



Canada's global leadership on health 1

Canada's universal health-care system: achieving its potential

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See *Comment* pages 1643, 1645, 1648, 1650 and 1651

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See *Series* page 1736

This is the first in a *Series* of two papers about Canada's health system and global health leadership

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Access to health care based on need rather than ability to pay was the founding principle of the Canadian health-care system. Medicare was born in one province in 1947. It spread across the country through federal cost sharing, and eventually was harmonised through standards in a federal law, the Canada Health Act of 1984. The health-care system is less a true national system than a decentralised collection of provincial and territorial insurance plans covering a narrow basket of services, which are free at the point of care. Administration and service delivery are highly decentralised, although coverage is portable across the country. In the setting of geographical and population diversity, long waits for elective care demand the capacity and commitment to scale up effective and sustainable models of care delivery across the country. Profound health inequities experienced by Indigenous populations and some vulnerable groups also require coordinated action on the social determinants of health if these inequities are to be effectively addressed. Achievement of the high aspirations of Medicare's founders requires a renewal of the tripartite social contract between governments, health-care providers, and the public. Expansion of the publicly funded basket of services and coordinated effort to reduce variation in outcomes will hinge on more engaged roles for the federal government and the physician community than have existed in previous decades. Public engagement in system stewardship will also be crucial to achieve a high-quality system grounded in both evidence and the Canadian values of equity and solidarity.

Introduction

Founded on Indigenous lands and the product of Confederation that united former British colonies in 1867, Canada is a complex project. 36 million people from a rich diversity of ethnocultural backgrounds live on a vast geography bounded by the Arctic, Pacific, and Atlantic Oceans, across six time zones and eight distinct climate regions.

Canada is among the world's most devolved federations, with substantial political power and policy responsibility

held by its ten provinces and three territories. The province of Quebec, with its unique French-speaking linguistic and cultural context, often charts a policy path that is independent from the rest of the country.¹ The decentralisation of the Canadian polity is expressed in its health-care system—known as Medicare—which is not a national system per se, but rather a collection of provincial and territorial health insurance plans subject to national standards.^{2,3} These taxation-based, publicly funded, universal programmes cover core medical and hospital services for all eligible Canadians, and are free at the point of care (figure 1).

To Canadians, the notion that access to health care should be based on need, not ability to pay, is a defining national value. This value survives despite a shared border with the USA, which has the most expensive and inequitable health-care system in the developed world.⁴

Canadian Medicare is more than a set of public insurance plans: more than 90% of Canadians view it as an important source of collective pride.⁵ This pride points to an implicit social contract between governments, health-care providers, and the public—one that demands a shared and ongoing commitment to equity and solidarity.⁶ Such a commitment is inevitably challenged in each generation by an array of external shocks and internal problems. Currently, wait times for elective care, inequitable access to health services in both the public and private systems, and the urgent need to address health disparities for Indigenous Canadians threaten this equity and solidarity.

In this first paper of a two-part *Series* on Canada's health system and global health leadership,⁷ we analyse the unique history and features of the Canadian health-care system and consider the key factors challenging domestic

Key messages

- Canada's universal, publicly funded health-care system—known as Medicare—is a source of national pride, and a model of universal health coverage. It provides relatively equitable access to physician and hospital services through 13 provincial and territorial tax-funded public insurance plans.
- Like most countries that are members of the Organisation for Economic Co-operation and Development (OECD), Canada faces an ageing population and fiscal constraints in its publicly funded programmes. Services must be provided across vast geography and in the context of high rates of migration and ethnocultural diversity in Canadian cities.
- In 2017, the 150th anniversary of Canadian Confederation, the three key health policy challenges are long waits for some elective health-care services, inequitable access to services outside the core public basket, and sustained poor health outcomes for Indigenous populations.
- To address these challenges, a renewal of the tripartite social contract underpinning Medicare is needed. Governments, health-care providers (especially physicians), and the public must recommit to equity, solidarity, and co-stewardship of the system.
- To fully achieve the potential of Medicare, action on the social determinants of health and reconciliation with Indigenous peoples must occur in parallel with health system reform.
- Without bold political vision and courage to strengthen and expand the country's health system, the Canadian version of universal health coverage is at risk of becoming outdated.

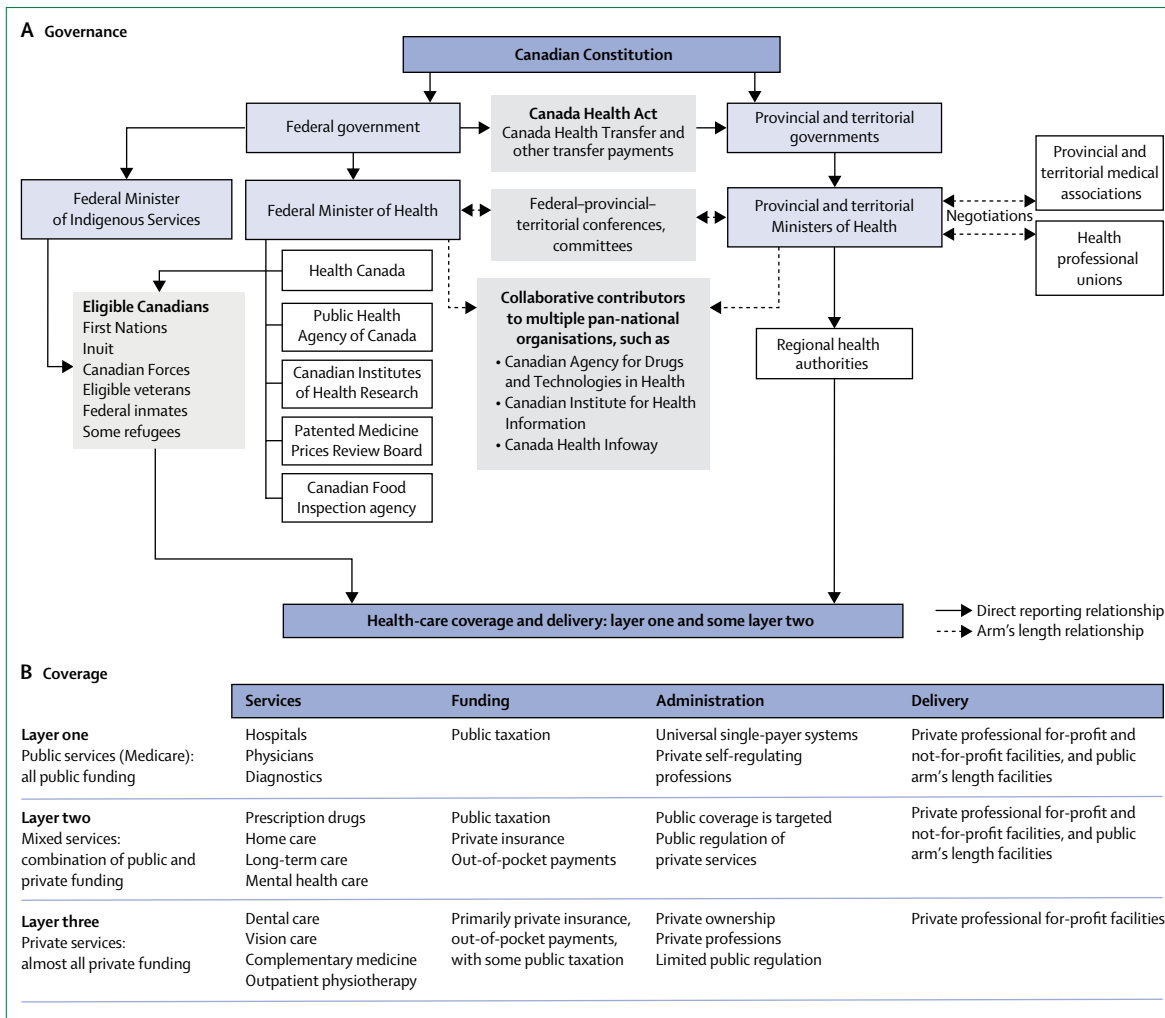


Figure 1: Overview of the Canadian health system
Adapted from references 2 and 3.

policy makers and the system's potential to be a model for the world. We then propose a renewal of the tripartite social contract in service of accessible, affordable, high-quality care for all residents of Canada in the decades to come.

History: a social democratic foundation

The words health and health care were nowhere to be found in the original Canadian Constitution of 1867. However, provincial governments were given explicit authority over hospitals in the constitutional division of powers between the federal government and the provinces and territories. Over time, these subnational governments became the presumed primary authorities over most health-care services.

In the early 1900s, Thomas Clement "Tommy" Douglas, then a young boy growing up in Winnipeg (MB), nearly lost a limb to osteomyelitis because his family was unable to pay for care. When Douglas later became the

Social Democratic Premier of Saskatchewan, he implemented universal public health insurance for the province, making it the first jurisdiction with universal health coverage in North America.⁸ This insurance initially covered hospital care in 1947. It was expanded to medical care (mainly defined as physician services) in 1962. Services were resourced by a provincial tax-financed plan. Hospitals and physicians maintained a high degree of autonomy, billing the public plan while designing their own models of care.

The federal government played a part in the emergence of universal health coverage during that period through its spending power, which it used, and continues to use, to maintain national standards for universal health coverage. Thus, the Saskatchewan approach was adopted in the rest of the country through the encouragement of the federal government, which originally offered 50 cents for every provincial dollar spent on universal health coverage. Panel 1 outlines key events in this complex

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Panel 1: An abbreviated history of Canadian Medicare**1947**

Led by Premier Tommy Douglas, the Saskatchewan Hospital Services Plan is introduced as the first universal hospital insurance programme in North America

1957

Led by Prime Minister Louis St. Laurent, the Hospital Insurance and Diagnostic Services Act establishes 50:50 cost sharing with provincial hospital insurance plans that meet the criteria of comprehensiveness, universality, accessibility, and portability (user fees are discouraged despite no explicit prohibition)

1958

Implementation of the Hospital Insurance and Diagnostic Services Act, with five provinces participating

1959

Premier Tommy Douglas announces his plan for universal publicly funded medical insurance coverage (Medicare) in Saskatchewan

1960

Organised medicine launches a large-scale campaign against Medicare

1961

All ten provinces now participating in the Hospital Insurance and Diagnostic Services Act

July 1, 1962

The Saskatchewan Medical Care Insurance Act takes effect, establishing universal publicly funded medical insurance for Saskatchewan residents

July 1–23, 1962

Saskatchewan doctors' strike, led by the Keep our Doctors committee

July 23, 1962

Saskatoon Agreement ends the strike, establishing opt-out provisions and protections for the fee-for-service, private practice model

1964

Led by Justice Emmett Hall, the Royal Commission on Health Services recommends comprehensive universal health coverage for all Canadians

1965

Led by Prime Minister Lester Pearson, federal Liberals announce support for 50:50 cost sharing with provincial health plans that meet the criteria of comprehensiveness, portability, universality, and public administration

Dec 8, 1966

The Medical Care Insurance Act is passed in Parliament, legislating federal support of provincial Medicare plans that meet the criteria of comprehensiveness, portability, universality, and public administration

July 1, 1968

The Medical Care Insurance Act comes into effect

1971

All provinces now have established comprehensive medical insurance plans that meet the federal criteria for funding eligibility

1977

Led by Prime Minister Pierre Elliott Trudeau, federal Liberals introduce Established Programs Financing, which provides block funding transfers to provinces and lessens federal involvement in health-care provision

1979

Led by Justice Emmett Hall, the Health Services Review raises concerns about the increase in user fees and extra billing by physicians

1979

The Indian Health Policy is adopted, formalising the federal government's responsibility for health-care provision for Indigenous Canadians as directed by constitutional and statutory provisions, treaties, and customary practice

1982

Prime Minister Pierre Elliott Trudeau and Queen Elizabeth II sign the Constitution Act, establishing Canadian sovereignty through patriation; previously established Constitutional convention remained unchanged, including provincial jurisdiction over health service delivery and financing, and a federal role in pharmaceutical regulation, public health, provincial oversight, and provision of services for those groups under federal Constitutional authority (such as Indigenous peoples, armed forces, veterans, inmates, and refugees)

1984

Under Minister of National Health and Welfare Monique Bégin, the Canada Health Act is passed unanimously by Parliament, explicitly banning extra billing and establishing criteria for transfer payment eligibility (with penalties for violations): public administration, comprehensiveness, universality, portability, and accessibility

historical process that culminated in the unanimous adoption of the Canada Health Act⁹ in Canada's Parliament in 1984.

