



## Transitioning to International Classification of Diseases (ICD)-11: The new, automated and user-friendly coding system to track diagnoses and procedures: A Policy Brief

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### Executive summary

*Uganda registration of persons act 2015 recommends that every birth and death be registered by civil registration. To achieve this Uganda adapted the manual system of International Classification of Diseases (ICD) version 10. Using this system, civil registration of death in 2016 was at only 24% compared to the set target 80% of deaths reported, registered, medically certified, and disaggregated by age and sex. The system is not flexible and is also expensive to implement hence it was not fully rolled out throughout the country. Recommending a transition from ICD-10 to ICD-11 and including ICD training in medical practitioners' curricula would ease medical certification of cause of death, coding and hence civil registration coverage throughout the country.*

### Introduction

Uganda in the 1995 constitution recognized the need for registration of every birth, death, and marriage occurring throughout the country (1). The civil registration policy, 2012 recommended digitization of the registration process to enable improved or even complete birth and death registration (1,2). This policy also recognizes the importance of working together with other ministries/stakeholders such as Ministry of Health to achieve the target of registering all births and deaths. The National identification and Registration Authority (NIRA) under Ministry of Internal affairs is mandated under the Registration of Persons Act (ROPA) 2015 to register all births and deaths. Uganda adopted the use of International Classification of Diseases (ICD) 10 as a measure to streamline registration of both birth and deaths within the country. International Classification of Diseases (ICD) developed by World Health Organization is the international



diagnostic classification standard for reporting diseases and health conditions globally. This allows for a common global language reporting, analysis, interpretation, and comparison of mortality and morbidity data (3,4). ICD can therefore be used for monitoring incidence and prevalence of diseases, reasons for encounter, factors that influence health status, and external causes of disease, counting of deaths, observing reimbursements, and resource allocation trends among others (4).

ICD undergoes revision to incorporate changes and updates in the practice of medicine. Since its inception in the 1940's ICD has undergone several revisions to ICD-10 in 1990 and the current version ICD-11 in 2018 (5–7).

#### Context and importance of the problem

Registration of Persons Act (ROPA) 2015 mandates that registration of every death within Uganda is compulsory and a medical certificate of cause of death (MCCOD) must be issued (2). However, in 2016 only 24% of the deaths that occurred were registered by civil authority NIRA (8,9). This leaves a gap in the registration process in the zeal to implement the ROPA and Uganda draft civil registration Policy 2012.

To enable the implementation of this policy, there is need for a standardized and functional ICD system and a trained up to date health workforce that is able to accurately and timely code all the deaths as they occur using the ICD codes. Uganda, currently uses ICD-10 in health facilities to code death from MCCOD that are completed by medical practitioners (8). Given the limitations of ICD 10 as shown in Table 1, there is need to quickly transition to the revised ICD-11 in order to improve civil registration coverage.



**Table 1: Comparison between International classification of diseases version-10 and 11**

ICD-10	ICD-11
<p>1) Manual curation.</p> <ul style="list-style-type: none"><li>a) Translation, updating and dissemination done manually</li><li>b) Terminological inconsistency and poor quality translations</li><li>c) Time-consuming implementation of updates.</li></ul>	<p>Automated</p> <ul style="list-style-type: none"><li>a) Search engine is customized for better and easier search results time saving</li><li>b) Thousands of synonyms with global substitutions allowing terminological consistency</li><li>c) Platform allows suggestions or additions to ICD–11 which are viewed and discussed transparently ensuring internationally consistent translations and the addition of locally used terms.</li></ul>
<p>2) Disseminated as a book</p> <ul style="list-style-type: none"><li>a) difficult &amp; delayed integration of ICD in electronic health record systems and other software</li><li>b) Expensive ICD-10 Books</li></ul>	<p>It is digital health ready, for use in multiple Information Technology (IT) environments</p>
<p>3) Loss of international data comparability as users can not create their own shortlist and update list</p>	<p>In built guidance for use with different cultures and translations into 43 languages providing a common coding language.</p>
<p>4) Quality of coded data compromised by coding errors despite expensive expert coder training</p>	<ul style="list-style-type: none"><li>a) Requires less training hence improved ease and accuracy of coding</li><li>b) Includes an implementation package with components that ease the transition and better use the categorization system:5</li></ul>
<p>5) Poor uptake &amp; implementation of ICD</p> <ul style="list-style-type: none"><li>a) Lack of accurate disease information in countries with highest disease burden</li><li>b) Delayed implementation</li></ul>	<ul style="list-style-type: none"><li>a) Thousands of synonyms with global substitutions</li><li>b) Reference guide text has been formatted using easier wordings to enhance user understanding</li></ul>



### **Critique of policy options**

The currently used international classification system ICD-10, lacks automation functionality and thus requires translations, updating and dissemination to be done manually by individuals consequently leading to terminological inconsistency, poor quality translations, and time-consuming implementation of updates.

In addition, ICD-10 is disseminated as a book which causes difficult & delayed integration of ICD in electronic health record systems and other software, and Uganda being a low income country cannot afford to purchase ICD Books which leads to creation of shortlists and update lists not internationally understood hence loss of international data comparability.

Furthermore, the use of ICD-10 in the health care setting in Uganda is the role of the same health workers whose roles still continue regardless of the requirement to work as coders. The transition to ICD-10 was overly burdensome on providers who are already engaged in provision of other essential services since the government employment structure does not allow for employment of medical coders. Medical coders are health information professionals whose main duties are to analyze clinical statements and assign standard codes using a classification system in this case ICD-11. Given its manual nature, many facilities that implement ICD-10 leave the work to records officers who in some cases are not trained in ICD and do not have medical expertise to correctly code the cause of death from clinical notes. This exposes the country to inaccurate and inconsistent data (10).

Lastly, ICD has not been incorporated in any medical curriculum in the country which leads to a gap in the knowledge among Medical practitioners who are required by regulation to complete the NIRA cause of death form which deaths are coded according to ICD-10 format.

### **Recommendations**

As Uganda looks forward to improved civil registration coverage as a way of attaining the Sustainable development goals, there is need to transition to a more robust system, ICD-11, that would allow for accurate and timely data on both mortality and morbidity. ICD-11 can be



incorporated into existing electronic health applications and information systems. It also, allows for the clinician to document all clinical details. ICD-11 lowers the costs for using ICD since it requires less training and less time for coding, and as such allows the implementation of standard reporting (11).

In addition, medical practitioners' curriculum should be revised to include training on international classification of diseases (ICD-11) to allow for accurate and consistent reporting of morbidity and mortality. Also, there is need to put in place capacity building strategies to enlighten health workers that are already in practice on ICD-11.

Finally, the government needs to revise the employment structure to allow for other cadres such as coders to help boost the capacity of health facilities with skilled human resource to accurately provide this very relevant information for civil registration.



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