Taking a Toll on the Patience of Patients

– Canada's Health Care System –

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Introduction

Approaching its 150th birthday, Canada ranked the world's most reputable country in 2017.[1] Canada is fortunate to have several positive stereotypes and reputations, including being friendly, having beautiful nature and also, a great healthcare system. The Canadian health care system is heavily based on the principle of being universal, and equally accessible; services are provided and covered solely based on need, rather than the ability to pay.[2] For a long time, our health care system has been praised and commended by the international community. Yet, recent reports tell a different story. Despite hitting first place in reputation, Canada was not able to make it in the top 25 countries in the WHO ranking of efficient health care systems.[3] More locally, last year the health and welfare commissioner of Quebec reported that Quebec had the worst emergency room wait times in the western world.[4] It is becoming clear that Canada's strategy for providing medical services is not as efficient as we perceived it to be. Perhaps it is time for the Canadian health system to go through a systemic remodeling.

Signs and Symptoms

There are several reasons behind the drop in Canada's healthcare reputation including the increase in costs. There is often the notion that Canada provides free healthcare – this is only partially true. It is important to understand that public health insurance is only a certain method of using our taxes. In 2016 the cost of health care of an average Canadian family with an estimated

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[1] "Country RepTrak®," Country RepTrak | Top Countries by Reputation, , accessed September 29, 2017, https://www.reputationinstitute.com/research/Country-RepTrak.aspx.
[2] *Canada Health Act, Statutes of Canada* 1985, c. C-6. http://laws-lois.justice.gc.ca/eng/acts/c-6/FullText.html
[3] Ajay Tandon et al., MEASURING OVERALL HEALTH SYSTEM PERFORMANCE FOR 191 COUNTRIES, PDF, World Health Organization, April 17, 2001.
[4] Jaques Boissinot, "Quebec has longest emergency room wait times in West: report," The Globe and Mail, January 2, 2016, , accessed September 30, 2017, https://beta.theglobeandmail.com/news/national/quebec-has-longest-emergency-room-wait-times-in-west-report/article30246337/?ref=http://www.theglobeandmail.com&.

cash income of $81,885 was $8,098.[5] This is a 37.8% increase compared to the cost in 2006.[6] This is not to say that this is necessarily a faulty way of financing, but it is important to note that the cost of care is increasing. Considering the extend of their financial contribution to the healthcare system, patients should have the right to receive satisfactory and quality health services. Yet, even with Medicare, out of 2 635 Canadians with health problems who were surveyed in 2008 had more than 15% of respondents who did not fill a prescription due to cost.[7] This demonstrates that cost of service remains an obstacle in our health care system.

There are many other factors that contribute to the decline in Canada's health care system such as the lack of accessibility to services and difficulty understanding the physicians' explanations.[8] Yet, the biggest complaint of Canadians is the wait time.[9] There are a variety of waiting times; for example, patients can be waiting in walk-in clinics, for surgery, diagnostic testing and in the emergency room. In the case of specialized services, according to Statistics Canada, 16-29% of the participants of the survey responded that the waiting time that they experienced was unacceptable.[10] Furthermore, 11-18% of these people responded that these waiting times affected their lives directly, mainly in the form of developing anxiety, worry and

[5] Milagros Palacios, Feixue Ren, and Bacchus Barua, The Price of Public Health Care Insurance, PDF, Fraser Institute , August 2016.
[6] Ibid
[7] Stephen Duckett and Annalise Kempton, "Canadians' Views about Health System Performance," Healthcare Policy | Politiques de Santé 7, no. 3 (2012): , doi:10.12927/hcpol.2013.22750.
[8] *Plan d'amélioration des services de santé et des services sociaux* 1998-2002, PDF, Montréal: Régie Régionale de la Santé et des Services Sociaux, January 16, 2001.
[9] Canada, Statistics Canada, *Difficulty accessing health care services in Canada*, by Janine Clark (Ottawa, ON: Minister of Industry, 2016), 9, December 8, 2016, accessed October 1, 2017, http://www.statcan.gc.ca/pub/82-624-x/2016001/article/14683-eng.pdf.

[10] Canada, Statistics Canada, *Access to Health Care Services in Canada | Waiting times for specialized services (January to December 2005),* , accessed October 1, 2017, http://www.statcan.gc.ca/pub/82-575-x/82-575-x2006002-eng.htm?contentType=application%2Fpdf.

stress during these waiting periods.[11] Not only are these patients losing time, they are also experiencing further deterioration of their health.

