TROUBLING DIAGNOSIS: COMPARING CANADA'S HEALTHCARE WITH ITS INTERNATIONAL PEERS

by Tingting Zhang

ONLINE APPENDIX:

A1: NUMBER OF MEASURES PER CATEGORY: 2018 VS. 2025 REPORTS

The analysis relies on data collected from 2021, 2022 and 2023 CMWF international surveys. Out of 237 questions across these three surveys, 102 measures were selected for analysis. Most of the measures were selected and categorized based on those presented in Busby, Muthukumaran and Jacobs (2018). Measures that did not fit within these categories were excluded. However, several new measures were added as the 2023 CMWF survey expanded to include additional information, providing valuable insights to complement the existing categories.

The Commonwealth Fund provides a range of reasonable and useful healthcare performance indicators but is not comprehensive. To address this, the author incorporated additional data points from the WHO, the OECD and CIHI. The table below compares the number of measures for each category between the 2018 report and the current analysis.

Table A1: Number of Measures per Category, 2018 vs. 2025 Reports*

Category	Total number of measures (2018)	Added in 2025	Modified in 2025	Dropped in 2025	Total number of measures (2025)
Access to Care	**16**	**7**	**1**	**4**	**19**
Affordability	6	4	0	1	9
Timeliness	10	3	1	3	10
Care Process	**29**	**47**	**9**	**1**	**75**
Preventative Care	9	2	4	0	11
Safe Care	3	2	0	1	4
Engagement and Patient Preferences	10	17	1	0	27
Coordinated Care	7	13	4	0	20
Virtual Care	0	13	0	0	13
Administrative Efficiency	**5**	**2**	**0**	**0**	**7**
Equity	**11**	**6**	**1**	**8**	**9**
Healthcare Outcomes	**9**	**2**	**4**	**3**	**8**
Total	**70**	**64**	**15**	**16**	**118**

* Comparison of Busby et al. (2018) and this 2025 publication.

Note: Measures were modified because survey items, response categories or available data changed.

Source: Author's compilation.

A2: METHODOLOGY

My approach to assessing Canada's healthcare systems mostly resembles Busby, Muthukumaran and Jacobs (2018). The method for calculating performance scores and rankings is also similar to Schneider et al. (2021) and Blumenthal et al. (2024). For each measure, the author converted each country's result (e.g., the percentage of survey respondents giving a certain response) to a normalized performance score. This score was calculated as the difference between the country's results and the 10-country mean, divided by the standard deviation of the results for each measure. This implies that the international average for all measures is precisely zero. A positive performance score indicates the country performs above the 10-country average; a negative score indicates the country performs below the international average.

The overall ranking is calculated as a weighted composite of results in the categories of Access to Care (0.2), Care Process (0.2), Administrative Efficiency (0.2), Equity (0.2) and Healthcare Outcomes (0.2). Sensitivity analysis shows that while applying different weights to these categories changes the middle countries' rankings, the bottom and top countries' rankings remain the same.

The scores calculated in this analysis are slightly different from those published by the Commonwealth Fund (Schneider et al. 2021, Blumenthal et al. 2024). These discrepancies stem from the addition of new measures and subcategories and adjustments for rounding and reweighting. Blumenthal et al. (2024) also excluded the US from their calculations of international averages because its outlier status negatively skewed the mean performance. This exclusion greatly accounts for the differences in performance scores between their analysis and this one. Considering the US's poor performance in several categories such as affordability, equity and healthcare outcomes, excluding it from the international average would further worsen the rankings of Canadian jurisdictions.

Compared to Blumenthal et al. (2024), the top performers in access to care, care process and administrative efficiency remain unchanged in my analysis, indicating that the inclusion of new indicators, reweighting and incorporating the US into the international average calculation did not significantly affect their performance. For Canada, its performance in care process, administrative efficiency and equity remained consistent. However, my analysis shows a decline in Canada's rankings for access to care and healthcare outcomes, which may explain its overall lower ranking. In contrast, my findings compared to Schneider et al. (2021) show improvement in Canada's performance in equity and healthcare outcomes.

B1: DATA

The Commonwealth Fund's 2021 International Health Policy Survey of Older Adults randomly sampled the population age 65 and older in 11 countries: Australia, Canada, France, Germany, the Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom and the United States. In Canada, a random digit dialling overlapping sampling frame telephone design was used to obtain all completed interviews. In total, 4,484 interviews were completed. The overall response rate was 22.3 percent. The random sample of adults over 65 years of age represents about 0.06 percent of the senior population in Canada and includes very few responses from residents of long-term care homes.

The Commonwealth Fund's 2022 International Health Policy Survey of Primary Care Physicians randomly sampled primary care physicians in 10 countries: Australia, Canada, France, Germany, the Netherlands, New Zealand, Sweden, Switzerland, the United Kingdom and the United States. In Canada, the survey consisted of paper and online surveys, as well as computer-assisted telephone interviews, that used a common questionnaire that was translated and adjusted for country-specific wording as needed. There were 1,459 respondents

in Canada. The overall response rate in Canada was 22.7 percent. In all countries, general practitioners and family physicians were included, with internists and pediatricians also sampled in Switzerland and the United States.

The Commonwealth Fund's 2023 International Health Policy Survey of the general population randomly sampled the general population age 18 and older in 10 countries: Australia, Canada, France, Germany, the Netherlands, New Zealand, Sweden, Switzerland, the United Kingdom and the United States. In Canada, a random digit dialling overlapping sampling frame telephone design was used to obtain all completed interviews. This approach allowed surveyors to reach respondents on both cellphones and landlines to produce a more nationally representative sample. In total, 4,820 interviews were completed across Canada. The response rate was 11.7 percent.

For more information about the data and sampling methodology, see CIHI (2022, 2023 and 2024).

B2: Data Limitations

Countries with high performance in primary care such as the UK often survey their patients about the system. However, in Canada the standardized cross-provincial data, let alone cross-national data, on health system performance are limited.

The CMWF survey offers unique and detailed data on the experiences of patients; it does not, however, capture administrative or financial information that would allow for more direct comparative analysis of policies. The Commonwealth Fund survey cannot draw conclusions about the relative efficiency or resulting clinical outcomes of specific policies in other jurisdictions. Notably, some experts call for caution about the limits of ranking exercises because they do not specifically adjust for each province's different demographic and socioeconomic circumstances (Hewitt and Wolfson 2013).

The author is aware of the potential bias related to survey data. Possible data limitations are associated with sampling bias,[1] response bias[2] and cross-cultural variations.[3] However, the findings still add value and provide a broad comparable overview of the populations' perceptions and interactions with healthcare systems and providers. It can highlight priority areas for improvement, or common challenges across jurisdictions, and allows for comparison across many aspects of care. Cross-province results also could facilitate the identification of best practices, thereby enabling more targeted engagement from pan-Canadian health organizations. Moreover, international comparisons would inform the Canadian public about healthcare performance relative to top international performers, fostering a political environment receptive to further reform.

1 The survey relies on a sample of respondents (i.e., 4,484 seniors, 1,459 family physicians and 4,820 adults). In total, they represent only a small portion of the population and might bias the findings if the sampling process does not represent the general population.

2 Respondents may provide answers influenced by social desirability or other biases, impacting the accuracy and reliability of the data.

3 Patients' and physicians' assessments might be affected by their expectations, which could differ by country and culture. Differences in cultural perceptions and interpretations of healthcare experiences may affect responses, potentially leading to misinterpretations of the data.