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Evaluating the Impact of ICD-11 on Canada's Health Care Information Systems

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Abstract To support the implementation of ICD-11 for health system use in Canada, we must understand the current use of hospital and clinical information systems (HIS/CIS) and the impact that ICD-11's implementation will have on these systems. Ensuring the compatibility of ICD-11 with other health information systems, electronic health/medical records (EHRs/EMRs) and national health databases is also key. To achieve these goals, the Canadian Institute for Health Information (CIHI) consulted with stakeholders and vendors across Canada using surveys, focus groups and interviews. This poster describes the process, outcomes and recommendations.
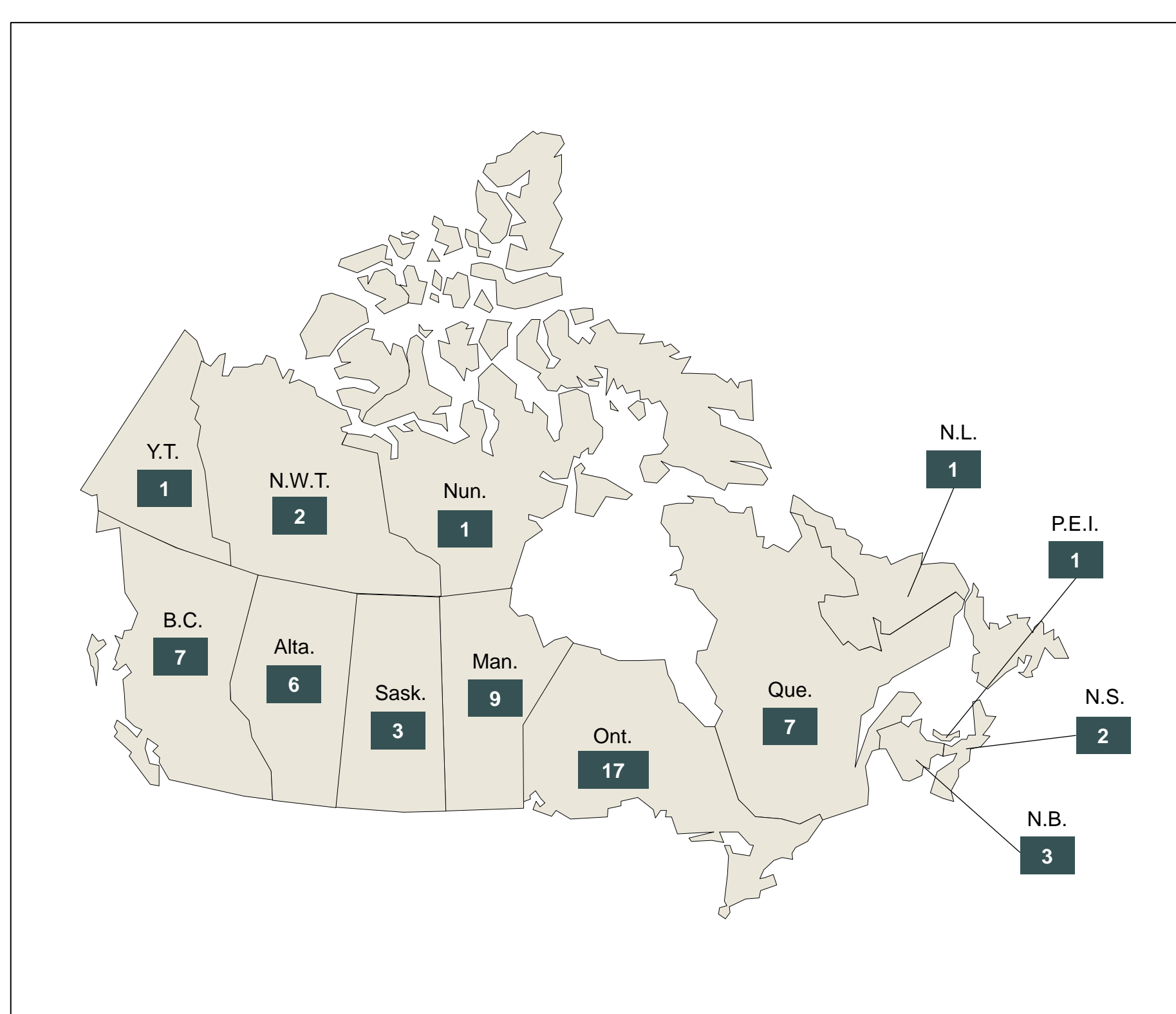
Introduction

Since ICD-11 came into effect in January 2022, CIHI has continued to evaluate the impacts that its adoption will have on health systems in Canada. Numerous studies have been conducted to examine the implications of implementing ICD-11. These studies have focused on specific questions, such as about comparability with ICD-10-CA (the Canadian modification of ICD-10) and ICD-11's utility in different health care settings, including primary care and mental health. The impact on data collection and reporting is an area yet to be examined, which includes analyzing how ICD-11 will affect health information systems, EHRs and national health databases.