It is true that patients may over-estimate wait times and have an inaccurate perception of time. However, evidence shows that unacceptably long wait times are not just an opinion, but a fact, especially in the emergency department. When visiting the emergency department, patients are categorized by the severity of their illness based on the Canadian Triage and Acuity Scale (CTAS). This scale divides patients in to five levels, starting at Level V – non-urgent – to Level I – Resuscitation; each level has a corresponding response time. Unfortunately, the ideal response time is not met for any of the CTAS levels in 90% of emergency visits in Canada.[12] Even for Level I Resuscitation patients, the median response time is 11 minutes, which is more than twice the recommended response time of < 5 minutes.[13] Furthermore, in Quebec, more than 20% of patients visiting the emergency room wait for 6-12 hours before consulting a doctor.[14] This is no longer simply a question on patient satisfaction, but a question on the quality and organization of our healthcare. In Canada, 62% of physicians and 50% of patients agree that fundamental changes need to occur in our healthcare system.[15] Wait-time is a recurring healthcare problem that Canada has been facing for at least the past decade. More importantly, the emergency department is an area of healthcare that patients heavily depend on – there are close to 16 million emergency visits

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[11] Ibid

[12] *Health Care in Canada 2012, A Focus on Wait Times,* PDF, 31, Canadian Institute of Health Information, November 25, 2012.

[13] Ibid

[14] Canada, Institut de la statistique du Québec, *Enquête québécoise sur l'expérience de soins 2010-2011*, vol. 4 (Quebec, QC: Gouvernement du Québec, Institut de la statistique du Québec, 2013), 59, April 2013, accessed September 10, 2017, http://www.stat.gouv.qc.ca/.

[15] Stephen Duckett and Annalise Kempton, "Canadians' Views about Health System Performance," *Healthcare Policy | Politiques de Santé* 7, no. 3 (2012): , doi:10.12927/hcpol.2013.22750.

each year in Canada[16] – especially for unexpected and severe health complications. It is time that we get to the root of this.

Localizing the problem

There are five key points that serve to map out a patient's journey through the ER: registration, triage, physician's initial assessment, disposition decision and leaving the emergency department. Between these steps are the potential wait times: wait time to physician's assessment, wait time to disposition (determining whether the patient should be discharged, receiving treatments/tests, and finally a decision to admit) and time waiting for inpatient beds if admitted.[17] This flow can also thought of as comprising three main components: *input* (the patient's coming into the ER), *throughput* (process of care and voyage through an ER visit), and *output* (discharging patients or moving patients to another site).[18] Each step has its own set of factors that may cause crowding of the ER and further, a delay in services.

Considering the three components, there is a tendency to focus on the *input.* While it makes sense to think that flow will improve if we remove some of the source, studies show that "unnecessary" visits to the emergency room (input) is negligible in the delay in service.[19] Rather it is the *throughput* and *output* components that cause the increase in patient waiting time.[20] Such factors include inadequate staffing, lack of resources and inefficient organization of transitions between health services. In Canada, there are a total of 1009 emergency medical doctors (including

[16] *Health Care in Canada 2012, A Focus on Wait Times,* 27
[17] Ibid, 28
[18] John C. Moskop et al., "Emergency Department Crowding, Part 1—Concept, Causes, and Moral Consequences," *Annals Of Emergency Medicine* 53, no. 5 (November 25, 2008): 606, accessed September 13, 2017, doi:http://dx.doi.org/10.1016/j.annemergmed.2008.09.019.
[19] Moskop et al., "Emergency Department Crowding, Part 1", 606.
[20] Ibid, 607.

pediatrics) for a population of 36.29 million people.[21] This amounts to about only 2.6 emergency physicians per 100 000 patients. This is lower than the ratio that the United Kingdom had over a decade ago (9.3/100 000).[22] The shortage in emergency staff has grave impacts on providing care to our patients. For example, last year, the emergency room in Saint-Marc-des-Carrières hospital, located between Quebec City and Trois-Rivières, had 54 shifts with no doctors present; unfortunately, this is not the only hospital in this situation.[23]

Lack of human resources is not the only obstacle in reducing wait times in emergency departments. Inefficient patient transition to the next service is a key factor in wait time. This includes discharge from the ER to wards once decisions have been made for patients to be admitted.[24] This is sometimes due to further tests that have to be done for the patient before leaving the emergency room; more often, the wait is due to lack of available inpatient beds.[25] If patients are not able to be moved to the inpatient beds, then this means that they occupy the stretchers and beds in the emergency room for several additional hours. This blocks the flow in patients, as new patients coming into the emergency now have no place to go, and ER nurses are taking care of patients who should be in the wards, rather than treating incoming emergency patients.

