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- Abstract
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Evaluation of the implementation of the Iris automated coding system in the Philippines

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Introduction & background

- Reliable mortality statistics are crucial for public health interventions

- The underlying cause of death is the essential aspect of the death certificate

- Philippines population 113 million

- Around 90% of deaths are registered

- Before 2016, the manual coding of over 580,000 death certificates by 30 coders – took 2 to 3 years to complete

Why automate mortality coding?

Countries with higher numbers of deaths

Mortality coders code large numbers of death certificates

Manual coding increases workload for coders

Non-uniform coding can lead to errors

Automated coding increases the timeliness, accuracy, and consistency of coding

What is Iris?

- Iris is an interactive coding software developed for coding causes of death and selecting the underlying cause of death

- Created by a group of experts

- All decisions implemented in the software are a result of discussions at the Mortality Reference Group (MRG)

What is Iris?

- Iris is based on the international medical certificate of cause of death recommended by the WHO

- Causes of death are coded according to the ICD-10 and the mortality classification rules.

- The selection of the underlying cause of death (UCOD) in Iris is entirely automated

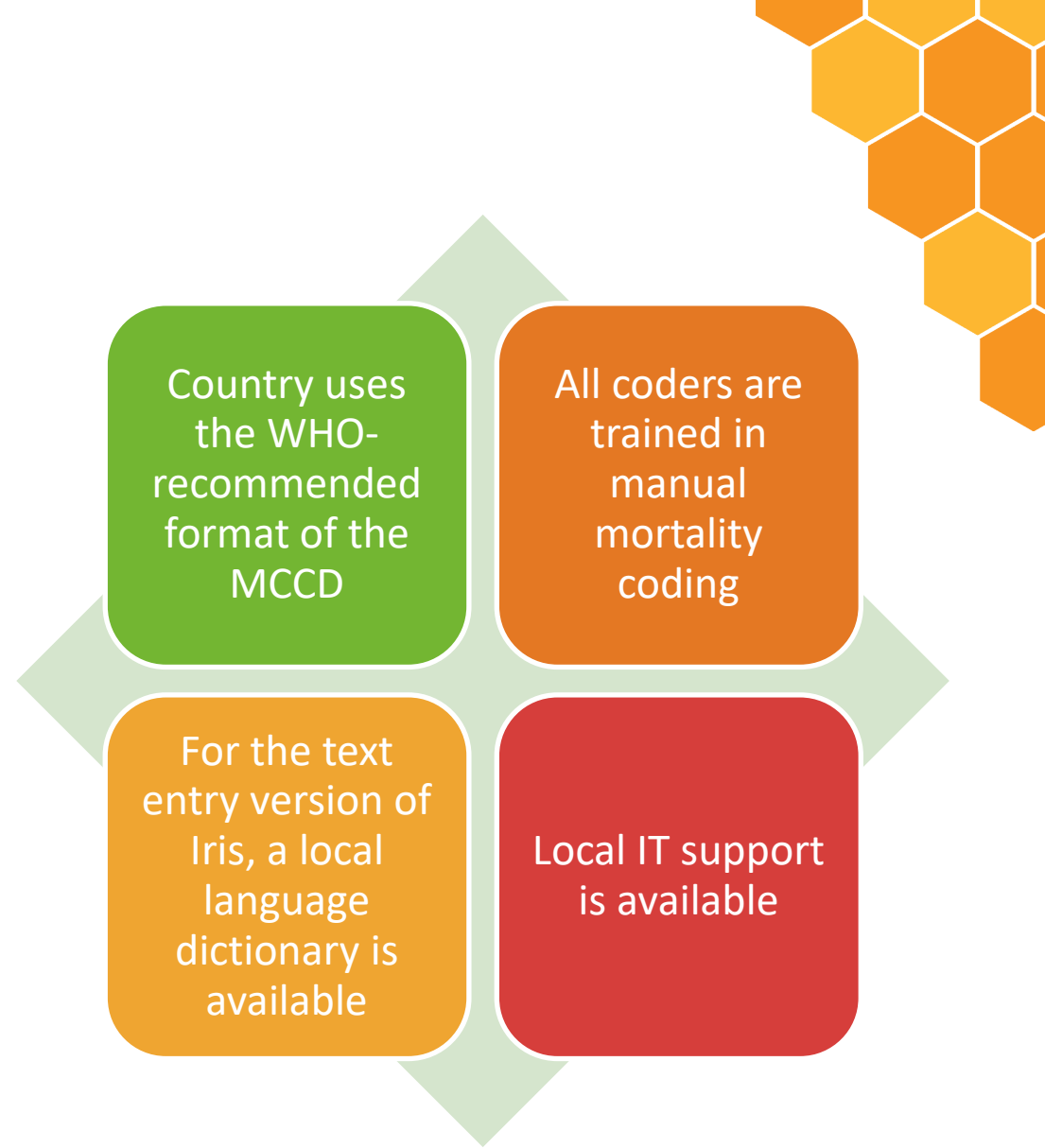- Iris uses mortality decision tables for the UCOD code selection

