



# CROSS MAPPING ICHI TO HOSPITAL INTERVENTIONS IN NIGERIA, UGANDA AND ZAMBIA

5-11 October 2019

Banff, Canada

Poster Number

WHO/CTS to insert

Warrick Sive, Chris Cockett

University of the Witwatersrand, Johannesburg

**Abstract** The study used a dataset of Procedure Descriptors to assess the mapping of such descriptors to ICHI codes. Data was extracted from completely anonymous claims data emanating from Nigeria, Uganda and Zambia. Data was mappable to ICHI codes in 79% of the Descriptors tested. The variability in Procedure Descriptors for the same Intervention was noted. It is suggested that ICHI has the potential to improve the quality of data in the setting of this study.

## Introduction

The International Classification of Health Interventions (ICHI) has been under development by the WHO and WHO-FIC Network since 2007 and beta testing is currently underway.

ICHI has the potential to provide African (and other) national health systems with a valuable and standardised intervention coding system. This is one of the critical requirements for any health system to be empowered to deliver health care that is of quality, is sustainable and is accessible to all.

This would fulfil one of the WHO and WHO-FIC Network goals, that of providing an intervention coding system that: "...meet(s) a number of use cases including international comparisons, a classification for countries that lack one, expanded content for countries that have a national classification focused on medical and surgical interventions as well as a base for redevelopment of national classifications."

## Methods & Materials

Claims data was extracted from a Medical Insurance administrator which provides medical cover to clients in a number of African countries. In-Hospital Procedures were extracted for three countries: Nigeria  
Uganda  
Zambia.

The Procedure Descriptors were used to map to the ICHI code equivalents.

The ICHI Beta-2 2019 Online Browser (<https://mitel.dimi.uniud.it/ichi/>) was used to identify the relevant ICHI codes.

The Procedure Descriptors that could not be cross mapped to an ICHI code were then grouped within country data to reflect the reasons for failure to cross map.

## Results

Chart 1 : Cross Mapping across all countries

ALL COUNTRIES	
Total Unique Descriptors	1 223
Successful ICHI Cross map	965 79%
Potentially Mappable	120 10%

Chart 2 : Cross Mapping per Country

MAPPING	Nigeria	Uganda	Zambia
Unique Descriptors	769	138	471
Successful ICHI Cross map	624 81%	100 72%	367 78%
Potentially Mappable	63 8%	15 11%	51 11%
Codeable with T	58	12	40
Codeable with T and or A and or M	5	3	11
Descriptor not Mappable - describes:	82 11%	23 17%	53 11%
Anatomy	6	1	0
Consumable	3	1	2
Contractual Information	28	8	5
Diagnosis	12	2	5
Equipment	2	0	0
Life Stage	1	0	0
Part of other Intervention	4	0	2
Test	5	2	4
Too Vague	21	9	35