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[21] *Number of physicians by specialty and age, Canada, 2017*, PDF, Ottawa: Canadian Medical Association.
[22] Duncan Emerton et al., *Doctor Statistics in Canada, France, Germany, Italy, Japan, Spain, UK, USA*., PDF, EphMRA, 2008.
[23] Angelica Montgomery, "Emergency rooms in Quebec City increasingly going unstaffed by doctors," *CBC News Montreal*, April 15, 2017, , accessed October 2, 2017, http://www.cbc.ca/news/canada/montreal/emergency-rooms-quebec-city-jeffrey-hale-1.4071820.
[24] John C. Moskop et al., "Emergency Department Crowding, Part 2—Barriers to Reform and Strategies to Overcome Them," *Annals Of Emergency Medicine* 53, no. 5 (November 25, 2008): 613, accessed September 13, 2017, doi:http://dx.doi.org/10.1016/j.annemergmed.2008.09.024.
[25] *Health Care in Canada 2012, A Focus on Wait Times,* 32-33.

One of the biggest factors correlated with bed availability is the number of alternate level of care (ALC) patients.[26, 27, 28] About 13% of beds in Canada are occupied by patients who could be discharged.[29] Often, these patients require further care at long-term care facilities; the process of transferring these patients is usually the cause of the delay. There are some suggestions to increase the number of beds in both the emergency rooms and in the wards in attempts to decrease wait time.[30] However, a study demonstrated that increasing the number of beds in the emergency room did not decrease the wait-time, but rather increased it by an average of 7 minutes; a better alternative was to increase the departure rates which led to a decrease in wait time by an average of 22 minutes.[31] Increasing the number of inpatient beds may possibly reduce the wait-time, however, this is only a temporary solution. In order to solve this problem on a long-term basis, we must find a way to transfer the alternative level care patients as soon as the physicians discharge them. This must take into consideration the capacities of the long-term care facilities, the transport system to transfer the patients from one location to the other, as well as the constant obstacle of efficient budgeting.

It is true that there have been cuts on the health care system, but the Canadian government is still spending 11% of its GDP on health.[32] Based on 2014 data provided by WHO, Canada spent $4641 (international $) per capita on health, compared to France which spent $4508 and Italy which spent $3239 per capita on healthcare.[33] France and Italy ranked 1st and 2nd on the WHO

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[26] ibid
[27] Moskop et al. “Emergency Department Crowding, Part 2”, 613.
[28] Jason Sutherland and R. Crump, "Alternative Level of Care: Canadas Hospital Beds, the Evidence and Options," *Healthcare Policy | Politiques de Santé* 9, no. 1 (2013): , doi:10.12927/hcpol.2013.23480. 27
[29] Ibid
[30] Ibid, 28.
[31] Rahul K. Khare et al., "Adding More Beds to the Emergency Department or Reducing Admitted Patient Boarding Times: Which Has a More Significant Influence on Emergency Department Congestion?" *Annals of Emergency Medicine* 53, no. 5 (2009): , doi:10.1016/j.annemergmed.2008.07.009. 580.
[32] "Health Spending," CIHI, June 13, 2017, , accessed October 03, 2017, https://www.cihi.ca/en/health-spending.
[33] "Countries," World Health Organization, , accessed October 02, 2017, http://www.who.int/countries/en/.

ranking of overall efficiency while Canada ranked 25th.[34] This suggests that it is possible to have a more efficient healthcare system despite the changes in our current budget.

Treatment

From what has been presented, Canada's healthcare does not seem to be doing well. However, Canada has been making constant efforts to bridge gaps and improve the quality of care for our patients, especially in the area of waiting times. A variety of initiatives have started across the country, such as the Pay-for-Performance model which started in Vancouver Coastal Health in 2007. This model provided financial incentives such as quality bonuses and improved reimbursement rates for higher-quality providers, which improved several emergency wait time targets by 13-24%.[35] In Saskatchewan, the Health Quality Council designed a new layout to separate the beds for less critical patients from the more critical patients. This avoided the block in the flow of patients, and the wait time between patient arrival and physician assessment was reduced from 63 minutes to 35 minutes and decreased the number of patients leaving the ER before being assessed.[36]

There are also notable innovations introduced close to home, such as the SIPA (service intégrés pour les personnes âgées en perte d'autonomie) project which was launched in 2006 to bring healthcare services to the patients in their homes. This study demonstrated that by providing community-based intersectoral services for seniors, the rate of ALC occupancy in the hospital

[34] Tandon et al., *Measuring overall health system performance*, 18.
[35] *Health Care in Canada 2012, A Focus on Wait Times,* 34
[36] Ibid, 35

could be reduced by 50%.[37] Unfortunately, this was only a pilot study that was conducted and the project did not seem to continue further.

