ICD-11 Readiness Assessment Results

Executive Summary

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Unless otherwise indicated, this product uses data provided by Canada's provinces and territories.

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Introduction

To support the implementation of ICD-11 for health system use in Canada, it is important to understand the landscape of hospital and clinical information system (HIS/CIS) use and the impact that ICD-11 implementation will have on these systems, and to ensure compatibility of ICD-11 with other health information systems, electronic health records (EHRs) and national health databases. To achieve this aim, the Canadian Institute for Health Information (CIHI) consulted with stakeholders and vendors across Canada and conducted an ICD-11 readiness assessment using a range of collection instruments such as surveys, focus groups and interviews. This executive summary provides an overview of the assessment process, as well as preliminary findings of the assessment and key recommendations.

Assessment process

CIHI hired an external consultant to seek input from all 13 Canadian provinces and territories and 5 health information system vendors in January and February 2023. Participants included representatives from jurisdictional health ministries and/or health authorities; members of the National Coding Advisory Committee (NCAC) and National Clinical Administrative Databases (NCAD) Advisory Committee; 2 coding and abstracting vendors; and 3 enterprise EHR vendors. Their perspectives were collected through surveys, focus groups and consultations, allowing for a comprehensive assessment of the benefits, challenges and readiness associated with the new classification system. Preliminary findings of the assessment, as well as recommendations, were shared with CIHI in July 2023. The information has been synthesized and appears below.

Preliminary findings

The assessment results have been grouped into 3 categories: current stakeholder landscape, current vendor landscape, and potential barriers and risks.

Current stakeholder landscape

The current state of HIS/CIS implementation varies across jurisdictions. While ICD-11 is digital health–ready, not all jurisdictions across the country have reached that level of readiness. Of the 13 jurisdictions, only 1 is fully electronic, while the remaining 12 jurisdictions are in a hybrid state — meaning that some sites are fully electronic while others still rely on paper charts.

Clinical terminologies such as SNOMED CT are in use in jurisdictions that have EHRs in place. Consultations with jurisdictions identified 4 jurisdictions that have incorporated clinical terminologies in their information systems. SNOMED CT is used in these jurisdictions, although indirectly via a third-party interface. The other 9 jurisdictions with either no or partial EHRs did not use clinical terminologies in their practices. Crosswalks/maps were often used to link clinical concepts to classifications for reporting purposes.

Stakeholders shared some anticipated challenges with ICD-11 implementation:

- Several jurisdictions are in the process of implementing new systems (e.g., EHR, CIS) over the next few years. It is imperative that these new systems have the capability to incorporate ICD-11, as several jurisdictions expressed their preference to avoid simultaneous implementation of a new system and ICD-11.
- The challenges encountered during the adoption of ICD-10-CA still exist, including a shortage of coders, outdated systems, the impact of historical data reporting and a lack of robust clinical documentation processes.
- While the current platform can accommodate both ICD-10-CA and ICD-11 codes, there was concern about retaining personnel and retraining personnel to use the codes.

Jurisdictional needs must be addressed prior to implementation, such as

- Buy-in at all levels to ensure resources are allocated;
- System readiness and operational support;
- Communication with all stakeholders/partners; and
- Change and project management.

In terms of a realistic time frame for transitioning to ICD-11, estimates vary across jurisdictions. 6 jurisdictions indicated a projected time frame of 5 or more years, while 2 reported a time frame of 4 to 5 years. 1 jurisdiction anticipated that a transition may be feasible within 2 to 4 years, and 1 did not provide a response regarding a timeline. It was also discussed that with the right incentives, establishing beta sites and having some hospitals implement ICD-11 first might help get the momentum going.

Stakeholders involved with coding and data submissions to CIHI indicated that they had enough information or knew where further information could be found. See the appendix for questions raised by stakeholders.

Current vendor landscape

All 5 vendors were aware that ICD-11 is on the horizon, but the majority have not taken significant action because an implementation date has not been set. 1 vendor has been proactive and has engaged in talks with the World Health Organization (WHO).

Most of the vendors interviewed felt that the move to ICD-11 would be a major technical challenge and more substantial than the transition from ICD-9 to ICD-10. Anticipated challenges include the requirement for modifications to every product that uses ICD-10-CA; how computer-assisted coding will work with ICD-11 and its impact on data collection; and how crosswalks/maps between clinical concepts and classifications will be handled.

