An Overview of the Canadian Health Care System

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Abstract
The Canadian health care system is a publicly financed system administered by ten provincial and three territorial governments. The purpose of this article is to provide an overview of the universal health care system in Canada, including its history, the health status of Canadians, health care funding and spending, and health research and data collection. Health care spending in Canada amounts to 11.6% of the country’s gross domestic product and is estimated to have been $200.5 billion Canadian dollars in 2011. Hospitals account for the largest source of health care spending (29%), followed by drugs (16%) and physician spending (14%). Of the total health care spending, 70% is paid for by the public system. Due to the Canadian population being covered by the universal health care system, health data are being collected and can be used to monitor the health care system and inform evidence-based medicine.

Key words: Canada, delivery of health care, economics, financing, health services

Introduction
The Canadian health care system is a publicly financed system providing universal health coverage to its 34 million citizens [1–3]. Health care in Canada is funded and administered by the provincial and territorial governments as outlined in the Canadian Constitution [1]. The Canadian health care system is decentralized with a collection of thirteen health insurance plans in each of the ten provinces (British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Newfoundland and Labrador, Nova Scotia, Prince Edward Island) and three northern territories (Northwest Territories, Nunavut, and Yukon) (Figure 1) [1–3]. The provinces and territories have primary jurisdiction over their health care system under the direction of their provincial or territorial Minister of Health [4]. The purpose of this article is to provide an overview of the health care system in Canada and discuss health care provision by the provincial and territorial governments. The overview describes the history of the health care system, health care funding and spending for hospitals, drugs, physicians, and uninsured services, as well as health research and data collection. All costs are presented in Canadian dollars.
istration, comprehensiveness, universality, portability, and accessibility [1, 2]. Public administration stipulates that a public authority accountable to the provincial government must administer the health insurance plan within the province on a non-profit basis. The next criterion, comprehensiveness, states that each province must fund services that are “medically necessary” as determined independently by each province. The medical insurance plan within each province must also be universal, providing coverage to all eligible citizens on uniform conditions. The medical insurance plan ought to be portable by allowing citizens to be covered for medical care which is received in other Canadian provinces during temporary absences from their home province. Lastly, the Canada Health Act stipulates that health care services are reasonably and uniformly accessible to all citizens without financial barriers or discrimination [1, 2]. The Canada Health Act also states that patients should not incur user charges or extra-billing for medical services which are covered by provincial or territorial health insurance plans [4].

The federal government contributes to the provincial and territorial health care insurance plans through Canada Health Transfer payments, which account for about 15% of the total health care spending [1, 6]. Provinces and territories receive a share of the federal payments if they adhere to the conditions outlined in the Canada Health Act and failure to do so may result in financial penalties for the provinces [4]. The rest of the health care funds (85%) come from provincial and territorial taxes [6]. For example, families earning the average Canadian household income of $55,271 (2012 dollars) with a tax rate of 39.4% will pay an estimated $5,285 towards health care from their taxes [7].

Health Care Funding and Spending

The federal government is responsible for health care for the Aboriginal Peoples, Canadian forces members and veterans, and federal inmates [1]. The federal government directly funds Health Canada, which is the federal department responsible for national public health, the Public Health Agency of Canada which is responsible for health protection and health promotion, as well as health research through the Canadian Institutes of Health Research [6,8]. Provincial and territorial governments are responsible for the administration of health care spending in their provinces or territories [1,2].

Health care spending in Canada amounts to 11.6% of the country’s gross domestic product and according to the Canadian Institute for Health Information, it was estimated to have been $200.5 billion Canadian dollars (CAD) in 2011 [8]. Per capita spending varies from province
to province (least in Quebec at $5,261 and most in
Newfoundland and Labrador at $6,884) with the Canadian
average being at $5,811 [8]. Health care expenditures are
the greatest in the Canadian territories ($8,996 to $11,929
per capita in Yukon and Nunavut, respectively) due to the
delivery of health care services over a vast geographical
area with a low population density [8]. The largest source
of health care spending is for hospitals which account for
29.1% of total health care spending followed by drugs
(16.2%) and physician spending (13.6%). Of the total he-
alth care spending, $141 billion or 70% is paid for by the
public system while the remainder is covered through the
private sector, which is limited to providing coverage for
uninsured health services [8].

Hospital Funding

For the most part, hospitals in Canada are non-profit
organizations which operate under the governance of
a voluntary or religious organization, provincial health
authority, or board of directors and are mostly publicly
funded by the provincial governments [2, 9]. There are
over 700 hospitals [9]. About 5% of the hospitals are pri-
vately funded (not-for-profit or for-profit) organizations
[2, 9], which have either existed before the establishment
of universal coverage and remain in operation or have
been formed after the establishment of universal covera-
ge [10, 11]. Depending on the province, for-profit hospi-
tals may open if they provide publicly insured services to
the residents; otherwise they may face challenges if their
operation is not in accordance with the Canada Health
Act [11]. Within the hospital system there are more than
45 teaching hospitals across Canada [12]. These hospitals
are partnered with 17 Faculties of Medicine and Health
Sciences and are involved in the training and education
of physicians, nurses, and other health professionals, as
well as research [12].