The Canada Health Act outlines the terms and conditions to which all provincial and territorial plans

must adhere in order to access federal funding for health care: portability, universality, accessibility, comprehensiveness, and public administration (panel 2). Three of these conditions are particularly effective in ensuring some commonality across 13 health systems: portability,

universality, and accessibility. Portability allows insured residents to keep their coverage when travelling or moving within Canada.¹¹ Universality stipulates that access must be on uniform terms and conditions—ie, individuals do not have preferential access based on the ability to pay privately. Accessibility means that no user fees are charged for publicly insured services: when a Canadian visits a doctor or is cared for in any department of a hospital, there is no payment or deductible. Provincial and territorial governments have upheld the principles of the Canada Health Act through various laws and policies to ensure ongoing federal funding; currently, federal transfer payments amount to approximately 20% of provincial health budgets.¹²

Financing: deep public coverage of a narrow basket of services

Financing in three layers

Expenditures on health constitute 10·4% of Canada's gross domestic product (GDP; table). This figure increased consistently for many years and peaked in 2010, at 11·6%, but decreased steadily in the years following the 2008–09 recession.¹⁴ Although this figure seems to have stabilised,¹⁴ it has not yet recovered to its previous peak.

Pundits and think tanks often claim that governments in Canada have a public monopoly on health care, but only 70·9% of total health expenditure is publicly sourced, mainly through general taxation.¹⁵ This percentage represents a considerably lower public share than that of the UK and most other nations in western Europe (table). Approximately half of the 30% private expenditure comes from out-of-pocket payments by patients; the other half is covered by private supplemental health insurance plans.

The financing of health services in Canada involves three layers (figure 1). Layer one comprises public services (those that Canadians recognise as Medicare): medically necessary hospital, diagnostic, and physician services. These services are financed through general tax revenues and provided free at the point of service, as required by the Canada Health Act. Coverage is universal in this single-payer system. The most important quality of this layer is relatively equitable access to physician and hospital care.¹⁶ Another benefit is cost containment: within Canadian publicly funded insurance plans, administrative overhead is extremely low—less than 2%—because of the simplicity of the single-payer scheme.¹⁷

Layer two services are financed through a mix of public and private insurance coverage and out-of-pocket payments, and include provision of outpatient prescription drugs, home care, and institutional long-term care. Provinces and territories each have a diverse mix of public programmes in this layer, without any national framework. For example, in some provinces, such as Ontario, all senior citizens older than 65 years have public prescription drug coverage, whereas in

Panel 2: Overview of the Canada Health Act

The following criteria and conditions must be met for provinces and territories to receive federal contributions under the Canada Health Transfer.

- Public administration: plans must be administered and operated on a non-profit basis by a public authority
- Comprehensiveness: plans must cover all insured health services provided by hospitals, physicians, or dentists (for surgical dental procedures that require a hospital setting)
- Universality: all insured residents must be entitled to the insured health services on uniform terms and conditions
- Portability: insured residents moving from one province or territory to another, or temporarily absent from their home province or territory or Canada, must continue to be covered for insured health services (within certain conditions)
- Accessibility: not to impede or preclude, either directly or indirectly, whether by user charges or otherwise, reasonable access to insured health services

Adapted from references 9 and 10.

others, such as British Columbia, drug coverage is income tested.¹⁸

Layer three services are financed almost entirely privately and include dental care, outpatient physiotherapy, and routine vision care for adults when provided by non-physicians.³

Approximately 65% of surveyed Canadians have private supplemental health insurance, mostly through their employers.¹⁹ This insurance covers some or all of the costs of layer two and three services, notably outpatient prescription medicines, generally with co-payments or deductibles.²⁰ An additional 11% of people have access to supplemental services through government-sponsored insurance plans.¹⁹ However, many Canadians do not have supplemental insurance, with provincial estimates ranging from a quarter to a third of the total population.^{19,21} These individuals have to pay out of pocket for outpatient medicines, counselling services (when provided by non-physicians), and more. Such spending has been steadily increasing, particularly for low-income Canadians.¹⁴ More than CAN\$6·5 billion in household funds was spent on pharmaceuticals alone in 2014.¹⁸ The large number of Canadians who do not have access to supplemental insurance has led to concerns about equity, fuelling calls for public coverage of a wider range of services than are currently available in layer one.

Exceptions

The federal government holds special responsibilities for providing health coverage and services to Canadian Forces personnel, inmates of federal prisons, eligible Indigenous people, veterans, and certain groups of refugees.²² The

federal government also has stewardship responsibilities for pharmaceutical regulation, health data collection, and health research funding (figure 1).

A small number of Canadian residents do not have public insurance for layer one services. Most are newcomers experiencing provincially mandated delays in coverage, rejected refugee claimants, and temporary residents with expired work or education permits.²³ In Ontario, a province of 13·6 million people, approximately 250 000 people are non-status residents and might therefore be unable to access health-care coverage.²⁴ When necessary, these people often attempt to access care through emergency departments, where upfront payment is not required.²⁵

Decentralisation of delivery: a defining feature of Medicare

Medicare is a single-payer layer of financing that is highly decentralised in terms of service delivery. This split between financing and provision of care evolved very differently from, for example, the more centralised National Health Service in the UK.

Doctors are most commonly independent contractors, billing public insurance plans on a fee-for-service or other basis.²⁶ Despite the fact that they work within the boundaries of regional or provincial health authorities and in hospitals financed almost entirely publicly, few accountability relationships exist between physicians and health authorities, hospitals, or governments.²⁷

	Canada	USA	UK	France	Denmark	Australia
Demographics						
Population	35·85 million	321·4 million	65·14 million	66·81 million	5·68 million	23·78 million
Landmass (km ²)	9·985 million	9·834 million	0·242 million	0·644 million	0·043 million	7·692 million
Average population density per km ²	3·6	32·6	269·2	103·8	132·1	3·1
Urban population*	82%	82%	83%	80%	88%	90%
Foreign-born population†	21·9%	13·1%	12·3%	11·7%	8·5%	27·6%
Human Development Index (global rank)‡	0·920 (10)	0·920 (10)	0·910 (12)	0·897 (21)	0·925 (5)	0·939 (2)
Gini coefficient of income inequality§	0·313	0·390	0·360	0·297	0·256	0·337
Population aged <15 years*	16%	19%	18%	18%	17%	19%
Population aged >65 years*	17%	15%	18%	19%	19%	15%
Fertility rate (children per woman)*	1·6	1·8	1·8	1·9	1·7	1·8
Population health						
Life expectancy at birth (years; global rank)*¶	82·14 (14)	79·16 (38)	80·78 (28)	82·26 (13)	80·35 (32)	82·50 (9)
Health-adjusted life expectancy at birth (years; global rank)	72·3 (11)	69·1 (51)	71·4 (23)	72·6 (9)	71·2 (26)	71·9 (16)
Amenable mortality by HAQ Index**	87·6	81·3	84·6	87·9	85·7	89·8
30-day acute myocardial infarction mortality††	6·7%	5·5%	7·9%	7·1%	6·3%	4·4%
Under-5 mortality per 1000‡	4·9	6·5	4·2	4·3	3·5	3·8
Population overweight or obese††	60·3%	70·1%	62·9%	52·7%	54·4%	63·6%
Population daily smokers‡	14·0%	12·9%	19·0%	22·4%	17·0%	12·4%
Leading cause of death‡‡	Cancer	Heart disease	Cancer	Cancer	Cancer	Heart disease
Experience of care						
Average length of hospital stay (days)††	7·5	5·4	6·0	5·8	3·5	4·7
Caesarean sections per 1000 births††	259	322	252	208	212	340
Hospital beds per 10 000††	27	28	27	62	27	38
Physicians per 1000	2·477	2·554	2·806	3·227	3·648	3·374
Physician generalists††	47·19%	11·92%	28·72%	46·72%	19·61%	45·01%
Nurses per 1000††	10·8	11·2	8·2	9·7	18·2	12·7
Proportion reporting difficulty accessing after-hours care§§	63%	51%	49%	64%	NA	44%
Proportion reporting wait >2 months for specialist appointment§§	30%	6%	19%	4%	NA	13%
Proportion reporting wait >4 months for elective surgery§§	18%	4%	12%	2%	NA	8%
Proportion reporting cost-related access barriers§§	16%	33%	7%	17%	NA	14%
Proportion reporting use of emergency services in past 2 years§§	41%	35%	24%	33%	NA	22%
Proportion reporting use of emergency given lack of access to regular medical doctor§§	17%	16%	7%	7%	NA	6%

(Table continues on next page)

	Canada	USA	UK	France	Denmark	Australia
(Continued from previous page)						
Per capita costs						
Total health expenditure per GDP*	10.4%	17.1%	9.1%	11.5%	10.8%	9.4%
Total health expenditure per capita (PPP)*	4641	9403	3377	4508	4782	4357
Total publicly financed health expenditure*	70.9%	48.3%	83.1%	78.2%	84.8%	67.0%
Total health expenditure out of pocket*	13.6%	11.0%	9.7%	6.3%	13.4%	18.8%
Total health expenditure on pharmaceuticals†	17.5%	12.3%	12.1%	14.7%	6.8%	14.4%
Pharmaceutical cost per capita (US\$)†	786	1112	497	668	342	617
Average general practitioner income (PPP)†‡¶¶	140 617.66	176 000.00	78 932.65	NA	NA	96 015.97
Average specialist income (PPP)†‡¶¶	230 291.66	265 000.00	161 794.37	95 162.75	139 248.35	208 107.93
Average nurse salary (PPP)†‡	55 259.93	70 610.00	49 948.20	41 161.50	58 364.26	62 919.14
Health technology assessment agency‡‡	Canadian Agency for Drugs and Technology	No centralised federal agency	National Institute for Health and Care Excellence	Haute Autorité de Santé	Danish Centre for Health Technology Assessment	Pharmaceutical Benefits Advisory Committee

OECD=Organisation for Economic Co-operation and Development. HAQ=Health Access and Quality. NA=not available. GDP=gross domestic product. PPP=purchasing power parity. *Data from World Bank Data Portal. †Data from OECD Data. ‡Data from United Nations Development Program: Human Development Reports. §Data from OECD Income Distribution Database. ¶Data from Index Mundi. ||Data from WHO Global Health Observatory Data. **Data from reference 13. ††Data from OECD.Stat. ‡‡Data from HiT reports. §§Data from 2016 Commonwealth Fund International Health Policy Survey. ¶¶Medscape Physician Compensation Report, 2013.