Pre-requisites for Iris implementation

Country uses the WHO-recommended format of the MCCD

All coders are trained in manual mortality coding

For the text entry version of Iris, a local language dictionary is available

Local IT support is available

Implementation

- In 2016, Bloomberg Philanthropies Data for Heath (BD4H) assisted in implementing Iris automated coding in the PSA (Philippines Statistics Authority)

- A computer utility program was developed to link PSA's Decentralized Vital Statistics System (DVSS) to Iris software

DVSS → Interface program → Iris → Interface program → DVSS
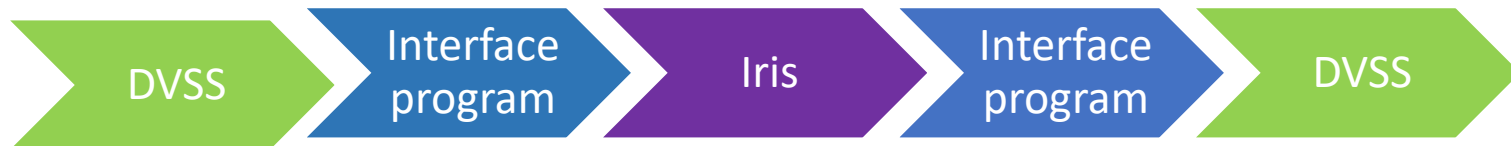
Figure 1: The flow of data from DVSS to Iris and back

All coders were trained in manual coding using Mortality Decision Tables – Feb 2017

Pre-test interface program – April 2017

Iris training – July 2017

Objective

To ensure that mortality data for the Philippines are standardized

Methods

- All the data were analysed, and changes and disease trends for the last three years were examined for plausibility.

- Cause-specific mortality distributions from 2017 – 2019 were compared for consistency

