

Chronic Diseases in Canada: Contemporary Burden and Management

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Abstract

Canadians are an aging population. Consequently, age-related chronic diseases and their management are increasing and evolving challenges. In the 2018 Health Care in Canada (HCIC) survey, more than half of the Canadian adult public reported having one or more chronic illness(es); with cardiovascular disease, arthritis, lung disease and mental health disorders, singly or in concert, the most common diagnoses. Despite increasing recognition and concern among the body politic, the prevalence of dementia, as represented by reported memory problems interfering with daily living, remains comparatively low. Disappointingly, in the management of chronic diseases, only 66 percent of adults currently report always, or often, receiving appropriate treatments. The dominant reasons reported by patients for non-receipt of appropriate therapy are prolonged wait times, lack of affordability of care; and, lack of understanding support from healthcare professionals. Physicians are rated by 89 percent of patients as their key professional partners in managing their chronic care; followed by pharmacists (22 percent); and, healthcare teams (11 percent). The concept, and contemporary development, of professional teams to manage care of patients with chronic diseases is markedly expanding. In 2018, nine-in-ten doctors, nurses and administrators, and eight-in-ten pharmacists, reported current participation in some evolving form of care teams. A potentially overlooked

factor in chronic care management is the intermittent need of acute care, with its accompanying challenge of effective communication between institutionally-based and community-based care givers. In 2018, 11 percent of chronic care patients in Canada were admitted to in-hospital acute care; 17 percent required acute emergency room care; and, 33 percent required other specialty care, including home care and palliative care. In terms of key gaps between best and usual care among Canadian patients with chronic illnesses, the overwhelming concern of healthcare professionals in 2018 was inadequate access, specifically non-timely access, to the various avenues of care, followed by sub-optimal patient adherence to prescribed care. Overall, chronic diseases and their contemporary therapeutic management are key challenges in Canada's social evolution; and, will increase in importance with our ever-aging population. While we cannot reverse aging and its accompanying chronic disease risks, prioritizing chronic care interventions may enhance their impact, particularly the acceleration of patients' access to care. Two other evolving trends also hold promise to make things better: the broadened application of multi-disciplinary knowledge and talent inherent in team care, including broadened entry points to expedite access; and, the increasing recognition and integration of acute and specialty care as integral components of the chronic care continuum. Things can be better.

Introduction

Canada has an increasingly aged population. Although a generator of previous societal accomplishments and hoped-for future advances, another factor of an aging population is an ever-increasing prevalence of age-related chronic diseases requiring care management. This is of special interest and opportunity in Canadian society, with a universal Medicare program and the companion reality of balancing its costs and benefits.

Over the past two decades, 13 serial Health Care in Canada (HCIC) surveys have consistently measured and reported country-wide health issues, their management and outcomes (1-5). The purposes of this manuscript are to update the nation's current chronic care burden, as measured in the 2018 HCIC survey; and, to identify key disease targets and their best management practices likely to make things better going forward.

This paper highlights the continuing high degree of contemporary non-adherence as a major lost opportunity to achieve optimal health care and outcomes in Canada; and, reviews contributing causes and possible paths to make things better.

HCIC Members, Data Acquisition and Analysis

The 2018 HCIC survey members were: Canadian Cancer Society; Canadian Home Care Association; Canadian Hospice Palliative Care Association; Canadian Medical Association; Canadian Nurses Association; Canadian Pharmacists Association; Constance Lethbridge Rehabilitation Centre and Centre for Interdisciplinary Research in Rehabilitation; McGill University; Health Charities Coalition of Canada; HealthCareCAN; Institute of Health Economics; Innovative Medicines Canada; Studer Group Canada;

Merck Canada; Strive Health Management; and, CareNet Health Management.

Data sources for all HCIC surveys have been representative samples of the Canadian adult public and a broad spectrum of clinical and administrative health professionals.

In 2018, the adult public's sample size was 1500, the mean age was 46 years and 51% were female. Professional sample sizes averaged $n=100$ per each group of doctors, nurses, pharmacists, administrators and a combination of other providers (nutritionists/dietitians, occupational therapists, physical therapists, psychologists and social workers).