Table: Canada versus OECD comparators by indicators of the Triple Aim

This structure can again be traced back to Saskatchewan, where physicians responded to the single-payer model with a province-wide strike for 23 days, demanding to preserve their ability to bill patients or private insurance plans rather than the government.²⁸ The strike ended with the Saskatoon Agreement, a truce whereby doctors would become part of the system as publicly paid but self-employed professionals with minimal engagement in or accountability to system-wide governance.²⁹

Further fragmentation is inherent in the fact that hospitals, health authorities, and other organisations often have their own independent boards and separate budgets, and thus make decisions about the kinds of services they will provide independently of other parts of the system.⁹

The centralised data collection that occurs in single-payer insurance plans has great potential to support quality improvement of the health system. Currently, these data inform the strategic directions of health ministries and support excellent health services research in most provinces. Unfortunately, their use for operational purposes to drive front-line improvements has been scarce. Data are seldom provided in real time to organisations and providers delivering care because of the prioritisation of privacy, data security, and the difficulties involved in provision of just-in-time data from large administrative databases.³⁰

The ease of innovation scale-up that should in theory characterise a single-payer environment remains unrealised.^{31,32} In Canada, the rate of adoption of electronic medical records increased from about 23% of health-care practitioners in 2006 to an estimated 73% in 2015.³³ Nonetheless, hospital-based systems and primary care systems are commonly designed in isolation from each other. This separation makes information sharing difficult as patients move through distinct parts of the system that

use different electronic tools unlinked to each other, causing further fragmentation of care.

National bodies that could overcome fragmentation of coverage or service delivery have had varying degrees of success. The special Canadian brand of decentralisation is illustrated in the case of health technology assessment, an area in which many countries use arm's length agencies to make nationwide decisions about funding allocation (eg, the National Institute for Health and Care Excellence in the UK). The Canadian version is the Canadian Agency for Drugs and Technologies in Health (CADTH), an intergovernmental body that provides evidence-informed funding recommendations as to which drugs and technologies should be publicly covered. However, unlike most international health technology assessment organisations, CADTH's outputs are advisory only. Although regional health plans made coverage decisions consistent with these recommendations in more than 90% of cases between 2012 and 2013, manufacturers must nonetheless navigate 13 provincial and territorial labyrinthine approval processes even after receiving CADTH sanction.³² Furthermore, 85% of private plans provide coverage for all prescriptions, including those that CADTH recommends against, with the result that evidence-informed recommendations do not necessarily cross the public-private divide.³⁴

The context for change

Fiscal constraints

As Canadian governments, providers, and the public consider how to address the important health policy challenges of the day, their options are defined by several factors. Some of these factors are common across many countries in the Organisation for Economic Co-operation and Development (OECD), such as fiscal constraints,

For data from World Bank Data Portal see <http://data.worldbank.org/>

For data from OECD Data see <https://data.oecd.org/>

For data from United Nations Development Program: Human Development Reports see <http://hdr.undp.org/en/data>

For data from OECD Income Distribution Database see <http://www.oecd.org/social/income-distribution-database.htm>

For data from Index Mundi see <http://www.indexmundi.com/>

For data from WHO Global Health Observatory Data see <http://www.who.int/gho/en/>

For data from OECD.Stat see <http://stats.oecd.org/>

For data from HiT reports see <http://www.euro.who.int/en/about-us/partners/observatory/publications/health-system-reviews-hits/full-list-of-country-hits>

For data from 2016 Commonwealth Fund International Health Policy Survey see <http://www.commonwealthfund.org/interactives-and-data/surveys/international-health-policy-surveys/2016/2016-international-survey>

For the Medscape Physician Compensation Report, 2013 see <http://www.medscape.com/features/slideshow/compensation/2013/public>

population ageing, and the social determinants of health; other factors have uniquely Canadian elements, such as geography and particular patterns of migration.

Following the recession of 2008–09, economic growth in Canada was slower than it had been throughout much of the post-World War 2 era, with GDP growth averaging just over 2% annually between 2011 and 2016.³⁵ In the past decade, provincial governments have increasingly focused on reducing the rate of growth in health-care spending, which constitutes 38% of provincial budgets based on the pan-Canadian average.¹⁴

Population ageing

In demographic terms, Canada is still a younger country than many European nations.³⁶ The fertility rate in Canada, which was 1·6 children per woman in 2015 (table; data from World Data Bank Portal), has remained relatively stable over the past decade, largely because of higher rates of childbearing among Indigenous and foreign-born Canadian women than among the general population.³⁷

Nevertheless, ageing remains an inevitable reality as the baby boom generation enters its senior years. People aged 65 years and older represent Canada's fastest growing age group, and 85% of seniors aged 65–79 years reported having at least one chronic condition in 2012.³⁸ The financial burden of ageing is not expected to be catastrophic, contributing an estimated less than 1% per year to health-care spending; however, the trend is important for design of health services.³⁹ The traditional hospital-focused and physician-focused nature of the Canadian system must evolve to meet the growing need for home-based and community-based care, interprofessional team-based care, and institutional long-term care.⁴⁰

Social determinants of health

The Lalonde Report of 1974 (panel 3) served as a catalyst for widespread recognition that health is determined more by social, cultural, economic, and gender-based determinants of health than by access to health-care services.⁴¹ In a country where the contribution of health services to health is estimated to be only 25%, the impact of other determinants including poverty is considerable.⁴² More than 13% of Canadians were living in a low-income household in 2016.⁴³ This hardship disproportionately affects vulnerable Canadians from particular ethnocultural backgrounds and some groups of migrants who are more than twice as likely to experience poverty than other Canadians.⁴⁴ Thus, as is the case across high-income countries, policies aimed at income redistribution, housing support, and early education and childhood development programmes will continue to be crucial to the health of the population.⁴⁵

Geography

The geographical challenges to Canada's health system are enormous. Approximately 18% of Canada's

population lives in rural or remote communities dispersed throughout 95% of the area of the second largest country in the world (table). North of the densely inhabited Canada–USA border corridor, the need for remote primary care facilities and frequent medical transport to specialised centres renders health-care delivery both challenging and expensive (figure 2).⁴⁶ The distribution of health-care providers and resources does not mirror need: only 13·6% of family physicians and less than 3% of specialists live in rural and remote areas of Canada.⁴⁷ Similar distributional imbalances exist for nurses and other regulated health-care professionals.

These realities have led to the emergence of high-performing regional networks for expensive specialty care, such as trauma services, cancer care, and organ transplantation. Telemedicine—in which local providers or patients receive specialist advice via telecommunication—has facilitated rapid access to emergency subspecialty assessment and follow-up, and is gradually expanding its role in chronic disease management.⁴⁸ New curricula and legislation have allowed rural nurses, nurse practitioners, pharmacists, and primary care physicians to broaden their scopes of practice into areas such as oncology or surgery.^{49,50} Trainees across the regulated health professions are increasingly being trained in rural or remote communities to prepare them for careers outside major cities.⁵¹

Despite these successes, Canadians living in remote areas must often travel long distances to access anything beyond the most basic forms of health care.⁵² For example, in Nunavut, a northern and largely Indigenous territory, 58% of patients needing inpatient and outpatient hospital care are transported outside the territory.⁵³ These geographical complexities might change in the coming decades, as Canada continues to urbanise. Census data from 2016 show that almost 60% of Canadians now live in metropolitan areas, with one in three individuals living in Toronto, Montréal, or Vancouver.⁵⁴

Ethnocultural and linguistic diversity and migration

Migration has been and remains an important force shaping Canadian demography and identity (figure 3). At present, more than one in five Canadians are foreign-born.⁵⁵ Canada welcomed nearly 325 000 immigrants and refugees in 2015, representing just under 1% of the total population.⁵⁶ Most immigrants and refugees settle in one of the country's three biggest cities—Toronto, Montréal, or Vancouver.⁵⁷

Despite the Canadian commitment to multiculturalism and a general historical pattern of strong immigrant integration into Canadian society, the health status of many migrant groups often differs from that of Canadian-born patients.^{58–60} Newly arrived economic immigrants are typically healthier than the general population, but this so-called healthy immigrant effect declines over

Panel 3: The history of national commissions and inquiries on health care in Canada

1961–64: Royal Commission on Health Services (Hall Commission)

Led by Justice Emmett Hall, the Commission recommended comprehensive health coverage for all Canadians and development of national policy in health services, health personnel, and health-care financing.

1973–74: A New Perspective on the Health of Canadians (Lalonde Report)

Led by Marc Lalonde, Canadian Minister of National Health and Welfare, this paper introduced the public health imperative and called for the prevention of illness and promotion of good health. It called for the expansion of the health-care system beyond disease-based medical care.

1979–80: Health Services Review

Led by Justice Emmett Hall, this review reported on the progress made since the 1964 commission and sought to determine whether provinces were meeting the criteria of the Medical Care Insurance Act. This inquiry identified widespread extra billing and user fees, and served as a catalyst for the Canada Health Act.

1991–96: Royal Commission on Aboriginal Peoples

The Commission investigated the evolution of the relationship between Aboriginal and non-Aboriginal people and governments in Canada. Major recommendations included the training of 10 000 health professionals over a 10-year period.

1993–97: Commission of Inquiry on the Blood System in Canada (Krever Inquiry)

Led by Justice Horace Krever, the Commission investigated the use of contaminated blood products that infected 2000 transfusion recipients with HIV and 30 000 with hepatitis C between 1980 and 1990. This Commission led to the creation of Canadian Blood Services in 1998.

1994–97: National Forum on Health

Commissioned by Prime Minister Jean Chrétien, this group of experts from across Canada focused on broad determinants of health and the need for enhanced emphasis on evidence-based care.

1999–2002: Standing Senate Committee on Social Affairs, Science and Technology Study on the State of the Health Care System in Canada (Kirby Committee)

Led by Senator Michael Kirby, this committee conducted a comprehensive review of Canadian health care. Recommendations included a call for enhanced federal oversight to ensure effective care and efficient resource use, and highlighted poor health human resource planning as a cause of geographical inequities.

2001–02: Commission on the Future of Health Care in Canada (Romanow Commission)

Led by former Saskatchewan Premier Roy Romanow, the Commission called for a renewed commitment to the values of equity, fairness, and solidarity. The report was the catalyst for the 2003 “Accords” and the establishment of the Health Council of Canada (defunded in 2014) to monitor progress on key objectives.

2003: National Advisory Committee on Severe Acute Respiratory Syndrome (SARS) and Public Health

Led by David Naylor, this committee was established to review the circumstances of the 2003 SARS outbreak. The report identified significant issues with public health in Canada and led to the creation of the Public Health Agency of Canada.

2008–15: Truth and Reconciliation Commission of Canada

Undertaken as part of holistic and comprehensive response to the systemic abuse suffered by Indigenous Canadians under the Indian Residential School system, the commission identified calls to action to advance reconciliation. Although not specifically focused on health care, the report highlighted substantial gaps in health care for Indigenous people and outlined the substantial impact of the trauma on mental and physical health.

