources for Health

Wait Times

Following the establishment of evidence based benchmarks on certain ‘priority areas’ in December 2005, there have been positive trends in cancer treatments, cardiac surgery, hip and knee replacement and cataract surgery. National estimates show that approximately eight out of 10 patients receive priority procedures within an appropriate time frame. Access to radiation therapy to treat cancer in particular has been quite encouraging, with 97% of all patients getting treatment within four weeks. Since 2011 however, CIHI notes that national progress towards benchmarks has largely stagnated. As the table below outlines, significant variances continue to exist between the provinces.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hip replacements ≤ 26 weeks</td>
<td>76%</td>
<td>80%</td>
<td>77%</td>
<td>68%</td>
<td>89%</td>
<td>81%</td>
<td>80%</td>
<td>92%</td>
<td>58%</td>
<td>69%</td>
<td>82%</td>
</tr>
<tr>
<td>Knee replacements ≤ 26 weeks</td>
<td>65%</td>
<td>72%</td>
<td>66%</td>
<td>58%</td>
<td>85%</td>
<td>78%</td>
<td>61%</td>
<td>93%</td>
<td>43%</td>
<td>60%</td>
<td>76%</td>
</tr>
<tr>
<td>Hip fracture repair ≤ 48 hours</td>
<td>83%</td>
<td>85%</td>
<td>82%</td>
<td>89%</td>
<td>n/a</td>
<td>83%</td>
<td>75%</td>
<td>82%</td>
<td>82%</td>
<td>84%</td>
<td>83%</td>
</tr>
<tr>
<td>Cataract surgery (high risk) ≤ 16 weeks</td>
<td>81%</td>
<td>66%</td>
<td>70%</td>
<td>62%</td>
<td>81%</td>
<td>88%</td>
<td>54%</td>
<td>95%</td>
<td>72%</td>
<td>88%</td>
<td>81%</td>
</tr>
<tr>
<td>Radiation therapy for cancer ≤ 4 weeks</td>
<td>94%</td>
<td>98%</td>
<td>98%</td>
<td>100%</td>
<td>98%</td>
<td>98%</td>
<td>92%</td>
<td>97%</td>
<td>90%</td>
<td>97%</td>
<td>99%</td>
</tr>
</tbody>
</table>

↑ Minimum 5% growth since 2011 in the % of patients receiving care within benchmark.
↓ Minimum 5% decline since 2011 in the % of patients receiving care within benchmark.

Source: CIHI, Wait Times in Canada, 2013

There are certain instances where the divergence between provinces is significant. Approximately nine in 10 Quebecers who are at high risk receive cataract surgery within 16 weeks, in contrast to only six in 10 in Manitoba. For knee replacements, the proportion of citizens receiving surgery within the established benchmarks is significantly higher in Ontario (85%) than Nova Scotia (43%). In Prince Edward Island, there has been a disconcerting decline in the province by at least 10% from 2009 to 2011 in the proportion of patients having hip and knee replacements, and cataract surgeries.87
In the 2010 National Physician Survey, physicians rated access in the priority areas accordingly:

- 50 per cent of family physicians (FPs) rate access to orthopedic surgeons as fair to poor,
- 15 per cent of FPs rate access to cardiac care services as fair to poor,
- 13 per cent of FPs rate access to cancer care as fair to poor and
- 37 per cent of all physician rate access to advanced diagnostic services (e.g., CTs, MRIs) as fair to poor.

Source: 2010 National Physician Survey (CFPC, CMA, Royal College)

The abovementioned variances however highlight the fact that not all Canadians have benefited from improvements in wait times. Indeed, more work needs to be done, including uptake of reporting procedures beyond the five priority areas such as cancer care, diagnostic imaging, gastroenterology, and psychiatry.

Wait Times: The impact of alternate levels of care stays

The Wait Times Alliance (WTA), a coalition of various medical national specialty societies, argues that alternate levels of care (ALC) stays are a growing detriment to wait times in Canada.

