Civil Registration and Vital Statistics (CRVS) Update on progress

May 2018

Presented by Doris Ma Fat (WHO)
THE URGENT NEED FOR BETTER MORTALITY DATA

African Ministers (2015):

‘…Recognizing that the Ebola epidemic has shown that the need for death registration and real time cause-of-death information is no longer optional but critical.…

…Call upon WHO, in collaboration with Pan African Organizations and other partners, to intensify their efforts in developing real time death registration and causes of death information systems at country level’
Global CRVS initiatives

2014 World Bank launched of Global Financing Facility: improve the health of women, children and adolescents

2014 Global Strategy for Women’s, Children’s and Adolescents’ Health (2016-2030: importance on strengthening country data, including CRVS systems

2015 the Summit on Health Measurement and Accountability for Results in Health

2015 Bloomberg Data for Health initiative to improve recording of deaths
CRVS eLearning course launched in 2017

Covers all aspects: legal framework, birth, death, marriages, divorces, ID, digitalization, vital stats, etc.
Mortality data are needed to monitor SDGs
### Sources of mortality and COD data

<table>
<thead>
<tr>
<th>Source</th>
<th>AGE</th>
<th>SEX</th>
<th>CAUSE OF DEATH</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil &amp; sample registration</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>If deaths medically certified or verbal autopsy</td>
</tr>
<tr>
<td>Census – deaths in household in last 12 months</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>Standard demographic techniques needed to assess completeness of birth and death reporting</td>
</tr>
<tr>
<td>Health care facilities (HMIS)</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>Only reflect deaths in population using facilities – quality issues</td>
</tr>
<tr>
<td>Household surveys – Deaths in last year or Sibling survival or Orphanhood</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>Problem of assessing completeness of reporting, assigning cause of death from VA</td>
</tr>
</tbody>
</table>
Global standards enhance the comparability of mortality data

The International Statistical Classification of Diseases and Related Health Problems (ICD) – to code and compare causes

The International Form of Medical Certificate of Death – to record all the conditions relating to the death

ICD rules – to select and modify the underlying cause of death
Definition of the underlying cause of death

"the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury"
Data quality: Certification issues
"Heart failure": some possible underlying causes of deaths

Myocardial infarction
Chronic renal failure due to urethral stricture
Disseminated primary carcinoma of left lung
Cerebrovascular accident
Post-partum haemorrhage
Suicide by poisoning
Stab injury

Source: Strengthening civil registration and vital statistics for births, deaths and causes of death, Resource Kit. WHO 2012
Quality of data

Proportion of defined causes v/s ill-defined causes

Defined

ill-defined

- defined
- infec
- can
- blood
- endo
- heart
- resp
- diges
- genit
- perin
- symp
- exter

World Health Organization
Even when there are data, quality can be an issue.
South Africa 2004 data: the 71,000 deaths reported due to TB are suspected to include HIV-related deaths.
Major CRVS improvement

Coverage increase:

South Africa: ~ 50% in 1990s → ~ 90% in 2014

Turkey: ~ 50% in 2007 → ~ 85% in 2013

Iran: ~ 40% in 2001 → ~ 70% in 2014 to 90% in 2015 (exclude Teheran province until 2014)

China: Since 2013 new integrated Death Registration System (DRS): merger of 3 former systems: VR (MoH), Disease Surveillance Point (DSP – China CDC) and hospital mortality report (China CDC)
Current situation in Africa

1. Very low coverage on death registration, many countries less than 10% of annual deaths having ICD coded cause of death determined, some haven’t started…

2. Inadequate human resources and capacity to adopt full ICD10

3. Lack of funding

4. Bureaucratic CRVS design, process and linkage among HMIS/IDSR, fragmentation of mortality collection

5. Lack of incentives for death registration, access barrier

6. Reluctance from physicians on provide/applying international CoD certificate.

7. Highly complex ICD10 for the context in WHO AFRO region.

Pre-release Draft for
UNECA Workshop 11-13 February 2016

Ministerial Statement: Third Conference of African Ministers responsible for Civil Registration
Republic of Côte d’Ivoire, February 2015