2015: Advisory Panel on Healthcare Innovation

Led by David Naylor, the panel’s Unleashing Innovation report highlighted the need for enhanced patient engagement, workforce modernisation, technological transformation, and improved scale-up of existing innovations.

time, partly because of the stresses of integration, and it is not found across other classes of migrants.⁶¹

Recent immigrants are twice as likely to have difficulty in accessing care than are Canadian-born women and men, and seek primary care less often than either established immigrants or the Canadian-born population.^{62,63} However, with longitudinal data controlling for individual propensity to seek care, immigrants are no more likely to be without a regular doctor or report an unmet health-care need than is the Canadian-born population.⁶⁴ For refugees, challenges are more prevalent and complex.⁶⁵ Language is the most commonly cited reason for difficulty in accessing care among many categories of migrants, whether they are

newcomers or established.⁵⁵ Availability of interpretation services and adequate use of those services, along with appropriate training for health-care providers and increased health and legal literacy for newcomers to Canada, would pave the way for improved access to context-sensitive care (panel 4).^{65,66}

Policy challenges

Three urgent issues

Canadians have a life expectancy at birth of 82·14 years (table), which is longer than the OECD average. Canada also outperforms the USA, the UK, and Denmark in terms of amenable mortality (ie, deaths that should not

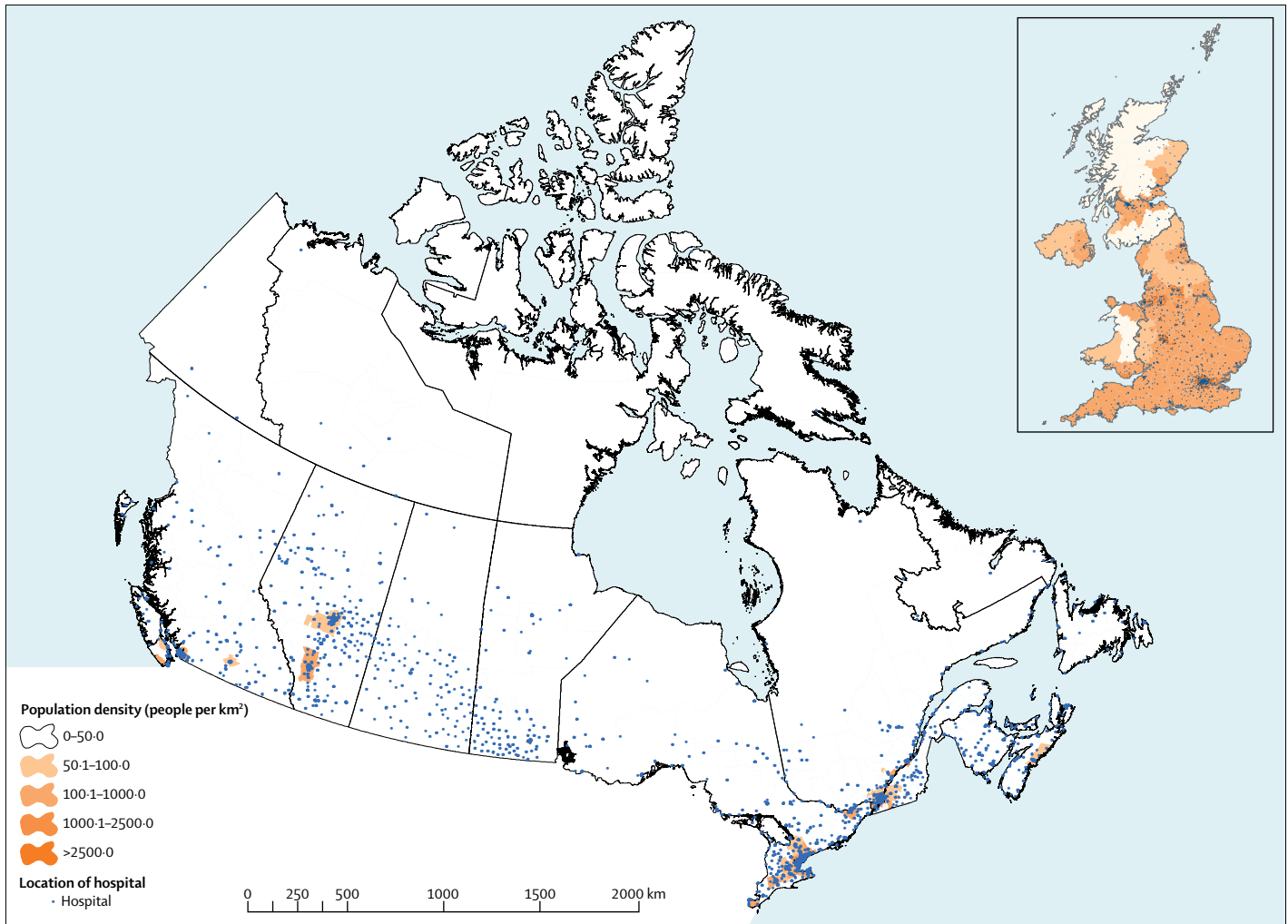


Figure 2: Population density and distribution of hospitals in Canada (and the UK)

The map shows the population density and wide geographical distribution of health-care delivery. For comparison, a map of the distribution of hospitals in the UK is shown inset. Hospital data for Canada are from DMTI Spatial, 2016, and population data for Canada are from Statistics Canada, 2016. UK hospital data are from the National Health Service, 2016, and UK population data are from Eurostat.

occur in the presence of timely and effective health care), as measured through the Health Access and Quality (HAQ) Index.¹³ But key observations from international comparisons point to a decades-long struggle with wait times for some elective care and inequitable access to services outside the traditional Medicare strength of hospitals and doctors.⁶⁷ Average life expectancy also masks variations in vulnerable groups, most notably Indigenous populations: First Nations people have a projected life expectancy of 73–74 years for men and 78–80 years for women; for the Inuit, living in the far north, life expectancy was 64 years for men and 73 years for women as of 2017.⁶⁸

What is most distressing to many observers of the Canadian system is the persistence of its problems over time.⁶⁹ Change in Canada is often slow and incremental, by contrast with the major and rapid transformations often observed in reforms of the UK's National Health Service.⁷⁰ It is thus most accurately described not as a

system in crisis, but a system in stasis.⁷¹ Within that context, and considering the complex needs of many segments of the Canadian population, three crucial problems require action.

Wait times for elective care are too long

Urgent medical and surgical care is generally timely and of high quality in Canada, as indicated by outcomes such as acute myocardial infarction mortality (table). However, the timeliness of elective care, such as hip and knee replacements, non-urgent advanced imaging, and outpatient specialty visits, is problematic.⁷² The proportion of Canadians waiting more than 2 months for a specialist referral is 30% (table), which is far greater than any OECD comparator in the Commonwealth Fund's comparison of 11 countries.⁶⁷ Similarly, the proportion of Canadians waiting more than 4 months for elective non-urgent surgery is greatest at 18%.

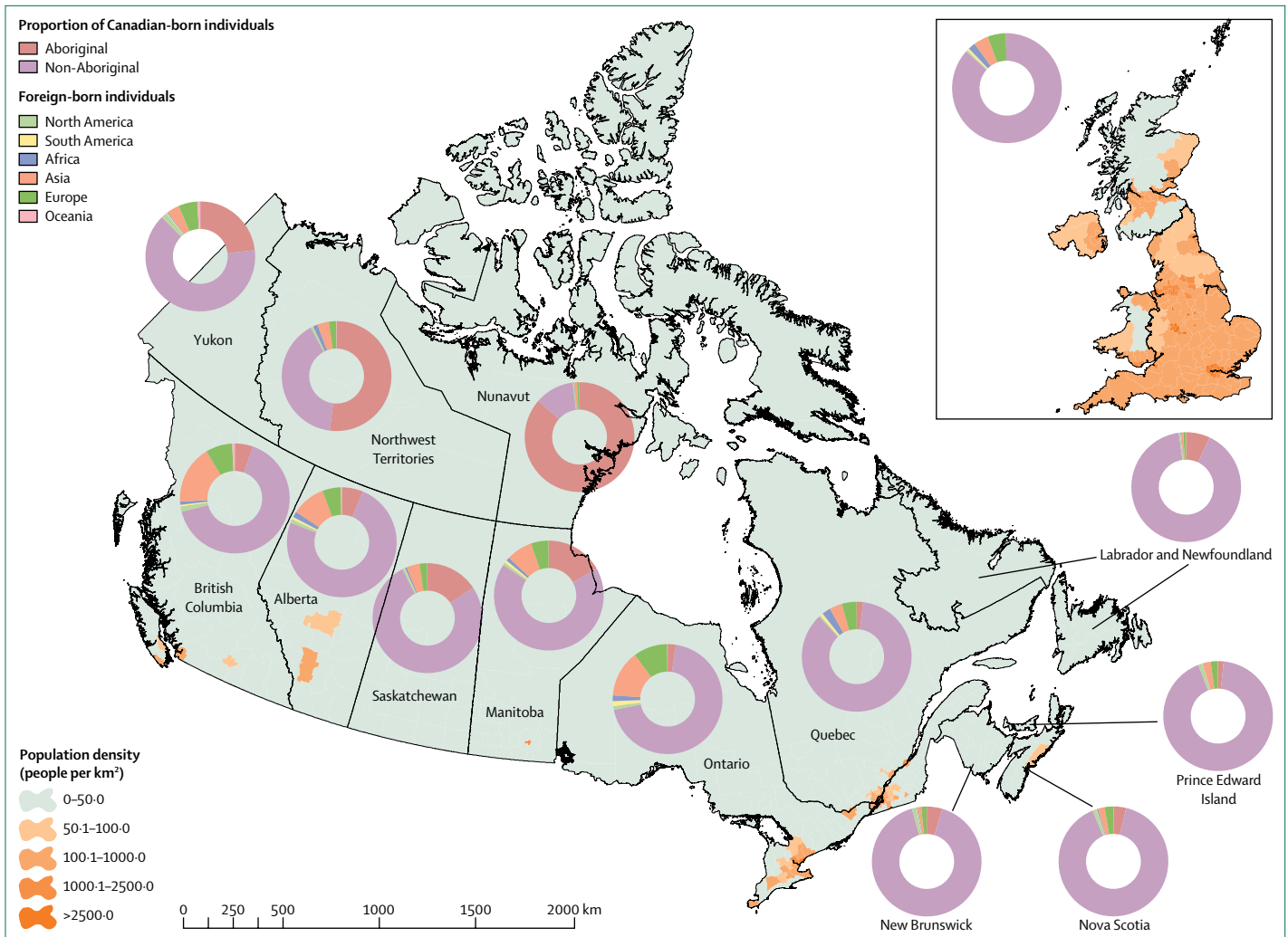


Figure 3: Map of Canada by country of birth

The map illustrates the population density and the proportion of provincial populations based on country of birth. For comparison, a map of the UK by country of birth is shown inset. Population data for Canada are from Statistics Canada, 2012, and population data for the UK are from the UK Office of National Statistics, 2016.

Governments have experimented with wait-time guarantees, focused programmes, and targeted spending in priority areas such as cancer care, cardiac care, and diagnostic imaging, with varying degrees of success. For example, all provinces achieved wait-time benchmarks in radiation oncology in 2016, but long elective MRI wait times remain largely unchanged over the past decade, despite substantial growth in the number of machines purchased and scans done.^{73,74}

The high degree of physician autonomy in Canada does little to encourage doctors to join organised programmes to reduce wait times. Successful models exist, such as the Alberta Bone and Joint Health Institute in Calgary, which reduced wait times for consultation for hip and knee replacement from 145 days to 21 days through innovations including interprofessional teams and centralised referral.⁷⁵ However, physicians have competing

responsibilities, and there is no systemic support for their involvement in system change. If a government or regional health authority wants physicians to participate in such an initiative, it must often rely on exhortation or simply pay its doctors more to gain their involvement. Poor federal-provincial-territorial collaboration also hinders the ability to scale up such successful responses to wait times across provincial borders, hence the characterisation of Canada by at least one former Minister of Health as a “country of perpetual pilot projects”.^{76,77}

Canada’s reasonable performance on composite quality metrics such as amenable mortality suggests that these wait times for elective care do not necessarily translate to worse health outcomes.⁷⁸ However, for the Canadian public, long wait times for elective care are a lightning rod issue and threaten to undermine support for Medicare. Some groups have turned to the courts as a means of

Panel 4: Health-care experiences of vulnerable groups in Canada**Vanessa: an Indigenous health story**

Vanessa is a healthy 28-year-old First Nations woman pregnant with her third child. Her two previous deliveries were uncomplicated and her pregnancy is considered low risk. On her northern First Nations reserve, primary care services are provided by nurses in the community clinic and supported by a family physician who flies in once a month. The nearest community an hour away has a small hospital, but provides no intrapartum services.