ALC generally refers to patients who continue to occupy an acute care hospital bed after the acute phase of their inpatient stay is complete. The WTA points ALC patients accounted for 14% of hospital beds in 2007-2008, which results in long wait times and overcrowding in emergency departments. An aging population (vulnerable to health concerns such as dementia), combined with lacking institutional and community support for chronic care patients has exacerbated concerns.

The report, Time for transformation: Canadians still waiting too long for health care can be accessed online at the following URL (www.waittimealliance.ca).

Quality of Care: How Canada measures up internationally

The OECD has developed 30 indicators that allow international comparisons on aspects of quality of care. Canada ranks highly on certain indicators such as keeping low hospital admissions for asthma and diabetes, influenza vaccinations in seniors, and also fares well in screening and survival rates for breast, colorectal and cervical cancer.

Graph 17: Avoidable admissions, Asthma and Diabetes, select OECD countries

<table>
<thead>
<tr>
<th></th>
<th>Hospital discharges per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Asthma</td>
</tr>
<tr>
<td>Canada</td>
<td>13.6</td>
</tr>
<tr>
<td>Germany</td>
<td>19.6</td>
</tr>
<tr>
<td>Italy</td>
<td>11.4</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>60.8</td>
</tr>
<tr>
<td>United States</td>
<td>117</td>
</tr>
</tbody>
</table>

Source: CIHI, International Comparisons, 2014
In the areas of patient safety and adverse events however, Canada does not fare as well. Canada reported high rates of obstetric trauma and a number of cases where unwanted foreign bodies were left in during procedures.

**Human Resources for Health (HRH)**

This section outlines key statistics and information on the physician workforce in Canada. Focusing primarily on specialist physicians, the section highlights HRH data about the number of physicians, their age and sex, and Canadian/International Medical Graduates.

The majority of the physician workforce data included in this scan has been collected through two major data holders, the Canadian Institute of Health Information (CIHI) and the Canadian Medical Association (CMA) Masterfile.
This section also includes new findings from the Royal College’s research on specialist physician employment challenges.

**Physicians in Canada: Heads Counts and Physician to population Ratios**

The CMA Masterfile reports that in January 2014, there were 74,788 physicians practicing in Canada (36,485 specialists and 38,286 family physicians). These numbers, which reflect headcounts, have increased consistently and have in fact outpaced the growth of the Canadian population in recent years. However, this growth in numbers has largely compensated for a number of factors including: the acute shortages of physicians experienced in the late 1990s and first decade of this century, more complex patient needs (e.g., aging population, the burden of chronic diseases and co-morbidities), and changing practice profiles (e.g., increasing demands on physician’s time for paperwork and administrative duties). These and other influencers on the medical supply underscore the need for further progress in medical workforce planning.

In specialty medicine, growing numbers have been observed in many disciplines and across most provinces as well.
In 2012, Nova Scotia had the highest proportion of specialist physicians, recording 123 specialists per 100,000. Since 2002, Newfoundland and Labrador reported the largest gains in the proportion of specialist physicians in a province (progressing from 66 to 114 specialists per 100,000 in 2012). The Northwest Territories was the only province or territory to record a drop in numbers over this time period, falling down from 38 specialists to 23 specialist physicians per 100,000 in 2012.

It is important to point out that there are a number of limitations associated with head counts and physician-population ratios when it comes to workforce planning. Head counts and physician-population ratios assume that all physicians provide services in equal quantity and which are uniform in nature—well known to be
inaccurate. The effects of team based models and expanded or complementary scopes of practice of other health professionals are also not factored in these statistics. Lastly, and perhaps most importantly, headcounts and physician to population ratios do not provide any sense of patient “need” for health care. Recognizing these issues, other methodologies have been devised to offer a more accurate representation of physician supply. For instance, the full time equivalent (FTE) methodology developed by CIHI utilizes physician payments as an output measure to estimate whether a physician is working full time. As the graph below shows, FTE counts paint a different picture on the number of specialist physicians per 100,000 in the country.

Although certain limitations of the FTE methodology are widely recognized, such as being based on fee-for-service income data, FTE counts arguably better depict physician human resources than simple headcounts.

