Is it possible to replace ICD 9 CM Vol 3 by International Classification of Health Interventions (ICHI) in Casemix groupers?: a test with UNU-CBG grouper

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Introduction

While the development of national and international CASEMIX (initially named DRG) projects around the world has been facilitated by the use of WHO International Classification of Diseases (from ICD 8 to ICD 10 and including ICD 9 CM and ICD 10 AM, it has been hampered by the absence of an international classification of procedures.

Since 2006, the WHO-FIC Family Development Committee has been developing ICHI based on an ontology framework defined in ENISO 1828 named Categorial Structure.

Among international CASEMIX systems the UNU-CBG (United Nations University- Case Base Group) grouper has been developed at National University of Malaysia.

Methods

9There are a total of 4,578 ICD-9-CM codes. The UNU CBG grouper uses 3,851 (84%) codes for assignment to the groups. We tested on these 3,851 ICD-9-CM codes the ability of ICHI to support semantic interoperability between the different CASEMIX systems.

The mapping was lexical in 75 % of codes and semantic based on ICHI categorial structure with 3 axes and 7 digits.

A data base of 34 978 discharges with procedures coded in ICD 9 CM was duplicated in a data base with procedures coded in ICHI.

They were both grouped using UNU-CBG Casemix grouper and their outputs compared

Results

99 % of ICD 9 cm codes were mapped to ICHI codes with most of them One to One

Only 90% of discharges were attributed to the same UNU-CBG Casemix groups due to many ICD 9 CM codes mapped to the same ICHI code

Conclusions

ICHI alpha 2 version is less granular than ICD 9 CM Vol 3 procedures coding system and cannot be recommended as such for use in CASEMIX systems grouping and comparison.

To reach the level of granularity of ICD 9 CM Vol 3 it is necessary to refine ICHI CAST with more than 3 axes and more than 7 characters.

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