- The typology, reasons, and proportions of Iris rejects were studied.
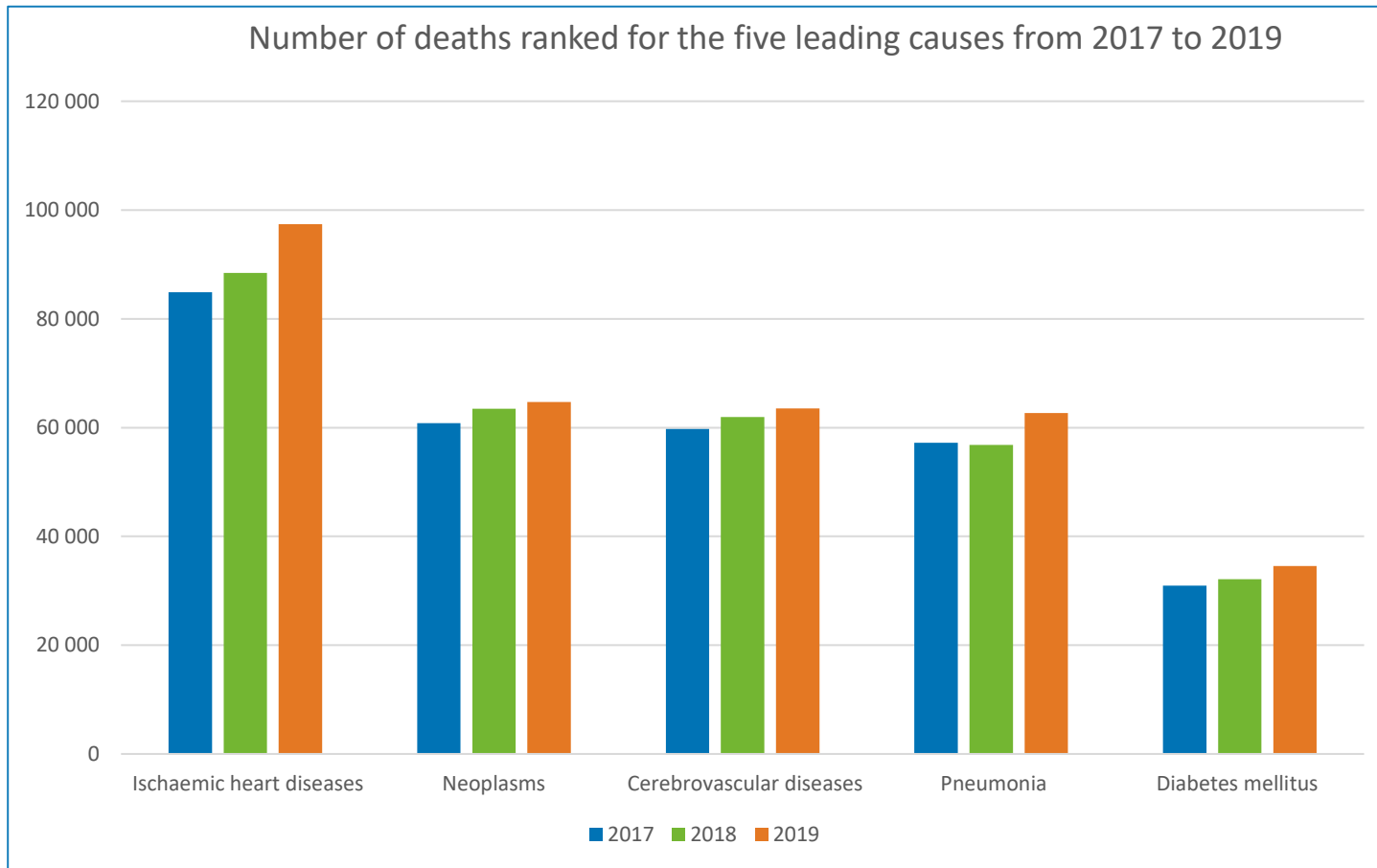
Iris implementation evaluation