Specialist Physicians in Canada: Age

Looking at both ends of the professional lifecycle, 42.3% of specialist physicians were aged 55 and over while approximately 30.7% were aged 44 and under in 2014.

From a discipline specific lens, Pediatric Emergency Medicine, Pediatric Hematology and Critical Care Medicine counted the highest proportion of physicians aged 44 and under amongst medical specialities. Given that the disciplines are still relatively young, this is not altogether surprising. In contrast, Cardiology (pediatric stream) and Occupational Medicine reported the largest proportion number of senior physicians, aged 55 and above, 100% and 83% respectively. It is also worth noting that more than half of the medical workforce in psychiatry, dermatology, and public health and preventative medicine were equally aged 55 or more.
Amongst surgical specialties, Gynecologic Oncology and Colorectal Surgery counted the highest proportion of surgeons aged under 45 at 100% and 90% respectively. Whereas Cardiothoracic Surgery and Ophthalmology counted the largest proportion of surgeons aged 55 and above, at 83.2% and 49.9% respectively.
Graph 26: Surgical Specialists, proportion of Surgeons aged 44 and under, by Discipline, 2014

Source: CMA Masterfile, January 2014

Graph 27: Surgical Specialists, proportion of Surgeons aged 55 and above, by Select Discipline, 2014

Source: CMA Masterfile, January 2014
The age gap among specialists is most apparent in laboratory medicine, with nearly half (49.7%) of all laboratory specialists aged 55 and above and only 21.6% of physicians under the age of 45.

Graph 28: Laboratory Specialists, proportion of physicians aged 44 and under, by discipline, 2014

Graph 29: Laboratory Specialists, proportion of physicians aged 55 and above, by discipline, 2014
**Specialist Physicians in Canada: Sex**

The specialist physician workforce remains male dominated – nearly seven out of 10 specialists are currently male. However, as the graph below shows, the gap between the sexes is narrowing.

**Graph 30: Proportion of specialist physicians, by sex, by year, Canada**

There are important variations however at the specialty-specific level where men clearly continue to make up the bulk of the workforce and others where women occupy an increasing share of the workforce. The two graphs below detail the top ten disciplines that have the highest proportion of males and females respectively.

**Graph 31: Highest proportion of males, top 10 disciplines, 2014**

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroradiology</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Urology</td>
<td>7.6%</td>
<td>92.4%</td>
</tr>
<tr>
<td>Cardiac Surgery</td>
<td>7.6%</td>
<td>92.4%</td>
</tr>
<tr>
<td>Orthopedic Surgery</td>
<td>9.6%</td>
<td>90.4%</td>
</tr>
<tr>
<td>Cardiothoracic Surgery</td>
<td>9.9%</td>
<td>90.1%</td>
</tr>
<tr>
<td>Neurosurgery</td>
<td>9.9%</td>
<td>90.1%</td>
</tr>
<tr>
<td>Vascular Surgery</td>
<td>10.1%</td>
<td>89.9%</td>
</tr>
<tr>
<td>Thoracic Surgery</td>
<td>13.0%</td>
<td>87.0%</td>
</tr>
<tr>
<td>Otolaryngology</td>
<td>18.3%</td>
<td>81.7%</td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td>18.7%</td>
<td>81.3%</td>
</tr>
</tbody>
</table>

Source: CMA Masterfile, January 2014
**Specialist Physicians in Canada: International Medical Graduates (IMGs)**

IMGs are an important component of Canada’s physician workforce and numbered nearly 18,077 in Canada in 2013, including family physicians.

While their numbers have trended upwards over the last decade, the proportion of IMG physicians relative to Canadian trained physicians has remained relatively consistent since the 1980s.
Within the provinces and territories, there are considerable differences in the proportion of IMGs in the specialist workforce. In 2012, Saskatchewan (40%) and Newfoundland and Labrador (37%) and New Brunswick (36%) had the highest percentage of IMGs and in contrast Nunavut (0%) and Quebec (12%) recorded the lowest proportion.