Not-for-profit hospitals are funded by the Ministry of
Health in each of the provinces and territories [9]. The
most common form of hospital funding is a global budget
which provides hospitals with funding based on their pre-
vious spending patterns [9]. Another funding mechanism
which is currently being taken up in some hospitals in
provinces such as Ontario and British Columbia is activ-
ity-based funding or case-based funding which offers
hospitals with remuneration based on the type and vol-
ume of services administered [13]. Funding is provided
based on the expected costs of care and hospitalization
of patients using a patient classification system like
diagnosis-related-groups [14]. This system associates
health care resources used to treat groups of patients with
certain diseases and characteristics and in turn, determi-
nes the costs of such care. Medically-necessary and out-
patient services provided within the hospitals are covered
through the universal health insurance plans within the
province or territory [1]. These plans cover the care re-
ceived from health professionals including physicians, nur-
ses, and other allied staff, as well as diagnostic services
like imaging and laboratory tests [4]. Prescription drugs
used during the hospital stay are also publicly financed.

Standard accommodation and food are covered under the
health insurance plan while preferred accommodations
(semi-private and private rooms) and certain additional
services can be obtained for a fee through out-of-pocket
payments or private health insurance [4, 8].

Hospitals make up the largest portion of health care
spending encompassing 29.1% or $58.4 billion of the to-
tal health expenditure in Canada [8]. It is estimated that
90% of total hospital funding is provided by the province
while the remainder of the funding is raised by the ho-
sitals through preferred accommodations, parking, real
estate, investments, and donations [8, 15]. The largest
hospital expenditure is employee compensation (not in-
cluding physicians) accounting for 60.4% [15]. The rest
of the expenditures can be broken down into supplies
(12.6%), drugs (11.6%), physicians (8.8%), equipment
amortization (2.6%), and other expenses (3.9%) [15]. The
average cost of a hospitalization in Canada was $6,983
in 2005 [16].

Drug Funding

The regulation of the drug sector lies under federal
jurisdiction with Health Canada being responsible for the
safety, efficacy, and quality of pharmaceuticals under the
Food and Drugs Act, as well as licensing and labeling
new drug products [17]. The federal government is also
responsible for pricing patented medicines [17]. In regar-
ds to drug costs, both prescription (out of hospital) and
over-the-counter drugs are not insured through universal
health coverage [17]. Drugs dispensed in hospitals are
covered by the provincial and territorial health care sys-
tems [8, 17].

Drugs are listed in the provincial (except Quebec),
territorial, and federal formularies based on a Common
Drug Review process conducted under the auspices of the
Canadian Agency for Drugs and Technologies in Health,
which is an independent, non-profit agency funded by the
government [18, 19]. The role of the process is to provi-
de the governments with recommendations on whether
to fund drugs based on the clinical, cost-effectiveness,
ethical evidence and considerations [19]. A parallel
process for reviewing cancer drugs is undertaken by the
pan-Canadian Oncology Drug Review. In Quebec, drug
funding decisions are carried out by the Conseil du Medi-
cament [19]. Each province and territory has its own drug
benefit program which covers drugs in their formularies
[17]. Public drug coverage ranges from providing drugs
to financially disadvantaged populations like seniors,
welfare recipients, and those individuals with medical
or financial needs to universal eligibility [17]. About
9 million Canadians receive drug coverage through the
publicly funded programs [20]. The remainder of the
population is mostly covered by private or employer-
sponsored drug programs [21]. The federal government
provides drug benefits to about 1 million residents under
its health care, including Aboriginal Peoples, Canadian
forces members and veterans, and federal inmates [17, 21].
It is estimated that 2% of the Canadian population is
not insured for drug coverage [22].
In 2009, drug sales were $29.6 billion and were the second largest source of health expenditures in Canada [8]. Of the total cost of drugs, prescribed drugs represented the largest proportion ($24.8 billion, 83.9%) of the cost and were mostly covered by the private sector (53.6%), which included both out-of-pocket and private health insurance expenses [8]. Other drug expenditures included over-the-counter drugs accounting for $2.7 billion in costs (9.1% of total drug costs) and personal health supplies accounting for $2.1 billion in costs (7.0%), both of which were covered by the private sector [8].

**Physician Funding**

Canadian medical schools train about 2,880 students per year [23]. There are 17 medical schools in Canada located in 8 provinces: British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, Nova Scotia, and Newfoundland and Labrador. Medical schools provide 3- or 4-year long training programs and award Doctor of Medicine (M.D.) degrees [23]. Typically, students entering medical schools have a bachelor’s degree or at least 2 or 3 years of undergraduate education completed [24]. Physicians are licensed to practice medicine by Colleges of Physicians and Surgeons in each of the provinces or territories [25]. In order to be licensed, physicians need to pass Qualifying Examinations during medical school and postgraduate training offered by the Medical Council of Canada. Family physicians are certified by the College of Family Physicians of Canada, while specialist physicians are certified by the Royal College of Physicians and Surgeons of Canada. During medical practice, physicians are expected to continue their professional development through educational activities including self-learning, conferences, and rounds [26]. There are an estimated 72,500 physicians in Canada with 51% being family physicians and 49% being specialists [27].