Results

Figure 2: Number of deaths ranked for the five leading causes of death from 2017 to 2019
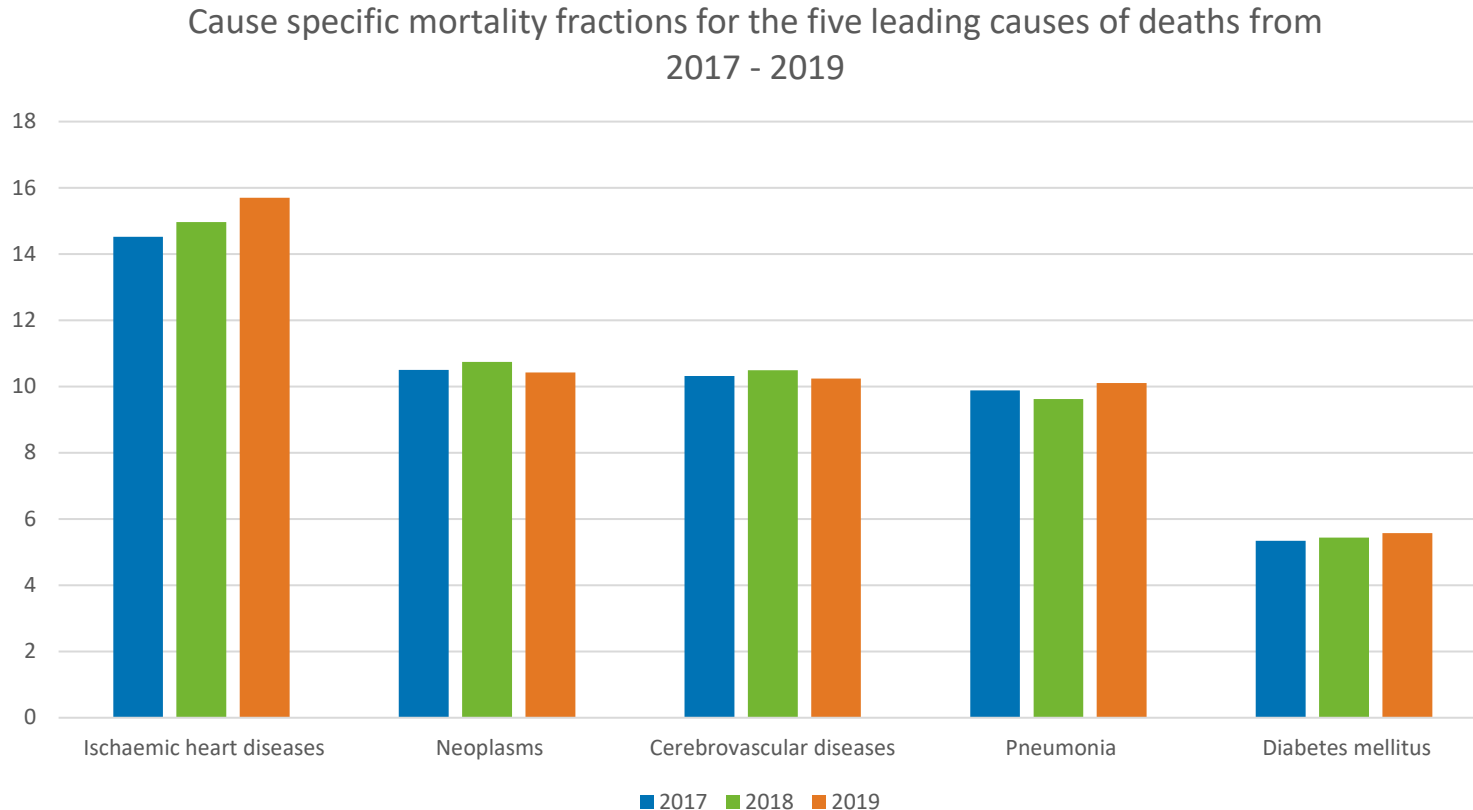
Results

Cause specific mortality fractions for the five leading causes of deaths from 2017 - 2019

Figure 3: Cause-specific mortality fractions for the five leading causes of death from 2017 to 2019

Results

- The initial high numbers of Iris rejects (60%) were reduced later (40%).

- Improved timeliness (2-3 years to 1 year)

- Improved quality and consistency of coding

Discussion

- There is a need to improve the accuracy of cause-of-death statistics regularly

- Quality of mortality data primarily depends on the quality of certification and coding

- Strengthened centralised coding practice

- Enhanced comparability of data due to the wide usage of Iris software in other countries

Conclusions

- Philippine mortality collection system functions well, and the Vital Statistics Division at PSA is fully able to run Iris and code the rejects manually

- The data compiled in the standard annual tables are of sufficient quality to be used for policy

Recommendations

- Iris software be used as the key tool for the cause of death coding

- For consistency of process, it is recommended that in the future perinatal deaths are coded using Iris

- Upgrade Iris to the latest available version, e.g., 5.8.1

Next steps

- Philippines DoH is looking forward to implementing ICD-11;
- The next step for PSA would be the implementation of Iris version 6 for ICD-11