The Lean Process

Each of the above-mentioned strategies showed some improvements to the wait time. Yet, the overall wait times have been progressively getting longer not only in the emergency department but in all parts of the healthcare system.[38] Why is this so? Perhaps it is because such measures were taken only in specific departments, rather than the management strategy of the organization as a whole. There are definite benefits to designing a strategy that is specific to a certain field as it allows for more detailed fine-tunings, which are necessary. However, by implementing a uniform overarching structure in the institution, it is possible to facilitate comprehensive communication between departments and form stronger intersectoral teams which would allow smoother patient-service transitions (i.e. transition from ED to wards).

In 2005, the Institute for Healthcare Improvement (IHI) in the Boston proposed the implementation of Lean management strategies in the hospital to target this problem. The core of this method is to distinguish "value-added" steps from "non-value-added" steps in processes to leave only the necessary stages. The key to this is continual measurements of the process and choosing the right measurements in order to encourage positive behaviours in the participants – in other words, making sure that each action is related to the overall target.[39, 40]

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[37] F. Beland et al., "A System of Integrated Care for Older Persons With Disabilities in Canada: Results From a Randomized Controlled Trial," *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences* 61, no. 4 (2006): , doi:10.1093/gerona/61.4.367.

[38] "Health care wait times hit 20 weeks in 2016: report," *CTV Health*, November 23, 2016, , accessed October 3, 2017, http://www.ctvnews.ca/health/health-care-wait-times-hit-20-weeks-in-2016-report-1.3171718.

[39] *Going Lean in Health Care*, Pdf, Cambridge: Institute for Healthcare Improvement, 2005.

[40] Benjamin Fine et al., "Leading Lean: A Canadian Healthcare Leaders Guide," *Healthcare Quarterly* 12, no. 3 (2009): , doi:10.12927/hcq.2013.20877.

This method of management has already been implemented in many hospitals across Canada, and many show promising results. In British Columbia, the Lean process was introduced to several institutions which led to a reduction in the length of staff absenteeism and an increase in the number of surgeries without any increase in resources.[41] It is interesting to note that British Columbia's healthcare has been given the highest ranking in all of the provinces and territories in Canada.[42] Of course, it is not possible to make a direct correlation between their performance and Lean management. Nonetheless, this observation suggests the influence on institution-level management strategies in improving the overall efficiency of the system.

Patient at heart, science in hand

In discussing the several problems and potential solutions above, it has been confirmed that Canada's healthcare system is functional, but quite inefficient. In the end, we are left with the question, "Why do we care?" or "Why *should* we care?" In practical terms, perhaps with improvements in waiting time and general efficiency of healthcare, our tax rates will decrease. Also, Canada may be able to regain their honour by ranking higher in the next WHO ranking. But these are secondary benefits; the most important reason to care is because it affects people. The strain on the health budget and the pressure to reduce wait-times not only adds extra stress to the staff, but in many ways, also jeopardizes their safety.[43] Furthermore, wait times cause serious health and economic consequences to patients, including mental anguish, pain, further

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[41] Brent Dowdall, "Lean at Work: Successful Implementation Across Canada," Lean at Work: Successful Implementation Across Canada, December 10, 2014, , accessed October 02, 2017, http://www.conferenceboard.ca/commentaries/healthcare/default/14-12-10/lean_at_work_successful_implementation_across_canada.aspx.

[42] "Canada health report card ranks B.C. 1st, Nunavut last," *CBC News Health,* February 12, 2015, , accessed October 2, 2017, http://www.cbc.ca/news/health/canada-health-report-card-ranks-b-c-1st-nunavut-last-1.2954620.

[43] Simon Nakonechny and Kate McKenna, "Montreal General Hospital ER nurse says family worried for her safety following staffing cuts," *CBC News Montreal*, September 5, 2017, , accessed October 2, 2017, http://www.cbc.ca/news/canada/montreal/montreal-general-hospital-er-nurse-says-family-worried-for-her-safety-following-staffing-cuts-1.4276177.

deterioration of their health and development, and loss of income and time.[44] In the Canada Health Act, Canada recognizes that *quality* healthcare is needed in order to ensure our health and well-being.[45] It is important to remind ourselves that 'Canada' does not only mean the government. Each one of us make up a part of Canada, and so have the responsibility to ensure quality healthcare. Furthermore, as medical professionals, we have a mandate to deliver quality and timely health services, whether it is through raising awareness, enforcing new laws, implementing new management strategies or seeing each patient on time with a smile, we must do it with our patients at heart, and science in hand.

[44] *Position paper on the occasion of the 10th Anniversary of the 2004 10-Year Plan to Strengthen Health Care in Canada:Timely access to care for all Canadians: The role of the federal government ,* PDF, Wait Time Alliance, September 23, 2014.
[45] *Canada Health Act, Statutes of Canada* 1985, c. C-6. http://laws-lois.justice.gc.ca/eng/acts/c-6/FullText.html

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