Vanessa has access to prenatal care close to home. It is important for her that such care is given within the community, increasing the ease of access and sense of cultural safety. Her medical care and prenatal vitamins are covered through public health insurance plans, as is her transportation to medical appointments outside the reserve. She worries about her partner when she is away, particularly given the deep impact of a cluster of recent suicides in the community that included his teenaged sister. The community is affected by many preventable deaths, including suicides, and trauma, but no births—the circle of life feels incomplete.

At 34 weeks' gestation, Vanessa must travel to the city, where she sits in a motel room and waits to go into labour. Neither the timing of the baby's arrival nor the potential complications that can arise can be predicted, so Vanessa waits alone. As for most women in communities like hers, the birth will occur not with a midwife in her community, but in a hospital hundreds of kilometres away from her partner and children, compromising her much-needed sense of cultural safety. Her access to health-care services free at the point of care is critical, but she wishes her care could be connected to her home, her family, and her culture. If these defects in the system are addressed, perhaps Vanessa's next generation will grow up to expect access to such vital, culturally safe health care.

Mahmoud: a migrant health story

Mahmoud is a 52-year-old Syrian dental surgeon who arrived in Canada with his wife and four children in 2016, as a government-sponsored refugee family. The children started public school while both parents enrolled in the government-funded English-language training for the first months of settlement.

Despite having publicly funded health insurance immediately on arrival, Mahmoud does not access primary care for himself or his family for many reasons, including discomfort with the English language and a lack of knowledge of where to seek care. When he begins to feel unwell, after stalling for a long time, he goes to a local community clinic. An appointment is given for him to return with interpreter services for the following week.

Unfortunately, in the meantime, Mahmoud is admitted to hospital with uncontrolled blood sugars. He is started on oral hypoglycaemics. As a refugee, his medicines are covered, but when he transitions to regular provincial health insurance he will have to pay for his medicines out of pocket.

The process associated with recognition of Mahmoud's dental credentials and skills is complex and lengthy. To take care of his family, he takes up taxi driving. With his unpredictable hours, he finds it hard to comply with his prescribed regimen and starts missing follow-up appointments.

As the Ramadan period approaches, Mahmoud knows he will fast but does not consult with the health team at the local clinic, unsure whether he would be understood as he does not know how to get an interpreter. Despite the fact that there is an increasing sensitivity to the diversity of the Canadian population by the health-care professionals, who are also becoming increasingly diverse, more work is needed to improve communication and personalisation of care, especially at the primary care level.

challenging the public–private payment divide. Relying on the constitutional Charter of Rights and Freedoms, major lawsuits in Quebec and British Columbia have argued that various provisions of provincial laws, including those that prevent privately financed care, are at the root of public wait times and threaten the right to security of the person.^{79–82}

Little more than a decade ago, the Quebec government responded to the Supreme Court of Canada's Chaoulli decision by allowing private insurance for a few types of surgical procedures, but this outcome did not create a viable private market for a health insurance duplicative of Medicare.⁸³ A more ambitious lawsuit impugning provincial Medicare laws was launched in British Columbia in 2016.⁸⁴ Unlike the Quebec trial, which sought only to overturn limits on private duplicative insurance, the plaintiffs in the Cambie Surgeries Corporation case in British Columbia seek to also

overturn restrictions on user fees and on physician dual practice.⁸⁵

In the past decade, Canadian courts have made important judgments on several other major questions of health-care delivery, including the legalisation of safe injection sites, reinstatement of insurance coverage for refugee claimants, and legalisation of medical assistance in dying.^{86–88} These decisions have generally increased access to care for vulnerable people. However, should the court in the Cambie Surgeries Corporation case establish a legal right for Canadians of means who wish to jump the public queue, this case could fundamentally reshape Medicare laws across the country and could threaten equitable access to care. If Canadians are unable to find ways to change the system from within through clinical and political leadership, there is a risk that changes will be forced by the courts, which are a blunt instrument for making policy change.

Services outside the Medicare basket are often inaccessible

Up to a third of working Canadians do not have access to employer-based supplemental private insurance for prescription medicines, outpatient mental health services provided by professionals such as social workers or psychologists, and dental care.²¹ These individuals are more likely to be women, youths, and low-income individuals. Public coverage of those services varies between provinces, but generally focuses on seniors and unemployed people receiving social assistance, leaving the working poor most vulnerable.⁸⁹ Thus, inequities in health outcomes driven by the social determinants of health are at risk of being compounded by the narrow but deep basket of publicly funded services.

Notably, Canada is the only developed country with universal health coverage that does not include prescription medications, and 57% of prescription drug spending is financed through private means.^{18,90} Nearly one in four Canadian households reports that someone in that household is not taking their medications because of inability to pay.⁹¹

Beyond prescription drugs, inequitable access to home-based care and institutional long-term care is pressing. In 2012, nearly 461 000 Canadians aged 15 years or older reported that they had not received help at home for a chronic health condition even though they needed it.⁹² Because such layer two services receive inadequate public financing, Canadians aged 65 years or older have cited inability to pay as the main barrier to accessing the home and community care support they needed.⁹² Some combination of inspired leadership, public financing, engaged governance, robust regulation, and intergovernmental cooperation seems to be needed to protect the public interest and address inequities of access to layer two services.

Indigenous health disparities are unacceptable

As in other settler societies such as Australia, New Zealand, and the USA, Indigenous populations in Canada were colonised and marginalised. In the Canadian case, marginalisation took the forms of Indian Residential Schools, government-enforced relocation, and historically segregated Indian hospitals, to name a few.^{93,94} Three distinct and constitutionally recognised groups—First Nations, Inuit, and Métis—constitute 4·3% of the Canadian population and experience persistent health disparities relative to the non-Indigenous population, including higher rates of chronic disease, trauma, interpersonal and domestic violence, and suicide, as well as lower life expectancy and higher infant mortality rates.^{95–97} For example, Canada's infant mortality rate dropped by 80% from more than 27 deaths per 1000 livebirths in 1960, to five per 1000 livebirths on average in 2013.⁹⁸ However, the estimated rate in Nunavut (the northern territory in which approximately 85% of the population is Inuit) was more than three

times the national rate at 18 deaths per 1000 livebirths in 2013.⁹⁸

Other far-reaching inequities exist in the social determinants of health that even the best health-care systems cannot redress. Indigenous Canadians face substantial wage gaps of up to 50% compared with non-Indigenous groups, after adjustment for education and age.⁹⁹ Persistent racism and social exclusion permeate not only the health-care but also the education and justice systems, with subsequent disparities in high school education rates, incarceration rates, and other factors often driving egregious health statistics.¹⁰⁰

These challenges are not evenly distributed: figure 3 illustrates the proportion of the population that is Indigenous by province and territory. Due in part to higher fertility rates in the Indigenous population than in the general population, by 2036, a projected one in five people will be an Indigenous person in the western provinces of Saskatchewan and Manitoba.¹⁰¹

A dizzying array of services in the health-care system, including federal programmes, provincially provided services, and highly bureaucratised add-ons, together continue to fail to meet the needs and constitutional rights of Indigenous people.¹⁰² Indigenous people are covered by provincial Medicare plans, but some on-reserve health-care services fall under federal jurisdiction, and many Indigenous people receive supplemental insurance through the federal government.

Canada is actively grappling with its colonial history. An unprecedented Truth and Reconciliation Commission (TRC) released a report⁹⁴ in 2015 that shared the stories of Indian Residential School survivors who lost connection to family, land, culture, and language through a process intended to assimilate them into western society. Seven of the 94 calls to action in the report refer directly to steps required to address the inequities in health. From recognising and valuing traditional Indigenous healing practices to training Indigenous doctors and nurses and setting measurable goals to close gaps in access to health-care services, the TRC calls to action address crucial themes, many of which are rooted in self-governance. The newly established First Nations Health Authority in British Columbia, which is self-governed and community-driven, is an example of the type of emerging model intended to address the demand for self-governance in the administration and delivery of culturally safe and responsive services for Indigenous people in Canada.¹⁰³ The remaining TRC calls to action, should they be implemented, would help to reduce disparities in the social determinants of health, leading to better health-care outcomes.

An opportunity to renew the social contract The role of governments: federal, provincial, and Indigenous

As Canadians observe the 150th anniversary of Confederation in the face of these three important

challenges, a renewed vision of the roles of governments, providers, and the public will be required to overcome the stasis of the present and achieve the potential of single-payer Medicare. Rather than continue the Canadian tradition of slow, steady, and incremental change, governments must step forward boldly and with proactive commitment to ensure a vital and sustainable system for all Canadians.

The predominant administrative and delivery responsibilities for health care in Canada will always lie with provincial and territorial governments. The work of reorganising resources, building infrastructure, and delivering programmes for an ageing population under fiscal constraints is theirs to lead. For wait times in particular, a focus on provincial implementation of successful projects using the available financial and policy levers is long overdue.

However, provincial and territorial governments cannot succeed alone. At a few key times in Canadian history, the federal government has overcome decentralisation and fragmentation by setting a national vision for health care and investing politically and financially in that vision. In an era in which Canada is reasserting its commitment to progressive values on the international stage,⁷ health care represents a key domestic opportunity to recommit to the core Canadian values of equity and solidarity.¹⁰⁴

The movement to expand the scope of the public basket of services is at the heart of this approach, and we support mounting calls for universal prescription drug coverage¹⁰⁵ as well as expanded home care,¹⁰⁶ long-term care,¹⁰⁶ and mental health services¹⁰⁷ to be included in layer one of the financing system. Royal Commissions as far back as the 1964 Hall Commission¹⁰⁸ and as recent as the 2002 Romanow Commission¹⁰⁹ have clearly articulated the need for this expansion. In particular, debates about a so-called Pharmacare system are gaining needed momentum, as multiple economic evaluations have suggested that improved access through an expansion of public coverage is possible at lower overall costs.¹¹⁰ As the Quebec experience illustrates, it is difficult for any one province to begin alone as Tommy Douglas did in Saskatchewan—federal cost sharing and stewardship will be required at an early stage to achieve the savings as well as the coverage and quality goals of Pharmacare.¹¹¹

With respect to wait times, solutions will continue to be based in local innovations, but the infrastructure for national spread and scale-up requires active federal involvement. One possible approach, recommended by a federally commissioned panel on health innovation, would be a Healthcare Innovation Fund intended to accelerate the spread and scale-up of promising innovations.³²

A constructive partnership between the federal government and Indigenous peoples could overcome one of Canada's most difficult challenges—the very poor health outcomes of Indigenous peoples. Newly established principles guiding the relationship between the Government of Canada and Indigenous peoples, as well as the

launch of a new federal Ministry of Indigenous Services established in August, 2017, could set the tone for renewed terms of engagement.¹¹² This commitment to self-determination will mean supporting new models of self-governance within and beyond the health-care sphere, with a particular focus on healing from intergenerational trauma and a strengths-based, wellness-focused approach to enhancing the social determinants of health. Canada's considerable experience with decentralised models of health-care delivery should allow for such innovation, and the opportunity must be seized with more urgency.