Based on the 2010 National Physician Survey, the majority of family physicians provided patient care in private offices or practice (55.7%) followed by community clinics (8.6%) and emergency departments (8.0%) [28]. Most specialist physicians provided care in academic health sciences centres (35.4%), private offices or practice (23.7%), and community hospitals (13.7%) [28]. Most physicians worked in group practices (43.0%), followed by solo practice (27.3%) and interprofessional practice (20.9%). 70.3% of physicians report being on call [28].

Physicians make up the third largest share of health care spending in Canada, accounting for $24.8 billion (13.6%) of the costs [8]. General practitioners and specialist physicians in Canada are primarily remunerated through fee-for-service payments based on the provincial fee schedules (41.9% of physicians) [5, 28]. A minority of physicians are salaried (8.5%) or receive sessional payments (3.2%) [5]. A third of physicians (32.3%) report receiving blended payments. In 2005, Canada had over 69,108 physicians representing 2.3 doctors per 1,000 people [5]. Based on data from Statistics Canada (the central statistical office in Canada), 6.6% of Canadian physicians are salaried (8.5%) or receive sessional fee schedules (41.9% of physicians) [5, 28]. A third of physicians (32.3%) report receiving blended payments. In 2005, Canada had over 69,108 physicians representing 2.3 doctors per 1,000 people [5]. Based on data from Statistics Canada (the central statistical office in Canada), 6.6% of Canadian physicians are salaried (8.5%) or receive sessional fee schedules (41.9% of physicians) [5, 28]. A third of physicians (32.3%) report receiving blended payments. In 2005, Canada had over 69,108 physicians representing 2.3 doctors per 1,000 people [5]. Based on data from Statistics Canada (the central statistical office in Canada), 6.6% of Canadian physicians are salaried (8.5%) or receive sessional fee schedules (41.9% of physicians) [5, 28]. A third of physicians (32.3%) report receiving blended payments. In 2005, Canada had over 69,108 physicians representing 2.3 doctors per 1,000 people [5]. Based on data from Statistics Canada (the central statistical office in Canada), 6.6% of Canadian physicians are salaried (8.5%) or receive sessional fee schedules (41.9% of physicians) [5, 28]. A third of physicians (32.3%) report receiving blended payments. In 2005, Canada had over 69,108 physicians representing 2.3 doctors per 1,000 people [5]. Based on data from Statistics Canada (the central statistical office in Canada), 6.6% of Canadi-
funds 14,100 researchers and trainees across Canadian institutions and organizations [35]. It funds research in four areas which are biomedical, clinical, health systems services, and social, cultural, environmental and population health [36].

Aside from clinical research, health information can be collected to evaluate the health care system and identify areas of need and development. In Canada, the federal government provides statistics through Statistics Canada [37]. Statistics Canada conducts a population census every five years and administers 350 cross-sectional and longitudinal surveys to provide statistics on the Canadian population, health, economy, and resources [37]. Microdata from Statistics Canada can be accessed through secure Research Data Centres located at university centres across the country in accordance with the Statistics Act [38].

As the majority of the population in each province are covered by the universal health care system, health data from hospitals and billing are being collected and can be used to monitor the health care system and for research purposes. The Canadian Institute for Health Information collects health data across Canada in a standardized way, which may be analyzed by researchers [39]. Data are collected under the Personal Information Protection and Electronic Documents Act and provincial data privacy acts, and can be obtained in anonymized form for research purposes [40]. One example is the Institute for Clinical Evaluative Sciences (ICES) in Ontario, through which researchers can get access to population health data including hospitalizations, ambulatory care visits, physician visits, and drug benefit claims [41].

Further Considerations

The Canadian health care system will face multiple challenges in the coming years as a result of the burden of chronic conditions, population aging, and increasing global travel. The Canadian health care system is facing these challenges by engaging on a number of strategies. Some of these include reductions in wait times for medical services, establishing long-term care strategies, and responsiveness to global pandemics. Future research and monitoring of population health in Canada can be established by interlinking existing provincial databases and collecting data using uniform methodologies. In addition, international research collaborations can be further developed to allow health care systems from around the world to learn from their experiences and to foster the sharing of health research.

Notes

1 Self-reported survey sent to all licensed physicians in Canada [28]. The survey frame was created using information from the Canadian Medical Association, College of Family Physicians of Canada, and Royal College of Physicians and Surgeons of Canada membership lists. The response rate was 18% and the responses were weighted to represent the population of physicians [28].

2 Physicians working in a privately owned practice are reimbursed for patient services by the provincial or territorial governments as in accordance with the Canada Health Act, physicians cannot bill patients for services [4].

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