In terms of a realistic time frame for moving to ICD-11, 2 vendors reported 4 to 5 years, 1 reported 3 to 5 years, 1 reported 3 to 4 years, and 1 reported 1 year.

Vendors would like ongoing dialogue with CIHI to share progress updates. The 2 key questions for vendors were the identification of an implementation date and whether there will be Canada-specific content. See the appendix for other questions raised by vendors.

Potential barriers and risks

Infrastructure and technology: Determination of a timeline for implementation is crucial but will be dependent on many things, such as

- Different levels of CIS implementation — stakeholders do not want to implement a new CIS and new classification at the same time;
- Interoperability between the disparate systems/vendors across the country and within jurisdictions; and
- The need for a third party to connect to EHRs.

Funding: Funding for the jurisdictions would have an impact on the implementation of ICD-11. Money must be allocated to the health information system in each jurisdiction to enable the transition from ICD-10-CA to ICD-11. Several jurisdictions indicated that they were experiencing a shortage of funds.

Human resources: There were concerns raised about coder resources (e.g., a shortage of coders, training of coders, pay for coders).

Convincing clinicians: To fully realize the advantages that come with an EHR or electronic medical record (EMR), clinicians must use it as intended. ICD-11 in an EHR or EMR has the potential to be a standard across the continuum of care in Canada. However, it may be a challenge to convince physicians to use ICD-11. Some physicians prefer to use SNOMED CT, which can be mapped to ICD-11 to increase interoperability between systems.

Recommendations

The following 8 recommendations were proposed for consideration to support the implementation of ICD-11 in Canada:

1. **Obtain buy-in:** Promote ICD-11 as the international data standard for a common health language in Canada and a potential long-term cost-saving solution.
2. **Make decisions soon:** Decisions need to be made as soon as possible to be able to provide stakeholders and vendors with the information they need to start planning. For example, a pan-Canadian task force needs to be formed to provide decisions to the Conference of Deputy Ministers about actions on the recommendations regarding the implementation of ICD-11, a Canadian version of ICD-11, the implementation date and the proposed transition plan. An internal working group should be established to review and provide recommendations to the pan-Canadian task force for decision-making.
3. **Communicate with stakeholders and vendors:** Stakeholders and vendors identified a need to have information about the implementation of ICD-11 updated and readily accessible. Actions to support this include keeping CIHI's ICD-11 web page current, continuing to circulate newsletters regarding CIHI's work related to ICD-11, developing an FAQ document to answer key questions presented in the appendix of this executive summary, and providing ongoing updates to systems departments, as some might not be aware of ICD-11.
4. **Continue to demonstrate the value of ICD-11:** Demonstrating the added value from the adoption of ICD-11 could help jurisdictions understand the purpose of implementation. Provide real-life examples of the type of information that would be available with ICD-11. Demonstrate the coding of mental health cases using the friendlier language. Consider creating a vendor sandbox (a testing environment) that allows developers to ensure that ICD-11 can be accommodated.
5. **Continue the consultation within Canada:** Stakeholders identified groups that should be consulted in the future such as departments of health, health informatics divisions, colleges of physicians and surgeons, and terminology and interoperability experts. It would be valuable to start engaging these groups to further promote ICD-11.
6. **Collaborate with international colleagues:** CIHI could work closely with WHO Family of International Classifications colleagues from countries that have their own national modifications of ICD-10 to encourage WHO to assist with solutions for the implementation of ICD-11. These countries also have comprehensive health information systems and will need time to transition to ICD-11.

7. **Leverage coding champions:** Some coders have tested the ICD-11 Coding Tool and enjoyed working with it. This is good news and should be shared across the country. Obtain testimonials and identify potential advocates or coding champions.
8. **Engage and educate physicians regarding the benefits of ICD-11:** Medical associations across the country should be engaged and informed about the potential use of ICD-11 as a common language for the Canadian health data ecosystem. Improved clinical documentation from clinicians is required to fully realize the advantages and automation that an EHR or EMR can provide. Physicians and clinicians need to be made aware that ICD-11 contains clinical language and is a much better fit for their needs.

