Coding Agreement on Identification of Main Resource Use Using ICD-10 and ICD-11

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Introduction

Main condition coding definitions in the International Classification of Disease (ICD) 10th and 11th versions are broadly defined in the current and upcoming versions of ICD, and coding health data can involve subjective coding specialist interpretation. Inconsistent coding can lead to inaccurate reporting, and lower quality data for research use.

Objectives and Approach

Main condition coding agreement was compared between ICD-10 and ICD-11. 730 hospital charts were randomly selected from Foothills Medical Centre in Calgary, Alberta. These charts were previously coded using ICD-10, and six professional coding specialists recoded them using ICD-11. To compare frequencies of ICD-10 to ICD-11, we used current WHO crosswalk tables to match codes. For any missing codes, manual comparison by done by a qualified reviewer. In Canada, the "main condition" is the clinically significant reason for the hospital visit. If multiple problems were present, the diagnosis using the greatest amount of resources is coded, "main resource use".

Results

Overall, 730 ICD-10 coded charts were analyzed. Of these charts, 79% (577) had matching resource coding between ICD-10 and ICD-11, and 21% (153) had mismatching coding. Matching coding was either considered an exact match between definitions (23.2%, 134), or similar but not identical (often one code has greater detail, 76.8%, 443). Mismatching codes were either due to different codes for similar conditions (13.1%, 20), different codes for not similar but related conditions (43.8%, 67), or completely different codes for unrelated conditions (43.1%, 66).

Conclusion/Implications

ICD-10 and ICD-11 main resource codes had a high match frequency indicating consistency between coding practices and ICD definitions (577/730, 79%). Future research will aim to understand underlying causes of mismatched main resource use codes. This research will help us understand issues in coding and contribute to future ICD-11 revisions.