The TRC's calls to action must move from suggestions based on the courageous voices of survivors of the Indian Residential School system to non-negotiable tasks for all levels of government, all professional organisations, and all citizens. These tasks include: first, measurement and frank evaluations of health-care systems and programmes; second, creation of cultural safety and humility within a health-care system that needs to rebuild trust; and third, true representation of Indigenous Canadians within the ranks of providers and leaders of the health-care system. Mutual accountability here is essential.

The role of providers

Canadian hospital-based nurses, nurse practitioners, pharmacists, physiotherapists, and other health professionals are employed by health service delivery organisations and regional health authorities. As employees, these regulated health professionals have accountability for quality improvement and system reform, and their influence and importance in the system have been increasing steadily for decades.¹¹³ The scope and availability of interprofessional and nurse-led care models continue to grow, as evidenced by policy outcomes such as the rapid increase in nurse practitioners in Quebec as part of that province's approach to primary care reform.¹¹⁴ Given the importance of interprofessional teams in improvement of access to high-quality primary and specialty care, such teams must be accelerated to reduce wait times, work on disparities associated with social determinants of health, and improve care for vulnerable groups.

By contrast, Canadian physicians remain primarily self-employed, independent professionals.¹¹⁵ Ongoing conflicts are fuelled by mounting pressure to alter this arrangement and increase professional accountability for and to the system.¹¹⁶ Productive partnerships between physicians and governments at times exist, but co-stewardship of finite resources is not built into the structure of the system. The need for physician engagement, both at the individual and collective level, is crucial as Canada moves to address long wait times for elective care, because solutions so often involve the reorganisation of traditional referral models and the introduction of team-based care. Furthermore, expanded public coverage of prescription medications will necessitate a drive towards more evidence-informed and

value-based prescribing. Canadian physicians are well situated to constructively contribute to such efforts to define value and help to shift behaviour. As founders of evidence-based medicine and important contributors to global medical research, Canadian physicians must help to lead the necessary research and debates on change within the health-care system.¹¹⁷ They are critical partners in ensuring quality, consistency, and availability of services.²⁷ Medical associations in at least two provinces have recognised the importance of system stewardship in the practice of professionalism and have committed to health system reform in collaboration with governments.^{118,119} The Canadian Medical Association's renewed strategic plan places patients at the core of its mission.¹²⁰ And leaders in medical education have embraced a social accountability mandate and are actively working to train the “right mix, distribution, and number of physicians to meet societal needs”.¹²¹ This approach is a model with potential broad international application.

The role of the public: patients, taxpayers, and citizens

It is not yet clear what mechanisms will emerge to alter patient behaviours as the system evolves. An early example of patients being encouraged to engage directly in system stewardship is Choosing Wisely Canada. This clinician-led campaign to address overuse of tests and treatments is part of the international movement to reduce low-value care.¹²² The campaign offers four questions that patients can ask to start a conversation with their health-care provider about whether a test, treatment, or procedure is necessary.¹²³ Users of services will also need to be willing to participate in new models of care delivery that have been shown to successfully reduce waits for specialty care. These models will include those that are more team focused than physician focused, and models centred in comprehensive primary care with expanded scopes of practice.

Public engagement and participation in health-care policy require engagement with people as taxpayers, who want value for money, and as citizens, who continue to believe in the principle of equitable access to services. At times, governments have assessed public support for various reform options through the public consultations of independent Royal Commissions or external advisory panels, many of which are listed in panel 3. National Royal Commissions are independent inquiries, invited through the power of the Crown to investigate matters of national importance and characterised by extensive consultations with the public.^{124,125}

Such commissions produce reports that are often accused of gathering dust, but at times they can be transformative in terms of public views and judgment, eventually having a profound effect on government policy. Some commissions even produce immediate change. Despite admirable efforts by health-care providers on the ground in Ontario and British Columbia to contain the outbreak of severe acute respiratory syndrome (SARS) in

2003, a subsequent review highlighted long-ignored flaws plaguing the system that were unmasked by the outbreak and led to formation of the Public Health Agency of Canada 1 year later.^{126,127}

As in the rest of the world, other models of citizen engagement in public policy are being explored, but the value of such initiatives is not yet known.¹²⁸ Citizens' panels are becoming more common, such as one on national Pharmacare in 2016.¹²⁹ Public support for and participation in values-based, evidence-informed decision making will be crucial to ensure financial sustainability and to mitigate the risks of overprescribing in the area of pharmaceutical policy.

Public engagement in health research—as seen, for example, in the Canadian Institutes of Health Research-funded Canada's Strategy for Patient-Oriented Research— incentivises each province and territory to identify research priorities in collaboration with patients, and must continue.¹³⁰ Public input of this kind should be nurtured, since it can help policy makers to balance the need for health system investment against other social priorities.

Canadian lessons for a global world

Canada's most important accomplishment by far has been the establishment of universal health coverage, which is free at the point of care, for medical and hospital services. The preservation and enhancement of Medicare are due largely to Canadians' pride in caring for one another—an expression of equity and solidarity that runs core to Canadian values. Hinging on a social consensus of equitable access to health care, the simplicity of the system—no variable coverage, no means testing, and no co-payments—is easy for Canadians to understand and support.

But universal health coverage is an aspiration, not a destination. All countries must continuously consider the depth and scope of coverage that is politically achievable and fiscally feasible. In Canada, that necessary work has not been done for more than 40 years. The Canadian experience thus offers a cautionary tale on incrementalism. In the absence of bold political vision and courage, coverage expansion can be very difficult to achieve, with the result that the Canadian version of universal health coverage is at risk of becoming outdated.

A powerful mechanism such as a single-payer insurance system is only as good as the willingness of system leaders to use it for reform. In turn, reform requires a willingness on the part of governments to pursue change, rather than simply managing the status quo. Clear mechanisms are lacking to consistently realign resources to meet population needs, promote evidence-based care, reduce variation, and contain costs. Health care is ultimately a local affair, and no patient or provider wants the payer in the examination room. However, much of the potential benefit of a single-payer structure is lost when institutions are independent, with little accountability. The potential of

the system is further limited by the fact that physicians function alongside but outside the system, rather than as accountable participants through employment or other contractual means. Co-stewardship and accountability should be recognised as integral parts of payment systems rather than avoided or grafted on afterwards.

Conclusion

When Tommy Douglas first established public health insurance in Saskatchewan in the late 1940s, his goal was to begin by creating insurance models that would eliminate the financial barriers to care. He intended to follow that with a second reform of health service delivery that would focus on population health needs, with an emphasis on the reform of delivery models and on the social determinants of health.¹³¹ His government, and subsequent governments, provincially and federally, managed to overcome fragmented institutional structures and decentralisation of power to make the first stage of his vision a reality, but not yet the second. To achieve that second stage in the 21st century, determined action on the social determinants of health and a joint effort by governments, health-care providers, and the public in achieving health system reform will be needed. With bold political vision and courage, this ambitious goal is within reach.¹³²

Contributors

All authors contributed to the formulation of the ideas in the manuscript and the writing of initial drafts. All authors contributed to the literature search and editing of the manuscript. APM, DM, and AQ-V contributed to the figures. All authors reviewed and approved the final manuscript before submission.

Declaration of interests

DM is currently an external adviser to the Government of Canada on a review of pan-Canadian health organisations. NRC is a consultant for the cancer strategy of British Columbia's First Nations Health Authority and co-director of the Centre for Excellence in Indigenous Health, University of British Columbia (Vancouver, BC, Canada). GPM was executive director of the Romanow Commission. We declare no other competing interests.

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References

- 1 Palley HA, Pomey MP, Forest P-G. Examining private and public provision in Canada's provincial health care systems: comparing Ontario and Quebec. *Int Polit Sci Rev* 2011; **32**: 79–94.
- 2 Marchildon GP. The public/private debate in the funding, administration and delivery of healthcare in Canada. *Healthc Pap* 2004; **4**: 61–68.
- 3 Marchildon GP. Canada: health system review. *Health Syst Transit* 2013; **15**: 1–179.
- 4 Osborn R, Squires D, Doty MM, Sarnak DO, Schneider EC. In new survey of 11 countries, US adults still struggle with access to and affordability of health care. *Health Aff (Millwood)* 2016; **35**: 2327–36.
- 5 Canadian Press. Poll: Canadians are most proud of universal medicare. *CTV News* (Ottawa, ON), Nov 25, 2012. <http://www.ctvnews.ca/canada/poll-canadians-are-most-proud-of-universal-medicare-1.1052929#> (accessed May 30, 2017).
- 6 Johnston D. 2012 convocation ceremony of the Royal College of Physicians and Surgeons of Canada. Oct 19, 2012. <http://www.ggc.ca/document.aspx?id=14787> (accessed May 30, 2017).
- 7 Nixon SA, Lee K, Bhutta ZA, et al. Canada's global health role: supporting equity and global citizenship as a middle power. *Lancet* 2018; published online Feb 23. [http://dx.doi.org/10.1016/S0140-6736\(18\)30322-2](http://dx.doi.org/10.1016/S0140-6736(18)30322-2).
- 8 Lam V. Extraordinary Canadians: Tommy Douglas. Toronto, ON: Penguin Canada, 2011.
- 9 Government of Canada. Canada Health Act. 1985. <http://laws-lois.justice.gc.ca/eng/acts/C-6/> (accessed June 4, 2017).
- 10 Health Canada. Canada Health Act annual report 2015–2016. Feb 17, 2017. <https://www.canada.ca/en/health-canada/services/publications/health-system-services/canada-health-act-annual-report-2015-2016.html> (accessed Sept 5, 2017).
- 11 Armstrong P, Armstrong H. Decentralised health care in Canada. *BMJ* 1999; **318**: 1201.
- 12 Sibbald B. Impasse over federal health transfers. *CMAJ* 2017; **189**: E127–28.
- 13 GBD 2015 Healthcare Access and Quality Collaborators. Healthcare Access and Quality Index based on mortality from causes amenable to personal health care in 195 countries and territories, 1990–2015: a novel analysis from the Global Burden of Disease Study 2015. *Lancet* 2017; **390**: 231–66.
- 14 Canadian Institute for Health Information. National health expenditure trends, 1975 to 2016. 2016. https://secure.cihi.ca/free_products/NHEX-Trends-Narrative-Report_2016_EN.pdf (accessed July 15, 2017).
- 15 Flood CM, Haugan A. Is Canada odd? A comparison of European and Canadian approaches to choice and regulation of the public/private divide in health care. *Health Econ Policy Law* 2010; **5**: 319–41.
- 16 Allin S. Does equity in healthcare use vary across Canadian provinces? *Healthc Policy* 2008; **3**: 83.
- 17 Woolhandler S, Campbell T, Himmelstein DU. Costs of health care administration in the United States and Canada. *N Engl J Med* 2003; **349**: 768–75.
- 18 Canadian Institute for Health Information. Prescribed drug spending in Canada, 2016: a focus on public drug programs. 2016. https://secure.cihi.ca/free_products/Prescribed%20Drug%20Spending%20in%20Canada_2016_EN_web.pdf (accessed Sept 5, 2017).
- 19 Allin S, Hurley J. Inequity in publicly funded physician care: what is the role of private prescription drug insurance? *Health Econ* 2009; **18**: 1218–32.
- 20 Law MR, Kratzer J, Dhalla IA. The increasing inefficiency of private health insurance in Canada. *CMAJ* 2014; **186**: E470–74.
- 21 Wellesley Institute. Low wages, no benefits: expanding access to health benefits for low income Ontarians. Feb, 2015. <http://www.wellesleyinstitute.com/wp-content/uploads/2015/02/Low-Wages-No-Benefits-Wellesley-Institute-Feb-2015.pdf> (accessed May 30, 2017).
- 22 Health Canada. Canada's health care system. 2012. <http://www.hc-sc.gc.ca/hcs-sss/pubs/system-regime/2011-hcs-sss/index-eng.php> (accessed May 30, 2017).
- 23 Caulford P, D'Andrade J. Health care for Canada's medically uninsured immigrants and refugees. *Can Fam Physician* 2012; **58**: 725–27.
- 24 Magalhaes L, Carrasco C, Gastaldo D. Undocumented migrants in Canada: a scope literature review on health, access to services, and working conditions. *J Immigr Minor Health* 2010; **12**: 132–51.
- 25 Caulford P, Vali Y. Providing health care to medically uninsured immigrants and refugees. *CMAJ* 2006; **174**: 1253–54.
- 26 Allin S, Rudoler D. The Canadian health care system. 2017. <http://international.commonwealthfund.org/countries/canada/> (accessed June 4, 2017).
- 27 The Canadian Medical Protective Agency. Changing physician-hospital relationships. September, 2011. <https://www.cmpa-acpm.ca/en/research-policy/public-policy/changing-physician-hospital-relationships> (accessed May 30, 2017).