Probability samples of these sizes provide an estimated margin of error of ± 2.5 percent for the public and ± 9.8 percent for each of the professional groups, except for the sub-set of "other providers" where a comparable margin of error is not available.

As in all HCIC surveys, POLLARA Strategic Insights provided professional survey leadership for question formatting, questionnaire pre-test, data collection and collation for the 2018 initiative.

Prevalence of Chronic Diseases in Canada

In the 2018 HCIC survey, slightly over half of the representative sample of the whole Canadian adult population reported having one or more chronic disease(s) (Figure 1). These results were very similar to the prevalence of chronic care among other adults living in their household (Figure 1).

The 2018 data are also similar to the 58 percent prevalence of chronic diseases among adults recorded in the 2013-2014 HCIC survey (2); but substantially higher than the 37 percent prevalence of chronic diseases recorded in the 2008 HCIC survey (1).

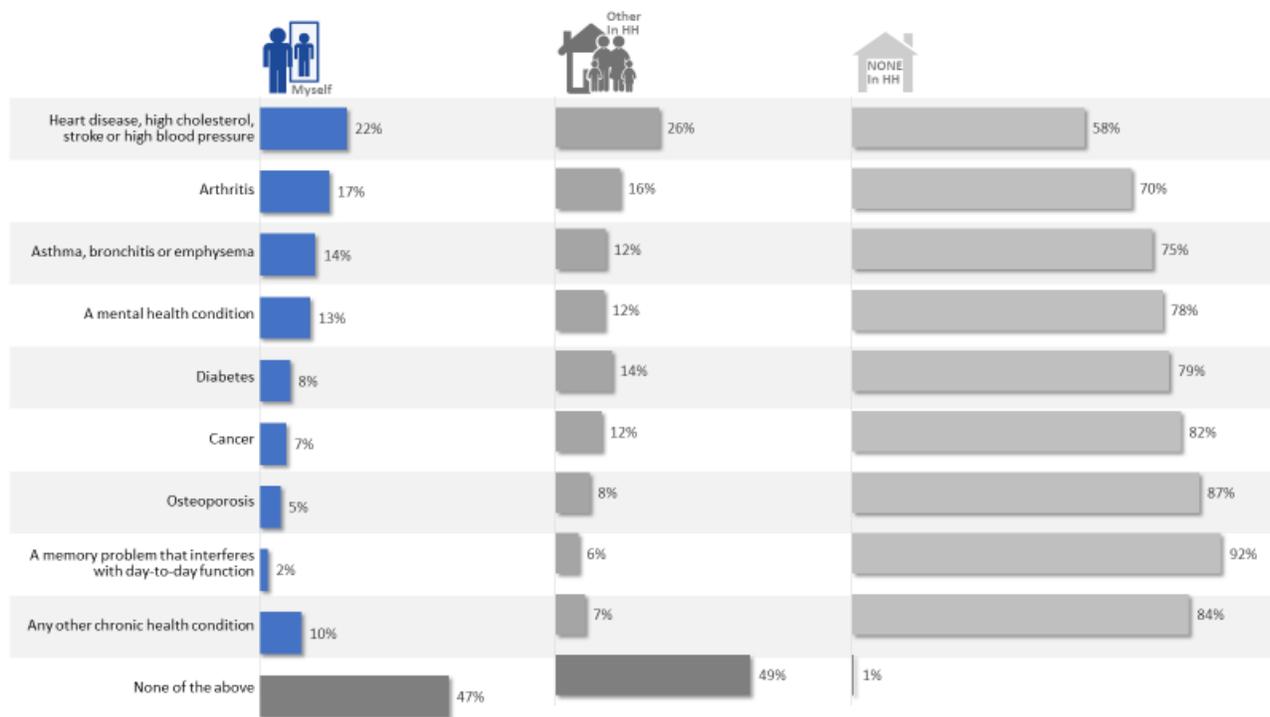


Figure 1. The comparative prevalence of various chronic diseases among Canadian adults, as reported in the 2018 HCIC survey when asked: “Have you or has anyone in your household, been diagnosed by a health care professional (e.g., physician, nurse practitioner) with any of the following?”