Figure 1 : Number of Unique Descriptors by Country

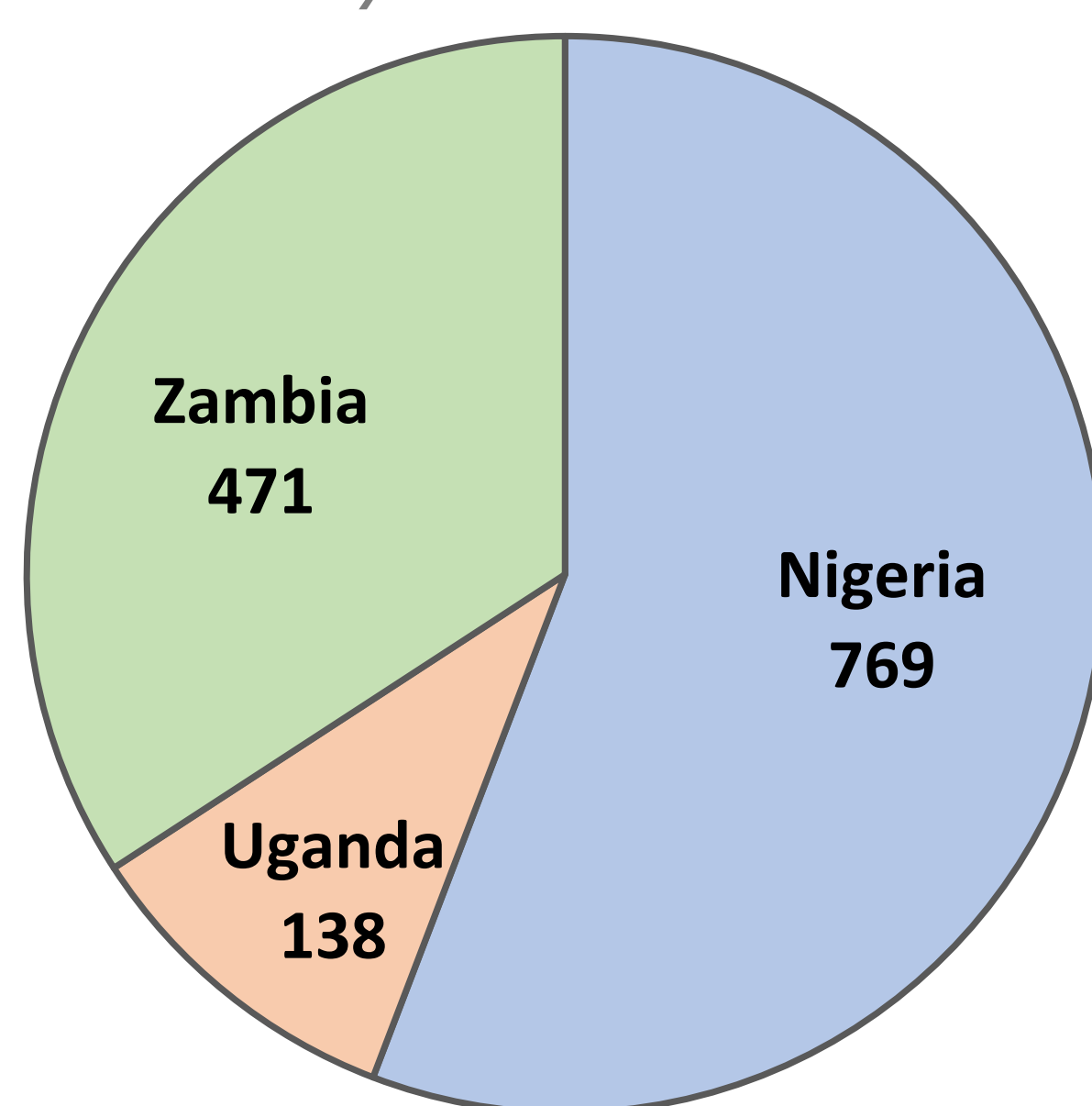