- 28 Badgley R, Wolfe S. Doctor's strike: medicare care and conflict in Saskatchewan. New York, NY: Atherton Press, 1967.
- 29 Collier R. Doctors v. government: the first major fight over pay. *CMAJ* 2015; **187**: E146–47.
- 30 Farmanova E, Kirvan C, Verma J, et al. Triple Aim in Canada: developing capacity to lead to better health, care and cost. *Int J Qual Health Care* 2016; **28**: 830–37.
- 31 Corallo AN, Croxford R, Goodman DC, Bryan EL, Srivastava D, Stukel TA. A systematic review of medical practice variation in OECD countries. *Health Policy* 2014; **114**: 5–14.
- 32 Naylor D. Unleashing innovation: excellent healthcare for Canada. 2015. <http://healthycanadians.gc.ca/publications/health-system-systeme-sante/report-healthcare-innovation-rapport-soins/alt/report-healthcare-innovation-rapport-soins-eng.pdf> (accessed May 30, 2017).
- 33 Canada Health Infoway. Electronic Medical Records (EMR) Progress in Canada. 2016. <https://www.infoway-inforoute.ca/en/component/edocman/2860-2016-electronic-medical-records-emr-progress-in-canada/view-document?Itemid=0> (accessed Dec 11, 2017).
- 34 Kratzer J, McGrail K, Strumpf E, Law MR. Cost-control mechanisms in Canadian private drug plans. *Health Policy* 2013; **9**: 35–43.
- 35 The World Bank. GDP growth (annual %). 2016. <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=CA> (accessed Sept 5, 2017).
- 36 Quesnel-Vallée A, Soderstrom L. Le défi démographique du vieillissement: une menace pour le financement des services de santé? In: Béland F, Contandriopoulos AP, Quesnel-Vallée A, Robert L, eds. *Le privé dans la santé. Les discours et les faits*. Montréal, QB: Presses de l'Université de Montréal, 2008: 46–68.
- 37 Statistics Canada. Population size and growth in Canada: key results from the 2016 Census. Feb 8, 2017. <http://www.statcan.gc.ca/daily-quotidien/170208/dq170208a-eng.htm> (accessed Sept 5, 2017).
- 38 Public Health Agency of Canada. The Chief Public Health Officer's report on the state of public health in Canada 2014—changing demographics, aging and health. <https://www.canada.ca/en/public-health/corporate/publications/chief-public-health-officer-reports-state-public-health-canada-2014-public-health-future/changing-demographics.html> (accessed Sept 5, 2017).
- 39 Morgan S, Cunningham C. Population aging and the determinants of healthcare expenditures: the case of hospital, medical and pharmaceutical care in British Columbia, 1996 to 2006. *Health Policy* 2011; **7**: 68–79.
- 40 Canadian Medical Association. Health and health care for an aging population. Dec, 2013. https://www.cma.ca/Assets/assets-library/document/en/advocacy/policy-research/CMA_Policy_Health_and_Health_Care_for_an_Aging-Population_PD14-03-e.pdf (accessed May 30, 2017).
- 41 Glouberman S, Millar J. Evolution of the determinants of health, health policy, and health information systems in Canada. *Am J Public Health* 2003; **93**: 388–92.
- 42 Keon WJ, Pépin L. Population health policy: issues and options. April, 2008. <https://senecanada.ca/content/sen/Committee/392/soci/rep/rep10apr08-e.pdf> (accessed Sept 8, 2017).
- 43 Statistics Canada. Census in brief: children living in low-income households. Sept 13, 2017. <http://www12.statcan.gc.ca/census-recensement/2016/as-sa/98-200-x/2016012/98-200-x2016012-eng.cfm#a2> (accessed Nov 27, 2017).
- 44 National Council of Welfare. Poverty profile: special edition. 2012. https://www.canada.ca/content/dam/esdc-esdc/migration/documents/eng/communities/reports/poverty_profile/snapshot.pdf (accessed Sept 10, 2017).
- 45 Bryant T, Raphael D, Schrecker T, Labonte R. Canada: a land of missed opportunity for addressing the social determinants of health. *Health Policy* 2011; **101**: 44–58.
- 46 Michiel Oosterveer T, Kue Young T. Primary health care accessibility challenges in remote indigenous communities in Canada's North. *Int J Circumpolar Health* 2015; **74**: 29576.
- 47 Canadian Institute for Health Information. Supply, distribution and migration of physicians in Canada, 2016: data tables. 2017. <https://secure.cihi.ca/estore/productFamily.htm?pf=PFC3537&lang=en&media=0> (accessed Nov 27, 2017).
- 48 Dorsey ER, Topol EJ. State of telehealth. *N Engl J Med* 2016; **375**: 154–61.
- 49 MacLeod M, Kulig J, Stewart N, Pitblado J, Knock M. The nature of nursing practice in rural and remote Canada. *Can Nurse* 2004; **100**: 27–31.
- 50 Iglesias S, Kornelsen J, Woollard R, et al. Joint position paper on rural surgery and operative delivery. *Can J Rural Med* 2015; **20**: 129–38.
- 51 Myhre D, Hohman S. Going the distance: early results of a distributed medical education initiative for Royal College residencies in Canada. *Rural Remote Health* 2012; **12**: 2151.
- 52 Sibley LM, Weiner JP. An evaluation of access to health care services along the rural–urban continuum in Canada. *BMC Health Serv Res* 2011; **11**: 20.
- 53 Canadian Institute for Health Information. Have health card, will travel: out-of-province/-territory patients. 2010. https://secure.cihi.ca/free_products/out_of_province_aib_201003_e.pdf (accessed Nov 27, 2017).
- 54 Statistics Canada. 2016 Census topic: population and dwelling counts. 2016. <http://www12.statcan.gc.ca/census-recensement/2016/rt-td/population-eng.cfm> (accessed Oct 6, 2017).
- 55 Statistics Canada. Immigration and ethnocultural diversity highlight tables. 2016. <http://www12.statcan.gc.ca/census-recensement/2016/dp-pd/imm/hltfst/imm/Table.cfm?Lang=E&T=11&Geo=00&SP=1&view=2&age=1&sex=1> (accessed Dec 18, 2017).
- 56 Statistics Canada. Internal migrants, by age group and sex, Canada, provinces, and territories annual (persons). Sept 26, 2017. <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=0510011&pattern=&stByVal=1&p1=1&p2=31&tabMode=dataTable&csid> (accessed Nov 27, 2017).
- 57 Statistics Canada. Immigration and ethnocultural diversity in Canada. 2016. <http://www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-010-x/99-010-x2011001-eng.cfm> (accessed Sept 5, 2017).
- 58 Alba R, Foner N. Comparing immigrant integration in North America and Western Europe: how much do the grand narratives tell us? *Int Migr Rev* 2014; **48**: S263–91.
- 59 Alter D, Stukel T, Chong A, Henry D. Lesson from Canada's universal care: Socially disadvantaged patients use more health services, still have poorer health. *Health Aff (Millwood)* 2011; **30**: 275–83.
- 60 Omariba D, Ng E, Vissandjée B. Differences between immigrants at various durations of residence and host population in all-cause mortality, Canada 1991–2006. *Popul Stud Camb* 2014; **68**: 339–57.
- 61 Vang ZM, Sigouin J, Flenon A, Gagnon A. Are immigrants healthier than native-born Canadians? A systematic review of the healthy immigrant effect in Canada. *Ethn Health* 2017; **22**: 209–41.
- 62 Lebrun LA, Dubay LC. Access to primary and preventive care among foreign-born adults in Canada and the United States: access to primary and preventive care. *Health Serv Res* 2010; **45**: 1693–719.
- 63 Sanmartin C, Ross N. Experiencing difficulties accessing first-contact health services in Canada. *Health Policy* 2006; **1**: 103–19.
- 64 Setia MS, Quesnel-Vallée A, Abrahamowicz M, Tousignant P, Lynch J. Access to health-care in Canadian immigrants: a longitudinal study of the National Population Health Survey: Access to health-care in Canadian immigrants. *Health Soc Care Community* 2011; **19**: 70–79.
- 65 McKeary M, Newbold B. Barriers to care: the challenges for Canadian refugees and their health care providers. *J Refug Stud* 2010; **23**: 523–45.
- 66 Ottie K, Ng E, Spitzer D, Mohammed A, Glazier R. Language proficiency, gender and self-reported health: an analysis of the first two waves of the longitudinal survey of immigrants to Canada. *Can J Public Health* 2008; **99**: 505–10.
- 67 Canadian Institute for Health Information. How Canada compares: results from the Commonwealth Fund's 2016 International Health Policy Survey of Adults in 11 Countries—accessible report. Ottawa, ON: CIHI, 2017.
- 68 Statistics Canada. Life expectancy. 2017. <http://www.statcan.gc.ca/pub/89-645-x/2010001/life-expectancy-esperance-vie-eng.htm> (accessed Sept 5, 2017).
- 69 Tuohy CH. Reform and the politics of hybridization in mature health care states. *J Health Polit Policy Law* 2012; **37**: 611–32.
- 70 Detsky A, Naylor C. Canada's health care system—reform delayed. *N Engl J Med* 2003; **349**: 804–10.
- 71 Paikin S. When will Ontario's health care system finally focus on the patient? Dec 4, 2015. <http://tvo.org/blog/current-affairs/when-will-ontarios-health-care-system-finally-focus-on-the-patient> (accessed July 17, 2017).