In 2018, cardiovascular diseases, particularly atherosclerotic heart disease, stroke and hypertension, were the most prevalent causes of chronic disease in Canada, with a 22 percent reported prevalence (Figure 1). Arthritis, pulmonary diseases and mental health issues were, however, close competitors.

Comparatively, in the 2013-2014 HCIC survey, arthritis and the various manifestations of cardiovascular disease tied for top prevalence of major chronic diseases in Canada, both recorded at 22 percent among adults (2). Interestingly, despite the increasing recognition of the age-related risk of dementia in our ever-aging society, when adults in the 2018 HCIC survey were queried if they had: “memory problems interfering with day-to-day function”, the prevalence of this surrogate for dementia was relatively low - ranging from 2 percent of the 2018 representative test sample

to 6 percent of their co-habitant adults (Figure 1).

In comparison, the prevalence of dementia in an older Canadian adult population, ranging from 65 years to greater than 85 years of age, reported by the Public Health Agency of Canada in 2017, using a “symptom-component” definition of memory loss, judgment, reasoning problems and changes in behavior, mood and communication abilities, was estimated at 7.1 percent overall; and, 5.6 percent in males and 8.3 percent in females (6).

Contemporary Management of Chronic Diseases - The Public’s Views

The overwhelming concern of Canadians with a health problem in all HCIC surveys has been obtaining needed access to care, particularly timely access.

The results of the 2018 HCIC survey reinforced this concern, with only 66 percent of chronic illness patients reporting always, or often, receiving needed treatments (Figure 2). This lack of timely access to care is also the dominant concern impeding patients' perceived sense of their centrality in health care (4).

Canadian patients with chronic illnesses identify physicians as the professional group they most frequently seek when accessing care for chronic disease problems / issues (Figure 3), although pharmacists and multi-disciplinary teams working together are also increasingly recognized as key contributors to optimal patient-centred care.

Management of Acute and Transitional Care for Patients with Chronic Diseases

Sometimes overlooked in the spectrum of care for comprehensive chronic disease management is the not-uncommon need for intermittent, acute hospital-based or other specialty care. As outlined in Figure 4, the necessity, particularly for hospitalization, is not an uncommon event. Eleven percent of chronic care patients queried in the 2018 HCIC survey reported being hospitalized at least once within the past 12 months; and, three percent reported the need for more than one hospital admission (Figure 4).

In addition, 17 percent of patients with chronic illnesses reported the necessity for emergency room visits within the past year; and, six percent reported more than one visit (Figure 4).