Conclusion

The readiness assessment helped elucidate the benefits and challenges of adopting ICD-11 for Canadian stakeholders. The transition to ICD-11 is considered a major technical challenge by stakeholders and vendors. The state of HIS/CIS use across the country is disparate — some sites are digital health–ready, while others are still relying on paper charts. EHR vendors are aware that ICD-11 is on the horizon, but they advised that there are many aspects that need to be addressed prior to implementation. While ICD-11 offers significant improvements in granularity, interoperability and data analytics, its successful implementation relies heavily on detailed planning, training and education, and on system updates. Stakeholder and vendor recommendations will help inform the development of an ICD-11 roadmap to ensure a smooth transition to ICD-11.

Acknowledgement

CIHI would like to express its appreciation and gratitude to all stakeholders who generously participated in the readiness assessment interviews.

Appendix: Questions raised by stakeholders and vendors during consultations

Stakeholder questions

- Is CIHI planning on a Folio-type product with Canadian modifications or is the plan to use the browser?
- We need to know more about system dependencies, the roll-out plan, training and education requirements.
  - What is the education required for coders and how long will it take to be comfortable with ICD-11?
- What is the status of CIHI's readiness?
- How will ICD-11 work with the different vendor applications?
- What are the benefits of ICD-11 in order to justify the cost and resources to do the transition?
  - What additional information will be gained with ICD-11?
- What will the impact be on cohort definitions and indicators?
  - Will CIHI's indicators be able to adapt to ICD-11 to provide trending (e.g., HSMR, Frailty, Hospital Harm)?
- More information is needed to understand the differences between ICD-10 and ICD-11:
  - Is there a fundamental change in ICD-11 compared with ICD-10?
  - What is the format of the new ICD-11 codes?
  - How will postcoordination and the extension codes work?
  - How will data quality checks be done?
  - How can we manage the external cause codes?
- Where can we find the tables behind the classification or are they there yet?
- How will the application programming interface (API) be integrated into our system?
- Is there a global view of other countries that have implemented? And can their successes and challenges during the transition be shared?
- Would it be possible to provide a course similar to what SNOMED International has done (a mini application that can be used to do test runs)?
- Will communication be provided to CEOs for budget planning?
- Will online hands-on learning be provided in different modules with different coding specialties, including specific examples for DAD and NACRS?
- Is a demo of the system available?

- What is the proposed transition plan?
  - What considerations will CIHI make to extend submission deadlines due to implementation and roll-out?
  - 1 participant noted that she was enrolled in a master's program that provided historical studies indicating that there could be a 9-month learning curve. She suggested that CIHI share information about lessons learned in the transition from ICD-9 to ICD-10.
  - Is there an estimated loss in productivity to dedicate resources to transition to ICD-11?
- What are the financial impacts?
  - Is there a cost estimate to data systems to host ICD-10-CA and ICD-11?
- Where does this initiative rank in priority over other health information projects?
- Who will be taking the lead/responsibility to work with the abstracting vendors in Canada?
- How often is the change cycle? In ICD-10, we have 3-year cycles.
- Will we get a new set of NRS codes?
- Will the NACRS CED-DxS list also be updated to ICD-11 codes? If yes, will the pick-list be expanded due to the new ICD-11 groupings?
- Is there any funding coming from the Pan-Canadian Health Data Strategy to implement the country-specific modification?
- Report writing and extraction of the data — how vastly different is it? How big is the gap in the variance of information?
- What about CCI?
- Is there a risk in waiting 4 to 5 years to implement?
- Will CIHI and Statistics Canada transition at the same time?
- Will there be a new CMG grouper with ICD-11?
- What will the workforce be like in each jurisdiction when implementation is being considered?
  - How many coders will retire or quit?
- What state is each facility in with respect to the roadmap and implementation of its electronic patient record (EPR)?

Vendor questions

- Will the transition process to ICD-11 be mapped out and made available?
- What are the specifications for the Coding Tool?
- How will this affect the clinical modules (e.g., NRS, OMHRS, CCRS, Rehab)?
- We need to know field lengths, valid dates, gender-specific codes, age ranges, grouper information — we can't do anything with the groupers until CIHI puts out information regarding CMG+ and CACS.
- Is SNOMED CT going to be mapped in somehow?
- Will CIHI enforce the use of the Coding Tool and the API?
- Are there any special use cases that the vendor needs to be aware of?
  - The example given was the list of high-cost conditions that exists in the United States. If there are programs like this where certain codes need to be highlighted, this information would be helpful for vendors.
- Is there going to be a limited subset of extension codes related to a stem code? Software providers require this content knowledge for development.

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