Information Sheet

Canadian Stability Analysis: Addressing the Challenges of Achieving Equivalency With ICD-11 MMS Codes

Disclaimer: This content was originally published as a poster for the WHO-FIC Network's annual meeting from October 14 to 18, 2024. It has been reformatted for download.

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Abstract

The Canadian Institute for Health Information (CIHI) continues to assess the clinical, business and statistical implications of transitioning to ICD-11; our goal is to provide a comprehensive understanding of the benefits and challenges associated with this transition. This poster is a companion to a prior WHO-FIC poster titled "Canadian Stability Analysis: Comparing v2018 ICD-10-CA With ICD-11." It delves deeper into the Canadian-specific codes (concepts) and their mapping to a broader ICD-11 MMS (*ICD-11 for Mortality and Morbidity Statistics*) target stem code, identifying challenges with achieving equivalency. One challenge is that some of the Canadian-specific codes exist as entities in the WHO-FIC Foundation and have Uniform Resource Identifiers (URIs) but lack a corresponding equivalent statistical code in the MMS linearization. This is consistent with the observation in the ICD-11 Reference Guide (1.6.4) that "The use of ICD in the specific context of the health care system of a country may require detail that is not currently part of ICD-11, for example, due to specific settings or due to reimbursement system requirements."

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Introduction

Like many countries, Canada has expanded on the World Health Organization (WHO) version of ICD, adding clinical detail to meet specific data needs. The national standard used in Canada to report morbidity statistics is ICD-10-CA. Developed by CIHI in collaboration with an expert panel of physicians and external field reviewers, ICD-10-CA includes modifications and additions to better meet the country's clinical, epidemiological and health information needs. Throughout the development of ICD-11, CIHI has been assessing the specificity of the new classification and providing recommendations for content enhancement. This has been achieved by comparing the content of ICD-10-CA and ICD-11. Furthermore, to support the transition to and implementation of ICD-11 in Canada, CIHI has developed a crosswalk between v2018 ICD-10-CA and v2022 ICD-11.

Approach

We assessed the Canadian-specific codes that mapped to a broader ICD-11 target stem code. Challenge A was assigned when an equivalent Foundation entity was found (i.e., with all the detail of the Canadian concept) but there was no equivalent ICD-11 MMS target stem code. Challenge B was assigned when there was no equivalent Foundation entity and there was no applicable extension code available to achieve equivalency. Challenge C was assigned when there was no equivalent Foundation entity, but equivalency could be achieved with optional extension codes — this is considered challenging because the optional nature of extension codes could lead to inconsistent data capture. Mapping errors and residual Canadian codes were assigned Challenge D — not applicable to assess.

Table Challenge descriptions and examples

Challenge description	Example ICD-10-CA source code	Example ICD-11 target code (broader)	Example equivalent ICD-11 Foundation entity
A: Equivalent Foundation entity, no equivalent ICD-11 target stem code	O70.21– Third degree perineal laceration during delivery, type 3a, so described	JB09.2 Third degree perineal laceration during delivery	Third degree perineal laceration during delivery, Type 3a Foundation URI http://id.who.int/icd/entity/2142820674
B: No equivalent Foundation entity, no applicable extension codes to specify detail	Z51.81 Assistance in dying	QB9Y Other specified contact with health services for nonsurgical interventions not involving devices	Not applicable
C: No equivalent Foundation entity, optional extension codes to specify detail (i.e., clustering required to achieve equivalency)	C34.00 Malignant neoplasm of right main bronchus	2C25.Z Malignant neoplasms of bronchus or lung, unspecified	Cancer of the main bronchus is not an equivalent Foundation entity but there is an optional extension code: XA3L52 Right main bronchus Cluster achieves equivalency: 2C25.Z&XA3L52

Limitations

These findings represent results from v2018 ICD-10-CA and v2022 ICD-11, which are older versions of the classifications. Subsequent releases of ICD-11 may include updates to potentially missing/erroneous content, which may impact the results.