Figure 2 : Descriptors Mappable to ICHI

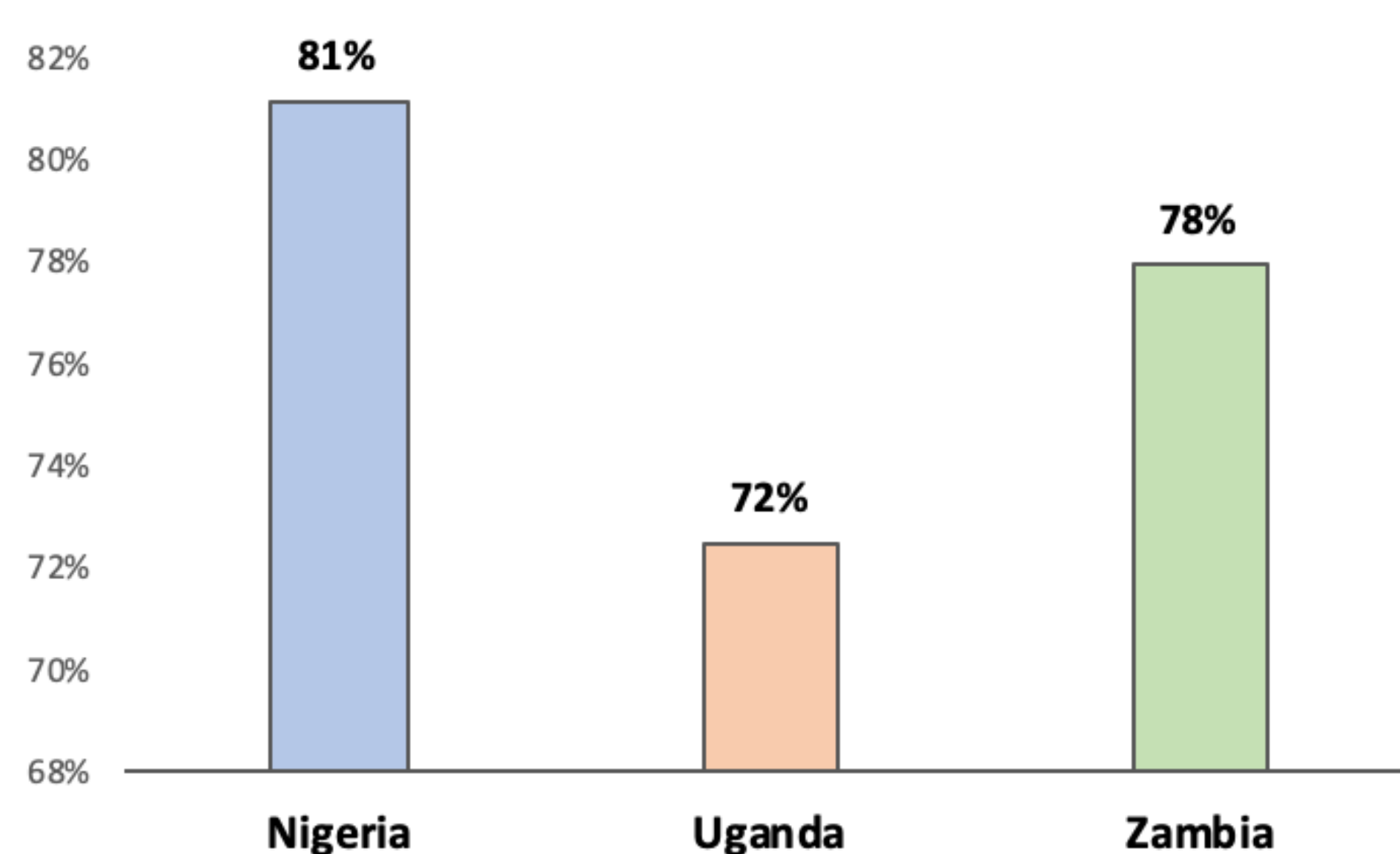
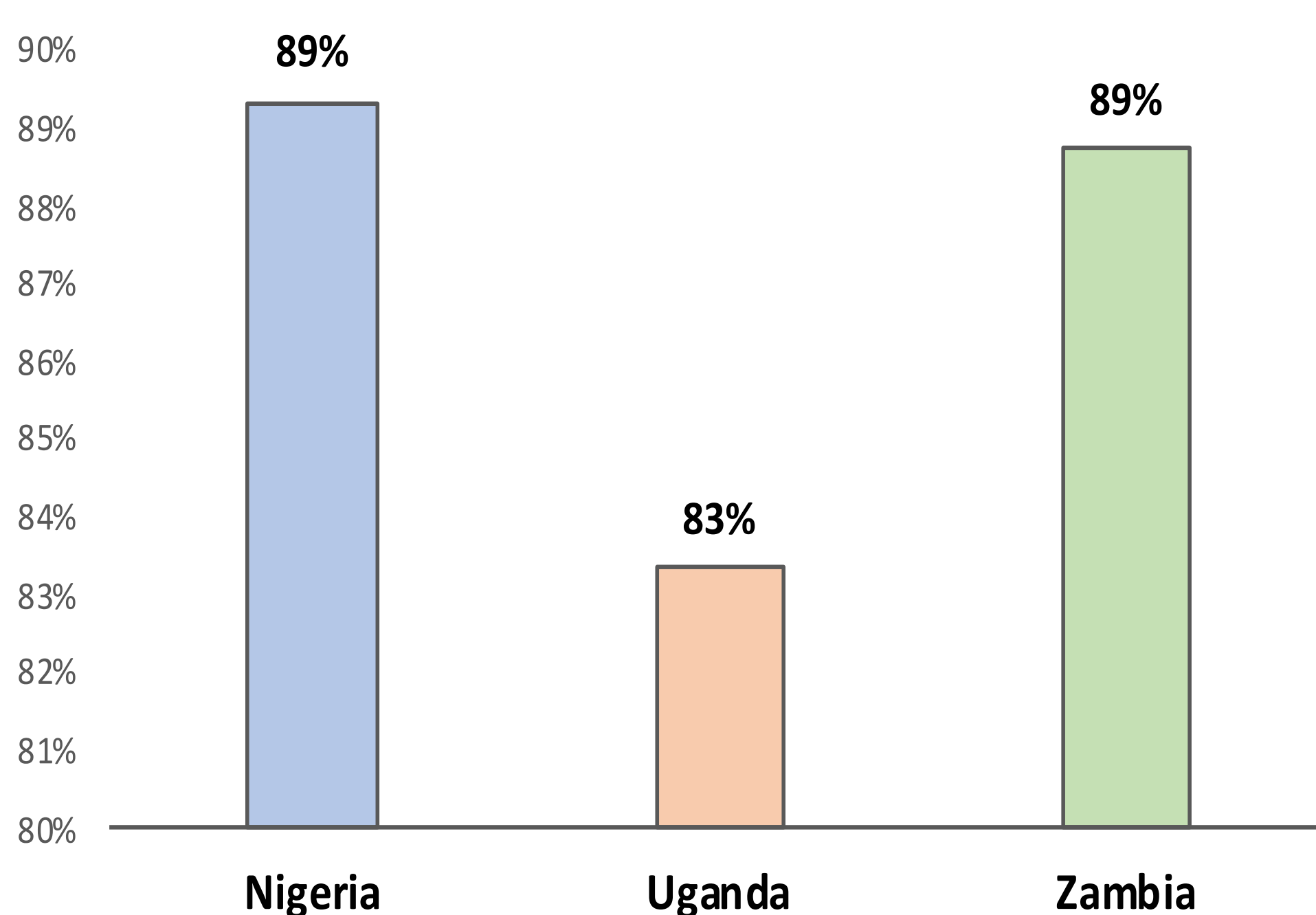