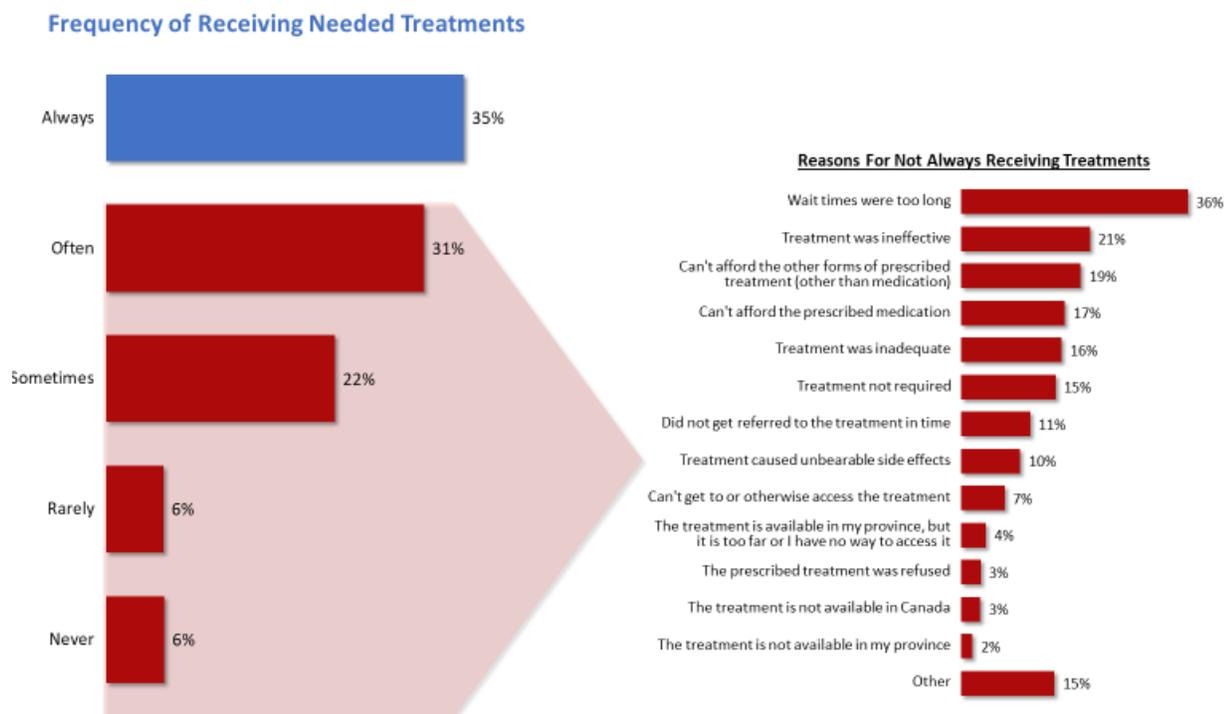


Figure 2. The frequency of access to, and reasons for non-receipt of, needed treatments for adult Canadian patients with various chronic diseases as reported in the 2018 HCIC survey when asked: “Do you have access to the treatments you need to manage your condition(s); and, “What are some of the reasons why you don’t always have access to the treatments you need to manage your condition(s)?”

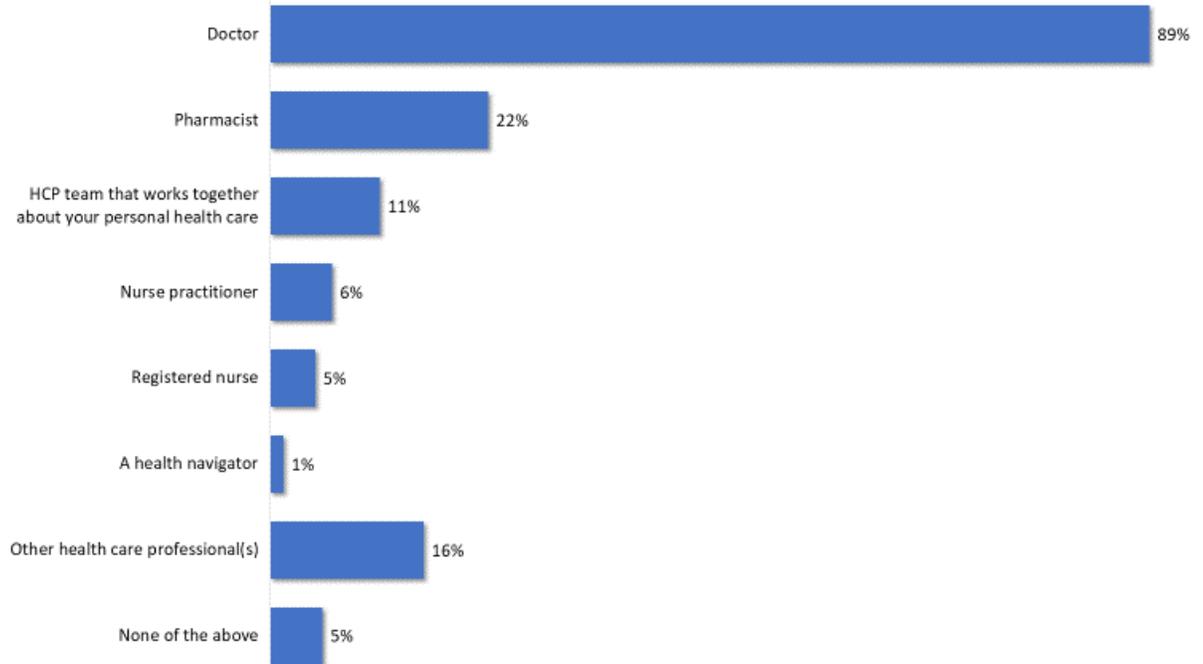


Figure 3. The frequency spectrum of health care professionals involved in management of patients with chronic diseases, when asked: “Please consider the condition(s) that you personally have been diagnosed with. Do you work with a doctor or other health care professional(s) to manage your condition?”

