

Project Name	Pilot implementation of Iris for coding of urban adult deaths in Nairobi
Project Status	Proposed
Project Point of Contact	Peter Young
Center	Center for Global Health
Keywords	Cause of death, International Classification of Diseases, Epidemiological monitoring, HIV
Project Description	<p>Background: Ongoing surveillance of causes of death can contribute to public health planning. Although death certificates are completed and filed with civil registration offices, cause of death data are not routinely tabulated and reported in Kenya. Complete ascertainment of cause of death according to ICD-10 rules requires certification of cause of death by a clinical officer, coding of causes of death by a trained coder using the ICD-10 classification, and selection of the underlying cause of death based on ICD-10 rules. The Iris software package is a language-independent coding system based on the US National Center for Health Statistics, Mortality Medical Data System. Iris is used by several countries to facilitate and partially automate the process of coding multiple causes of death and selecting the underlying cause of death for tabulation. Iris provides a user interface to allow for entry of death certificates into a relational database, and computer-assisted coding of multiple causes of death as well as selection of the underlying cause of death. However, efficient use of Iris is based on a locally-adapted dictionary to map causes of death to ICD-10 codes. Recently, a database of 13,000 notifications for adult deaths in Nairobi was created for mortality surveillance purposes. In order to accelerate the utilization of emerging tools and approaches to improve the availability, quality, and timeliness of surveillance data, we propose to use Iris to code and select underlying cause of death from this database. Kenya’s Ministry of Health uses the District Health Information System (DHIS) to manage routinely-reported aggregate health statistics and is piloting the use of DHIS to manage cause of death reporting. Therefore any system developed to support cause of death coding and selection should ideally be able to communicate with DHIS. Thus we propose to also integrate the proposed solution with DHIS so that it can be used for routine coding in Kenya in the future.</p> <p>Impact: Successful implementation of Iris in Kenya would allow county authorities to streamline coding of causes of death, thus facilitating sub-national cause of death reporting by civil registration authorities.</p> <p>Methods: The activity will be conducted in three phases: training, coding and dictionary development, and systems integration. For the first phase, experts from Statistics South Africa and Iris Institute will train coders from Kenyatta National Referral Hospital (KNH), the Ministry of Health and other civil registration authorities, and residents from the Field Epidemiology and Laboratory Training Program on the use of Iris. In the second phase this team will develop a local Iris dictionary with support from these experts. In the third phase, experts and software developers will collaborate with the Ministry of Health to develop a DHIS module to support use of Iris for coding and selection of underlying cause of death. In Kenya, Medical and Clinical Officers certify deaths by completing medical certificates of death (Death Notification Form D1). DHIS has</p>

previously been modified to allow Health Records Information Officers to enter details from the D1 form using a DHIS individual-level entry module designed to look exactly like the Kenyan D1 form. The data entry process will be designed in such a way as to allow the same details to be transferred to Iris to facilitate automated coding and selection of the underlying cause of death, and allow any rejected cases to be resolved by trained coders.

Partners include the Nairobi City Health Department, KNH, the National AIDS/STI Control Program (NAS COP), the Ministry of Health, and the Department of Civil Registration.

Scalability: Iris is freely available and supported by the German Institute of Medical Documentation and Information. By integrating Iris with the District Health Information System (DHIS) platform, which is also a freely-available system, a major barrier to its adoption in Kenya and other countries which rely on DHIS for managing health indicators will be removed.

Measures of Success:

- Training of 10 individuals on ICD-10 mortality coding and use of Iris
- Successful coding of 13,000 adult deaths available for Nairobi
- Creation of an Iris dictionary that can be used by other teams in Kenya and East Africa
- Creation of a DHIS2 Integration procedure / module for Iris
- Demonstration of feasibility of coding and tabulating causes of death in Kenya with Iris

For more information about this project, please contact the CHIC at chiic@cdc.gov or Maria Michaels at maria.michaels@cdc.gov.