Results

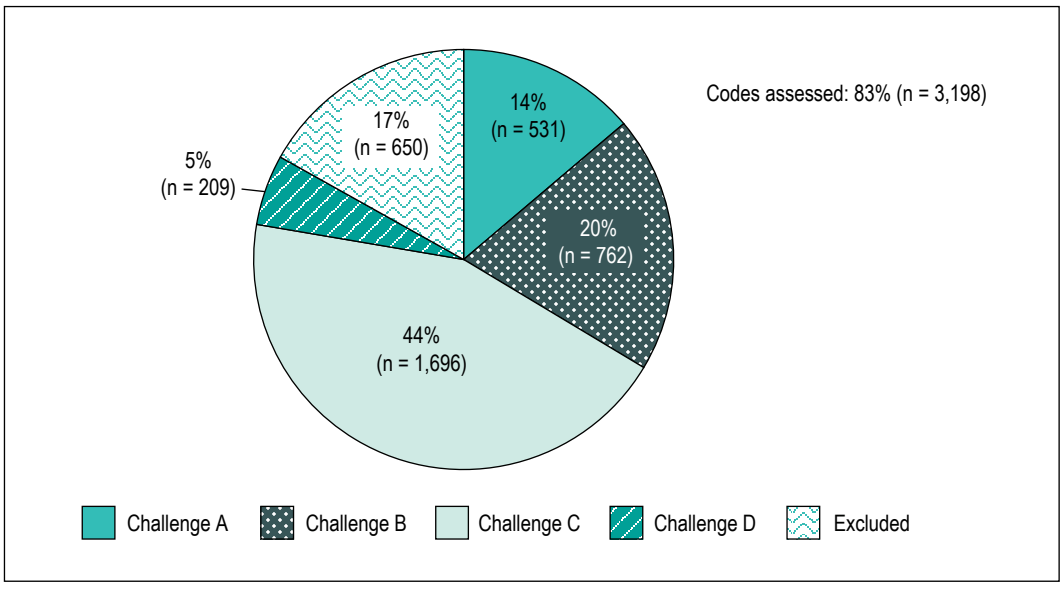
83% (n = 3,198) of the total 3,848 Canadian-specific codes (concepts) — which mapped to a broader (less specific) ICD-11 MMS stem code — were assessed to determine why equivalency could not be achieved. The findings are as follows:

- Challenge A: 14% (n = 531)
- Challenge B: 20% (n = 762)
- Challenge C: 44% (n = 1,696)
- Challenge D: 5% (n = 209) were not applicable to assess as part of this study (i.e., mapping errors [1%, n = 45] and residuals [4%, n = 164])

17% (n = 650) of the Canadian-specific codes were excluded from the assessment for the following reasons:

- Equivalent: The ICD-11 MMS target stem code was equivalent (9%, n = 355)
- Narrower: The ICD-11 MMS target stem code was narrower (greater specificity) (2%, n = 64)
- Not applicable: No map was possible at a single ICD-11 MMS target stem code (6%, n = 231)

Figure Challenges with achieving equivalency



Conclusion

Our analysis indicates that if a Canadian linearization was developed, Canadian-specific concepts were elevated to become codeable entities and extension codes became mandatory, equivalency would be achieved for 67% of Canadian-specific codes. Further assessment is required to determine whether, for the 20% of Canadian-specific codes that do not have an equivalent Foundation entity, there is a need for this detail. If so, proposals to add entities to the Foundation would be required, along with proposals to add extension codes to capture specific details. Assessing the impact on case-mix grouping methodologies and CIHI's national indicator reporting, including a review of code utilization patterns, will help determine requirements and how a Canadian linearization could benefit health system data and analytical reporting needs.

While no decision has been made regarding a timeline for implementing ICD-11 MMS for morbidity statistics in Canada, CIHI's ongoing and forthcoming work will inform strategies and guide decision-making on its implementation for health system use in Canada.

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