A companion challenge that confronts all Canadians requiring acute, or in-hospital health care, although perhaps more frequently for patients with chronic illnesses, is the effective transition back to, and re-integration with, their long-term health care management. As outlined in Figure 5, managing these care transitions remains challenging. In 2018, only two-thirds of Canadian adults admitted to hospitals for acute care reported receiving adequate post-hospital care and support.

One-third of the entire Canadian adult

population also received one or more specialized care support or service in 2018, including: home care, hospice-based palliative care or long-term care (Figure 5). The majority of these patients reported smooth transition among these increasingly-demanded components of contemporary health care. This is encouraging, as all of these care specialties will undoubtedly face increasing demand and delivery challenges as our aging population advances in the era of patient-centred (4) and end-of-life (5) care, including medically assisted death.

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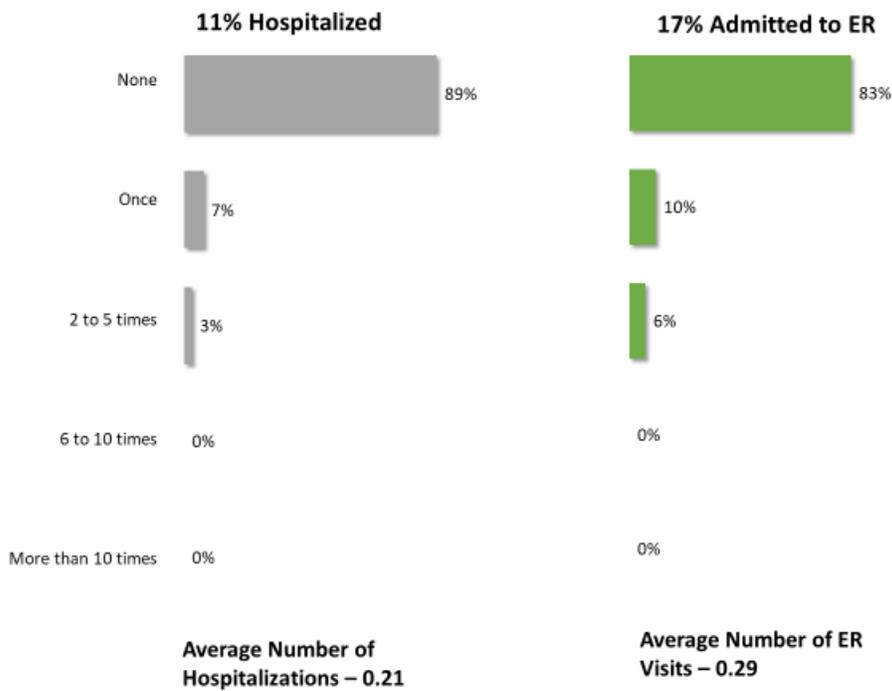


Figure 4. The annual frequency spectrum of hospitalizations and emergency room visitations of patients with chronic diseases when asked: “As a direct result of your chronic condition(s), over the past 12 months, how many times were you hospitalized; or, required emergency room visitations for care?”