- 72 Schneider E, Sarnak D, Squires D, Shah A, Doty M. Mirror, mirror: how the US health care system compares internationally at a time of radical change. 2017. <http://www.commonwealthfund.org/interactives/2017/july/mirror-mirror/> (accessed July 14, 2017).
- 73 Canadian Institute for Health Information. Benchmarks for treatment and wait time trending across Canada. 2016. <http://waittimes.cihi.ca/> (accessed Sept 5, 2017).
- 74 Wait Time Alliance. Eliminating code gridlock in Canada's health care system: 2015 Wait Time Alliance report card. 2015. http://www.waittimealliance.ca/wp-content/uploads/2015/12/EN-FINAL-2015-WTA-Report-Card_REV.pdf (accessed July 17, 2017).
- 75 Alberta Bone & Joint Institute. Alberta hip and knee replacement pilot project. June, 2007. <https://albertaboneandjoint.com/wp-content/uploads/2013/12/Hip-Knee-Scientific-Report.pdf> (accessed Sept 5, 2017).
- 76 Lewis S. Spare the policy, spoil the profession. Dec, 2008. <http://www.longwoods.com/content/20360> (accessed Sept 5, 2017).
- 77 Bégin M, Eggertson L. A country of perpetual pilot projects. *CMAJ* 2009; **180**: 1185.
- 78 Siciliani L, Borowitz M, Moran V. Measuring and comparing health care waiting times in OECD countries. *Health Policy* 2014; **118**: 292–303.
- 79 Constitution Act, Canada. 1987. <http://laws-lois.justice.gc.ca/eng/Const/page-15.html> (accessed May 30, 2017).
- 80 Supreme Court of Canada. Chaoulli v Quebec (Attorney General). 2005. 1 SCR 791, 2005 SCC 35 (Canada). <https://scc-csc.lexum.com/scc-csc/scc-csc/en/item/2237/index.do> (accessed Sept 5, 2017).
- 81 Palmer K. Background: a primer on the legal challenge between Cambie Surgeries Corporation (led by Dr Brian Day) and British Columbia—and how it may affect our healthcare system. Aug 8, 2016. <http://evidencenetwork.ca/archives/25738> (accessed May 30, 2017).
- 82 Steinbrook R. Private health care in Canada. *N Engl J Med* 2006; **354**: 1661–64.
- 83 Flood CM. Chaoulli's legacy for the future of Canadian health care policy. *Osgoode Hall Law J* 2006; **44**: 273.
- 84 Vogel L. Medicare trial postponed. *CMAJ* 2014; **186**: 1209.
- 85 Peden A. Background: Court challenges to one-tier medicare. Oct 15, 2014. <http://evidencenetwork.ca/archives/20743> (accessed May 30, 2017).
- 86 Supreme Court of Canada. Canada (Attorney General) v. PHS Community Services Society. 2011. SCC 44, [2011] 3 SCR. 134. <https://scc-csc.lexum.com/scc-csc/scc-csc/en/item/7960/index.do> (accessed Sept 5, 2017).
- 87 Supreme Court of Canada. Carter v Canada (Attorney General). 2015. SCC 5, [2015] 1 SCR 331. <https://scc-csc.lexum.com/scc-csc/scc-csc/en/item/14637/index.do> (accessed Sept 5, 2017).
- 88 Supreme Court of Canada. Canadian Doctors for Refugee Care v Canada (Attorney general). 2014. FC 651, [2014] T-356-1. <http://cas-cdc-www02.cas-satj.gc.ca/rss/T-356-13%20Cdn%20Doctors%20v%20AGC%20Judgment%20and%20Reasons.pdf> (accessed Sept 5, 2017).
- 89 Sanmartin C, Hennessy D, Lu Y, Law M. Trends in out-of-pocket health care expenditures in Canada, by household income, 1997 to 2009. *Health Rep* 2014; **25**: 13–17.
- 90 Boothe K. How the pace of change affects the scope of reform: pharmaceutical insurance in Canada, Australia, and the United Kingdom. *J Health Polit Policy Law* 2012; **37**: 779–814.
- 91 Angus Reid Institute. Prescription drug access and affordability an issue for nearly a quarter of all Canadian households. 2015. <http://angusreid.org/wp-content/uploads/2015/07/2015.07.09-Pharma.pdf> (accessed May 30, 2017).
- 92 Hoover M, Roterma M. Seniors' use of and unmet needs for home care. *Health Rep* 2012; **23**: 55–60.
- 93 Elias B, Mignone J, Hall M, Hong SP, Hart L, Sareen J. Trauma and suicide behaviour histories among a Canadian indigenous population: an empirical exploration of the potential role of Canada's residential school system. *Soc Sci Med* 2012; **74**: 1560–69.
- 94 Truth and Reconciliation Commission of Canada. Honouring the truth, reconciling for the future: summary of the final report of the Truth and Reconciliation Commission of Canada. July 23, 2015. http://www.trc.ca/websites/trcinstitution/File/2015/Honouring_the_Truth_Reconciling_for_the_Future_July_23_2015.pdf (accessed May 30, 2017).
- 95 Adelson N. The embodiment of inequity: health disparities in Aboriginal Canada. *Can J Public Health* 2005; **96**: S45–61.
- 96 Statistics Canada. Aboriginal peoples in Canada: First Nations people. 2016. <http://www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-011-x/99-011-x2011001-eng.cfm#a2> (accessed Sept 5, 2017).
- 97 Gracey M, King M. Indigenous health part 1: determinants and disease patterns. *Lancet* 2009; **374**: 65–75.
- 98 Statistics Canada. Infant mortality rates, by province and territory (both sexes). 2017. <http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/health21a-eng.htm> (accessed Sept 6, 2017).
- 99 Pendakur R, Pendakur K. Aboriginal income disparity in Canada. *Can Public Policy* 2011; **37**: 61–83.
- 100 Garner R, Varriera G, Sanmartin C. The health of First Nations living off-reserve, Inuit, and Metis adults in Canada: the impact of socio-economic status on inequalities in health. 2010. <http://www.statcan.gc.ca/pub/82-622-x/82-622-x2010004-eng.pdf> (accessed May 30, 2017).
- 101 Statistics Canada. Projections of the Aboriginal population and households in Canada (91-552-X). Sept 17, 2015. <http://www.statcan.gc.ca/pub/91-552-x/91-552-x2015001-eng.pdf> (accessed Nov 27, 2017).
- 102 Lavoie J. The value and challenges of separate services. In: Healy J, McKee M, eds. *Accessing healthcare: responding to diversity*. Oxford Scholarship Online, 2009: 325–49.
- 103 Gallagher J, Mendez JK, Kehoe T. The First Nations Health Authority: a transformation in healthcare for BC First Nations. *Health Manage Forum* 2015; **28**: 255–61.
- 104 The Economist. The last liberals. Oct 29, 2016. <https://www.economist.com/news/briefing/21709291-why-canada-still-ease-openness-last-liberals> (accessed Sept 5, 2017).
- 105 Webster P. Consensus mounts for national drug formulary. *CMAJ* 2016; **188**: E180.
- 106 Sibbald B. CMA wants seniors' care on federal agenda. *CMAJ* 2014; **186**: E507.
- 107 Mental Health Commission of Canada. Changing directions, changing lives: the mental health strategy for Canada. 2012. https://www.mentalhealthcommission.ca/sites/default/files/MHStrategy_Strategy_ENG.pdf (accessed Nov 27, 2017).
- 108 Hall EM. Royal Commission on Health Services. Ottawa: Queen's Printer, 1964.
- 109 Romanow RJ. Building on values: the future of health care in Canada. Ottawa, ON: Commission on the Future of Health Care in Canada, 2002.
- 110 Morgan SG, Law M, Daw JR, Abraham L, Martin D. Estimated cost of universal public coverage of prescription drugs in Canada. *CMAJ* 2015; **187**: 491–97.
- 111 Office of the Parliamentary Budget Officer. Federal cost of a national pharmacare program. Sept 28, 2017. <http://www.pbo-dpb.gc.ca/en/blog/news/Pharmacare> (accessed Sept 5, 2017).
- 112 Trudeau J. New Ministers to support the renewed relationship with Indigenous Peoples. Aug 28, 2017. <http://pm.gc.ca/eng/news/2017/08/28/new-ministers-support-renewed-relationship-indigenous-peoples> (accessed Sept 9, 2017).
- 113 Virani T. Interprofessional Collaborative Teams. June, 2012. http://www.cfhi-fccas.ca/Libraries/Commissioned_Research_Reports/Virani-Interprofessional-EN.sflb.ashx (accessed Sept 5, 2017).
- 114 Contandriopoulos D, Brousselle A, Dubois C-A, et al. A process-based framework to guide nurse practitioners integration into primary healthcare teams: results from a logic analysis. *BMC Health Serv Res* 2015; **15**: 78.
- 115 Lewis S. A system in name only—access, variation, and reform in Canada's provinces. *N Engl J Med* 2015; **372**: 497–500.
- 116 Collier R. Doctors v. government: a history of conflict. *CMAJ* 2015; **187**: 243.
- 117 Martin D. Better now: six big ideas to improve health care for all Canadians. Toronto, ON: Allen Lane, 2017.
- 118 Saskatchewan Medical Association. Moving forward: physicians co-designing and integrated health system for Saskatchewan. 2017. <http://www.sma.sk.ca/resources/52/health-system-redesign.html> (accessed June 4, 2017).
- 119 Alberta Medical Association. Stewardship in an integrated health system. 2016. <https://www.albertadoctors.org/services/media-publications/publications/digest/digest-archive/integrated-health-care-system-stewardship> (accessed June 4, 2017).

- 120 Canadian Medical Association. CMA 2020—aiming for new heights. June 14, 2017. <https://www.cma.ca/En/Pages/cma-2020-aiming-for-new-heights.aspx> (accessed Sept 6, 2017).
- 121 The Association of Faculties of Medicine of Canada. The Future of Medical Education in Canada (FMEC): a collective vision for postgraduate medical education in Canada. Ottawa, ON, 2012. https://afmc.ca/future-of-medical-education-in-canada/postgraduate-project/pdf/FMEC_PG_Final-Report_EN.pdf (accessed May 30, 2017).
- 122 Elshaug AG, Rosenthal MB, Lavis JN, et al. Levers for addressing medical underuse and overuse: achieving high-value health care. *Lancet* 2017; **390**: 191–202.
- 123 Choosing Wisely Canada. Four questions to ask your health care provider. <https://choosingwiselycanada.org/wp-content/uploads/2017/05/Four-questions-EN.pdf> (accessed Sept 6, 2017).
- 124 Lockwood T. A history of Royal Commissions. *Osgoode Hall Law J* 1967; **5**: 172–209.
- 125 Maxwell J, Rosell S, Forest P-G. Giving citizens a voice in healthcare policy in Canada. *BMJ* 2003; **326**: 1031.
- 126 Naylor C. National Advisory Committee on SARS and Public Health. Learning from SARS: renewal of public health in Canada. 2003. <http://www.phac-aspc.gc.ca/publicat/sars-sras/naylor/index-eng.php> (accessed July 13, 2017).
- 127 Rachlis M. Moving forward with public health in Canada. *Can J Public Health* 2004; **95**: 405–08.
- 128 Mockford C, Staniszewska S, Griffiths F, Herron-Marx S. The impact of patient and public involvement on UK NHS health care: a systematic review. *Int J Qual Health Care* 2012; **24**: 28–38.
- 129 Citizens' Reference Panel on Pharmacare in Canada. Necessary medicines: recommendations of the citizens' reference panel on pharmacare in Canada. 2016. <https://static1.squarespace.com/static/579b7eaf2e69cf79da94700b/t/584632c515d5db6feba1d9be/1480995544677/CRPPC+++Final+Report.pdf> (accessed Sept 5, 2017).
- 130 Canadian Institutes of Health Research. Strategy for patient-oriented research. June, 2017. <http://www.cihr-irsc.gc.ca/e/41204.html> (accessed Sept 5, 2017).
- 131 Campbell B, Marchildon G. Completing Tommy's vision: Medicare's future. Nov 19, 2007. <https://www.policyalternatives.ca/publications/commentary/completing-tommys-vision> (accessed May 30, 2017).
- 132 Layton J. Canadian idealism: an excerpt. 2011. <http://reviewcanada.ca/magazine/2011/10/canadian-idealism> (accessed May 30, 2017).