**Graph 34: Proportion of IMGs, 2000-2013**

Source: CMA Masterfile

**Graph 35: Specialist physicians, proportion of International Medical Graduates, by province, 2012**

Source: CIHI, Supply, Distribution and Migration, 2013
The United Kingdom, Ireland, South Africa, United States and Egypt are the top five suppliers of IMG specialist physicians in the country.

**Graph 36: Specialist physicians, number of International Medical Graduates, top five Countries of M.D. Graduation, 2012**

<table>
<thead>
<tr>
<th>Country</th>
<th>Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>1,011</td>
</tr>
<tr>
<td>Ireland</td>
<td>510</td>
</tr>
<tr>
<td>India</td>
<td>957</td>
</tr>
<tr>
<td>South Africa</td>
<td>681</td>
</tr>
<tr>
<td>United States</td>
<td>412</td>
</tr>
</tbody>
</table>

Source: CIHI, Supply, Distribution and Migration, 2013

In 2012, 42% of all specialist IMGs trained in one of these five countries. However, as the graph below shows, new specialist IMGs that have set up practice in Canada over the last five years (2009-2013) reveals that IMGs are coming from a diverse range of countries such as Iran, Pakistan, Saudi Arabia and Libya as well.

**Graph 37: New IMG specialists, top 10 Countries of M.D. Graduation, 2009-2013**

<table>
<thead>
<tr>
<th>Country</th>
<th>Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kuwait</td>
<td>0</td>
</tr>
<tr>
<td>China</td>
<td>20</td>
</tr>
<tr>
<td>Egypt</td>
<td>40</td>
</tr>
<tr>
<td>Pakistan</td>
<td>60</td>
</tr>
<tr>
<td>Ireland</td>
<td>60</td>
</tr>
<tr>
<td>Libya</td>
<td>60</td>
</tr>
<tr>
<td>USA</td>
<td>80</td>
</tr>
<tr>
<td>Iran</td>
<td>100</td>
</tr>
<tr>
<td>India</td>
<td>120</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>120</td>
</tr>
</tbody>
</table>

Source: CMA Masterfile

Canadians themselves are increasingly becoming a growing subset of the IMG cohort. In 2012, out of 407 foreign trained graduates matched to a postgraduate medical education program, 232 graduates were Canadians studying abroad (CSA). This is the largest number of CSAs to have been matched through the CaRMS match. In 2010, CaRMS estimated that 3500 Canadians were studying in medical schools abroad in countries such as Ireland and Poland. An overwhelming 93.8% of CSAs studying in Ireland at the time reported that they plan to pursue postgraduate medical education in Canada.99

Canadians are becoming a growing subset of the IMG cohort. In 2012, over half of foreign trained graduates matched to a residency program were Canadians studying abroad.
**Other Health Professionals**

Other Health professionals outside of medicine are increasingly expanding their clinical roles in the diagnosis and treatment of patients. Nurse Practitioners in Manitoba, for example, can order diagnostic tests\(^{100}\) and in Prince Edward Island they can take an independent caseload of patients\(^{101}\). In Ontario, Paramedics now have an enhanced role in providing homecare services for seniors\(^ {102}\) and Pharmacists now administer vaccinations\(^ {103}\), which used to be traditionally provided by physicians and nurses. New health professions such as physician assistants have also been introduced in Manitoba, Ontario, New Brunswick and Alberta.

With the advent of such regulations, there has been a predictable increase in the number of other health professionals over the last decade as well.

**Graph 38: Number of providers, select health professions, 2005-2012**

There is growing literature that showcases the promising impact of other health professionals on quality of care, outcomes, and cost-effectiveness. However, there are a number of issues that need to be taken into account as the scopes of practice of other health professions evolve. The Royal College has called on regulators and governments to incorporate the following control measures during the uptake of new or redesigned scopes of practice of health professionals\(^ {104}\):

- Ensure the health provider has quality specialized skills training throughout the continuum of education. This includes a review of the accreditation process of educational programs and the learning activities pursued through continuing professional development.
- There needs to be supporting research and data on population health needs, patient health outcomes, patient satisfaction and health system performance including cost effectiveness.
Earnest consultations, communications and collaboration are undertaken with key stakeholders including the physician profession and the public when significant changes to scope of practice are being considered.