Figure 3 : Descriptors Mappable to ICHI + Potentially Mappable Descriptors



## Conclusions

### Range of Descriptors for the same Intervention:

Although there were 1 223 Unique Procedure Descriptors a number of these descriptors, although textually different described the same intervention. Different abbreviations, spellings, type of doctor, location of intervention etc were responsible for a wide range of duplicated descriptions. In the case of ECGs (non-stress) there were some 37 different descriptions (mainly different spelling and abbreviations) and for Dilatation and Curettage some 10 different descriptions. This gives but one indication of the improvement of data quality should ICHI coding be used within this environment.

### Mapping of Descriptors to ICHI Codes

79% of all Unique Indicators were mappable to ICHI codes. A further 10% were assessed as mappable should the relevant Target (predominantly) or the Target and/or Means and or Action be recorded. Thus it appears that 89% of the extracted Descriptors could be mapped to ICHI codes.

### Variability in Number of Unique Descriptors

The variability of unique Descriptors across the countries indicates an area of further research. Such may facilitate an improvement in health data quality.

### Mapping of Descriptors to ICHI

All three countries were above 80% in mapping + potential mapping of Descriptors to ICHI.

### Summary

The study provides encouragement as to the potential use of ICHI in the countries concerned.

ICHI has not been developed as a tariff tool. Further research and development is required in this regard if ICHI is to play a role in the measurement of resource utilization (costing) of health care and therefore, similarly, in the development of an ICHI ICD-11 DRG grouper.

## Acknowledgements or Notes

The following is gratefully acknowledged

- Liberty Health for providing the Descriptors
- Wits Health Consortium for travel assistance