The ICD-11 readiness assessment results were informative regarding how stakeholders manage HIS/CIS for clinical documentation and for collecting, reporting and analyzing health information at the federal, provincial and territorial levels. Vendor readiness was also assessed. Potential barriers and risks were discussed, including infrastructure and technology, timing of implementation and corporate buy-in. 8 recommendations were proposed for consideration to support the implementation of ICD-11 in Canada.

Process

CIHI hired an external consultant to seek input from all 13 Canadian jurisdictions and from 5 health information system vendors (including 2 coding and abstracting vendors and 3 enterprise EHR vendors) in January and February 2023 (see figure). Stakeholder input was collected through surveys, focus groups and consultations, allowing for a comprehensive assessment of the benefits, challenges and readiness associated with the new classification system. The assessment results are currently being synthesized and prepared so they can be shared with participants, as well as externally.

Figure Number of stakeholders consulted

Outcomes

The assessment results were categorized into 3 groups: current stakeholder landscape, current vendor landscape and potential barriers and risks (see table).

Table Sample questions and responses from the assessment results

Question	Response
Current stakeholder landscape	
Current state of HIS/CIS and EHR/EMR implementation	Fully electronic: 1; Hybrid: 12. *Hybrid: Some sites are fully electronic, and some still rely on paper charts.*
Usage of clinical terminologies (e.g., SNOMED CT)	Yes: 4; No: 9
Realistic time frame for moving to ICD-11	5+ years: 6; 4–5 years: 2; 2–4 years: 1; DNP: 4. *DNP: Did not provide an answer.*
Current vendor landscape	
Awareness of ICD-11	All 5 vendors are aware of ICD-11.
System accommodation of both ICD-10-CA and ICD-11	• All 5 vendor systems can accommodate both code sets. • 1 vendor prefers to have only 1 active code set displayed at a time.
Realistic time frame for moving to ICD-11	4–5 years: 2; 3–5 years: 1; 3–4 years: 1; 1 year: 1
Potential barriers and risks	
Infrastructure and technology	Determining a timeline for implementation is crucial but will depend on many things: • Different levels of CIS implementation — stakeholders do not want to implement a new CIS and the new classification at the same time • Interoperability between the disparate systems/vendors across the country and within jurisdictions • The need for a third party to connect to EHRs
Timing of implementation	Several jurisdictions are in the process of implementing new CIS over the next few years. It is imperative that these new CIS can accommodate ICD-11, as several jurisdictions indicated that they would prefer not to implement a new system and ICD-11 at the same time.
Corporate memory preventing buy-in	The jurisdictions remember the implementation of ICD-10-CA as an expensive, time-consuming proposition and are reluctant to go through the process again. Memories of the steep learning curve and the lengthy period required to get back to pre-implementation productivity levels linger in many people's minds.

Recommendations

Highlighted recommendations include the following:

- **Obtain buy-in:** CIHI to promote ICD-11 as the international standard for a common health language for physician billing, primary care, reciprocal billing, hospital records and mortality statistics so that this information is connected. Also to promote ICD-11 as a potential long-term cost-savings.
- **Communicate with stakeholders and vendors:** Stakeholders and vendors shared that they need information early on. CIHI to leverage communication channels such as websites and newsletters to keep key decision-makers at all levels informed.
- **Demonstrate the value of ICD-11:** CIHI to provide real-life examples of the type of information that would be available with ICD-11, create coding examples by case-mix group or by specialty, and showcase the ICD-11 coding tool so that the value of ICD-11 is clear.

Conclusions

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 still rely on paper charts. EHR vendors are aware that ICD-11 is on the horizon but 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 proper planning, training and education, and system updates. The recommendations above will help inform the development of a roadmap to ensure a smooth transition to ICD-11.

Acknowledgements