**Specialist physician employment problems**

The Royal College released its report synthesizing two years of research on the scope and drivers of physician employment challenges in Canada. The chart below shows that employment challenges persisted in 2013, with a constantly increasing number of respondents reporting that they were at the end-point of training and without a job or were continuing training as an alternative to unemployment.

**Graph 39: Summary profile of under- unemployed newly certified specialists**

Consistent with the findings reported in 2013, surgical disciplines and those that are resource intensive continued to be where employment challenges were most prevalent.

<table>
<thead>
<tr>
<th>Specialty/Subspecialty</th>
<th>Year 2011</th>
<th>Year 2012</th>
<th>Year 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesthesiology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbers unemployed</td>
<td>13 (65/129)</td>
<td>10 (61/142)</td>
<td>12 (54/137)</td>
</tr>
<tr>
<td>Diagnostic Radiology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbers unemployed</td>
<td>4 (28/97)</td>
<td>4 (25/114)</td>
<td>11 (57/121)</td>
</tr>
<tr>
<td>General Surgery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbers unemployed</td>
<td>5 (18/98)</td>
<td>8 (32/99)</td>
<td>7 (44/99)</td>
</tr>
<tr>
<td>Nuclear Medicine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbers unemployed</td>
<td>2 (4/14)</td>
<td>2 (3/7)</td>
<td>1 (3/9)</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbers unemployed</td>
<td>7 (17/42)</td>
<td>6 (13/42)</td>
<td>5 (24/39)</td>
</tr>
<tr>
<td>Orthopedic Surgery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbers unemployed</td>
<td>6 (30/80)</td>
<td>9 (31/88)</td>
<td>14 (42/88)</td>
</tr>
<tr>
<td>Otolaryngology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbers unemployed</td>
<td>0 (5/23)</td>
<td>5 (12/32)</td>
<td>4 (13/36)</td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbers unemployed</td>
<td>1 (8/24)</td>
<td>3 (11/30)</td>
<td>5 (8/26)</td>
</tr>
<tr>
<td>Radiation Oncology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbers unemployed</td>
<td>4 (13/30)</td>
<td>10 (16/30)</td>
<td>16 (23/34)</td>
</tr>
<tr>
<td>Urology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbers unemployed</td>
<td>1 (5/30)</td>
<td>5 (11/31)</td>
<td>5 (14/29)</td>
</tr>
</tbody>
</table>

n - sample size  
N - population size (total number of certificants)  
Conclusion

Given the fluid nature of the political, policy and practice environments, one can expect many themes and questions highlighted in this environmental scan to further foment in 2014. For instance:

- The Harper government’s revamped CHT funding to the provinces/territories takes effect in 2014-15. Will there be a response from the Council of the Federation?
- In December 2013, an annual poll conducted by Nanos Research and the Institute for Research on Public Policy revealed that issues such as the Senate expense scandal have significantly hampered Canadians’ opinions on the Harper government. What measures will the Harper government undertake in the coming year to restore the “Harper brand” as Canada moves closer to its next federal election, slated for fall 2015?
- Quebec’s proposed Bill 52, which decriminalizes euthanasia, is anticipated to pass in 2014. Although temporarily stalled by the Marois government’s recent electoral government defeat, newly elected Premier Philippe Couillard has signalled that his Liberal government intends to pass the bill. Given that the Federal government has opposed the bill in the past, will 2014 set the stage for another challenge between the two levels of government - one that will ultimately have to be arbitrated by the Supreme Court?
- How does Canada strive to address health inequities within its diverse population? New research continues to reinforce the disconcerting disparity in care that exists.
- How will planners address the changing scopes of practice of health professionals and growing trend of unemployed specialists?

These and other issues that influence and shape our health care systems will be featured in future iterations of this living document.

As mentioned previously, we encourage Fellows and all readers to contact the Office of Health Policy at healthpolicy@royalcollege.ca if they have any comments, questions, or to suggest new content for future iterations of this environmental scan.
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