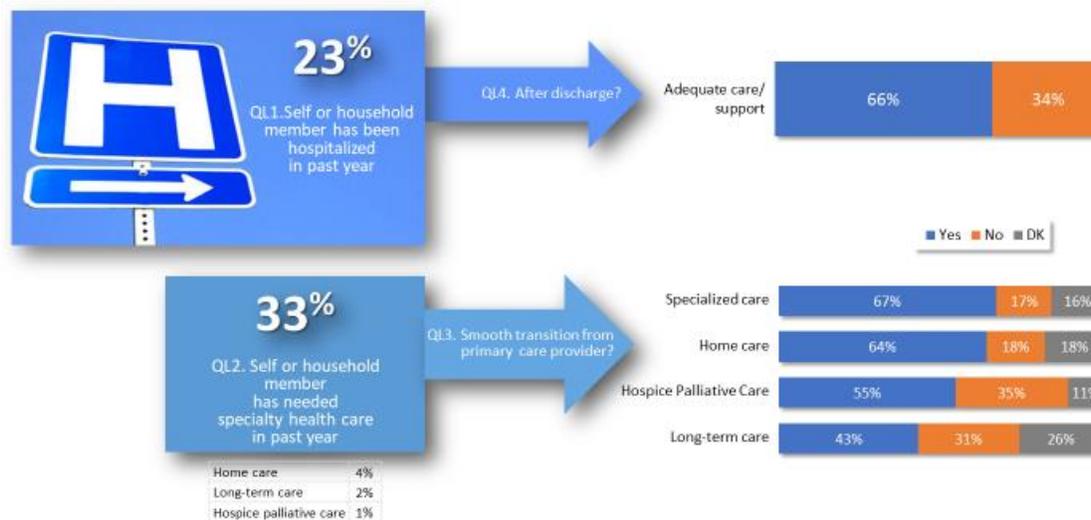


Figure 5. In the top frames, the 2018 Canadian public’s reported need for in-hospital care; and, their perceptions of adequate care and support in post-discharge transition to community-based care. In the bottom frames, the public’s reported need in 2018 for the various and evolving modalities of specialty health care.

Continuing Causes of Care Gaps in Chronic Diseases and Insights for Change

Traditionally, the four most-cited principal causes of gaps between best and usual medical care are: inadequate access to care; non-diagnosis of disease; non-prescription of proven therapies; and, non-adherence to proven therapies (7).

Among the public, the primary reported cause of care gaps has traditionally been poor access to health care (7). Among health professionals, on the other hand, the most frequently cited key cause, heretofore, has been poor patient adherence to prescribed therapy (7).

Things change. Currently, as measured in the 2018 HCIC survey, professionals' opinion, consistent across all component groups, indicates that inadequate access to care is the number-one, that is the most important, care gap cause, although poor adherence remains a

very significant concern (Figure 6).

This emergent insight is important. Its overarching message, especially for a nation with universal Medicare and in active debate around instituting universal Pharmacare, is that successful attainment of a better future of care and outcomes for the most people will require a priority policy targeting both timely access and improved adherence.

One other remarkable finding in the 2018 HCIC survey regarding the evolving management of patients with chronic illnesses is the very high percentage of all health professionals currently involved in team care. Among physicians, nurses, pharmacists, administrators and other care providers in the 2018 HCIC survey, an average of 89 percent report being currently involved in some form of team care (Figure 7)

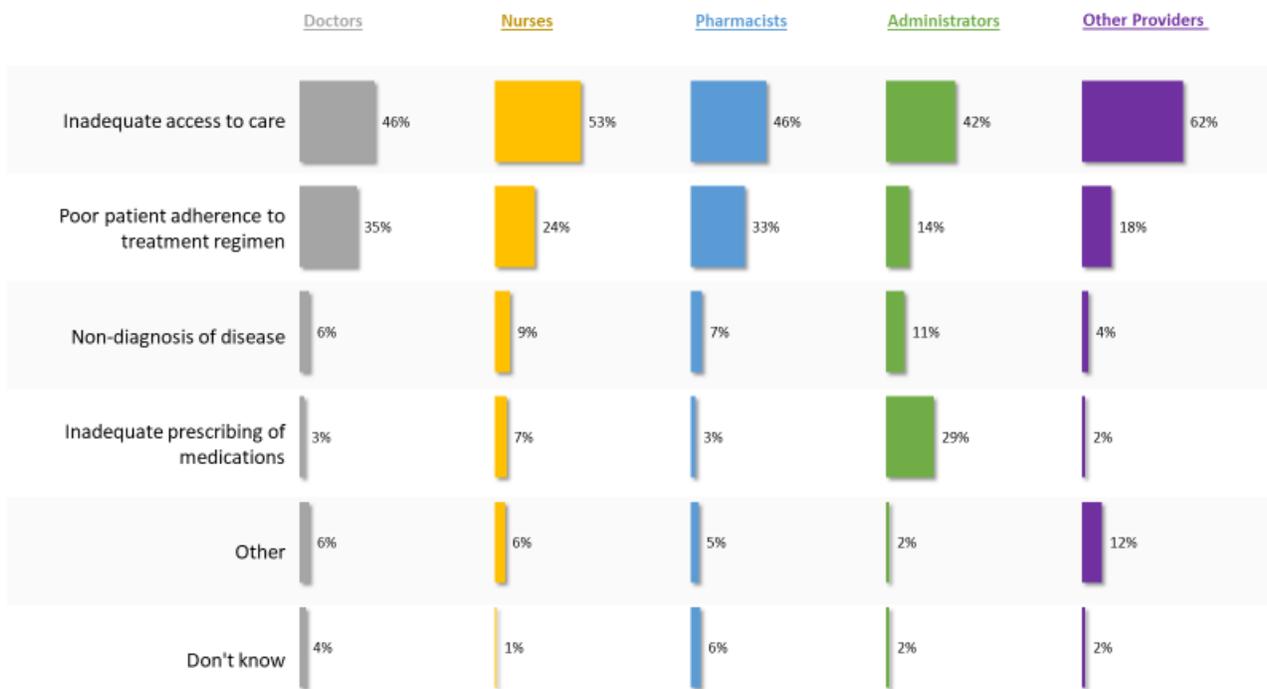


Figure 6. Contemporary causes of gaps between best and usual care in Canada as recorded in the 2018 HCIC survey.



Figure 7. Canadian health care professionals' responses when asked in the 2018 HCIC survey if they were involved "in a program that included a system of coordinated intervention programs that are often delivered by a team of health care professionals."

The concept of working as part of a team of health care professionals has rapidly expanded recently, particularly among doctors, nurses and administrators.

For comparison, in the 2016 HCIC survey, when asked if they were involved in a program of coordinated intervention programs delivered by a team of health care professions, only 37 percent of physicians, 62 percent of nurses, 43 percent of pharmacists; and, and 50 percent of administrators and other providers said they were involved in such care.

The factors driving the increased interest in team management of healthcare in Canada remain uncertain. One possible explanation is a nation-wide increase in "The Romance of Teams" phenomenon, in which involvement in teams appears to engender a shared sense of well-being among the individual components within the team regarding their mission and performance - despite unequivocal empirical evidence that management by teams actually

improves desired outcomes (8, 9).

On the other hand, it may reflect increasing realization that team-based health care involving patient-centred social-networking structures, particularly community-focused, clustered-lattice networks that highlight and integrate measurement and knowledge translation components are both clinically efficacious and cost-efficient (10, 11). Health care teams are believed to be the immediate and convenient context to deliver patient-centred care in primary care (11).

The Health Council of Canada currently suggests that teams should be the 'standard of care' for Canadians with chronic medical conditions, citing positive impacts such as fewer patient visits to hospitals and better health outcomes (12). Time will tell.

Going Forward

The contemporary burden of Canada's chronic diseases and their management are heavy and

increasing, both socially and fiscally. The near-future prognosis of our aging population, with their age-related chronic diseases, does not suggest an imminent relief from these challenges. Nonetheless, while we cannot reverse aging and its accompanying companion of increased chronic disease risk, prioritizing care interventions may moderate their impact. In particular, acceleration of patients' access to care should continue to be a priority target for all stakeholders.

Two other evolving trends also hold promise. One is the increasing recognition and integration of episodic acute and specialty care as integral components of the chronic care continuum.

Potentially more important is the increasing appreciation that multi-disciplinary knowledge and opportunity inherent in team care may, not only broaden entry points and expedite care access, but also increase measurement and feedback of care and outcomes to stakeholders, a definite driver of improved care and outcomes, including increased adherence to prescribed care (13,14).

Things can be better.

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