Recognizing that the Ebola epidemic has shown that the need for death registration and real
time cause-of-death information is no longer optional but critical;

...Realizing the centrality of civil registration based vital statistics in providing data to inform
health, economic and social policies, for good governance and accountability, and in advancing
the data revolution;

...Appreciating the increased and continuing involvement of the African Ministers of Health in
improving registration of births and deaths, including the collection of information on cause-of-
death;

...Underscoring the important role of the health sector in the delivery of civil registration services
to ensure a coordinated and integrated approach in addressing the challenges of improving
CRVS systems in Africa;

...Call upon WHO, in collaboration with Pan African Organizations and other partners, to
intensify their efforts in developing real time death registration and causes of death
information systems at country level.
Africa Mortality Statistics Improvement Strategy

National Mortality Statistics

- Death registered by age, sex and location
- Hospital deaths with causes of death: notified to CRVS system, coded for local and national statistical use
- Community deaths recorded with causes of death: integrating multiple systems

Technical Expertise;
Scaled and Integrated Technical Projects;
Norms, Standards, Guidance;
Knowledge Development and Sharing
Countries where DHIS2 is nationally-implemented in health facilities

Cause-of-death information by country, 2014

DHIS2 complete national implementation:

Bangladesh, Burkina Faso, Gambia, Ghana, Kenya, Liberia, Mozambique, Nigeria, Rwanda, Sierra Leone, Tanzania, Uganda, Zambia, Zanzibar, Zimbabwe

Cause-of-death data quality

- Low
- Medium
- High
- Sample registration system
- Data not available
- Not applicable
WHO Start-Up Mortality list (SMoL): A simplified and realistic approach – low resource settings

**Causes of death**
- Created a Start-Up list of causes (SMoL)- 107 causes and 17 optional subcategories – fully expandable if needed

**Training**
- Adapted existing training materials for doctors/certifiers
- Developed small training manual for selection of underlying cause of death according to simplified rules

**Data capture platform**
- Developed an integrated data entry interface into District Health Information System (DHIS2) : all data in one place. Built-in the 2016 WHO medical certificate of cause of death
APPROACH in low-resource settings

○ Detailed cause list
  - ICD-10 books expensive
  - Training of coders (1-2 weeks) difficult to sustain and costly
  - Inadequate system to record CoD

○ Start-Up cause list
  - Short list of causes
  - Training max 2 days
  - DHIS2 integrated CoD module → real time info all in one place
  - An effective way to build capacity to progress towards the detailed list when ready
**Information on the deceased**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Select or search from the list</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Birth</td>
<td>yyyy-MM-dd</td>
</tr>
<tr>
<td>Date of Death</td>
<td>2016-07-01</td>
</tr>
<tr>
<td>Birth date unknown</td>
<td>☐</td>
</tr>
<tr>
<td>Estimated age</td>
<td>Select or search from the list</td>
</tr>
</tbody>
</table>

**Medical data**

**Cause of death**

<table>
<thead>
<tr>
<th>Disease or condition directly leading to death</th>
<th>Immediate</th>
<th>A</th>
<th>Select or search from the list</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report chain of events in “due to” order (B - C - D) if applicable. State the underlying cause on the lowest used line, and tick the checkbox for &quot;Underlying&quot;.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Due to</td>
<td>B</td>
<td>Select or search from the list</td>
</tr>
<tr>
<td>Other significant conditions contributing to death (time intervals can be included in brackets after the condition)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Due to</td>
<td>C</td>
<td>Select or search from the list</td>
</tr>
<tr>
<td>Surgery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was surgery performed within the last 4 weeks?</td>
<td>Select or search from the list</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Medical diagnostic terms**

- Birth
- Birthmark
- Stillbirth
- Birth Anoxia
- Birth Trauma
- Birth Hypoxia
- Birth Asphyxia
- Low Birth Weight
- Stillbirth (Fresh)
- Severe Birth Asphyxia

**Time from onset to death**

| Select or search from the list |

**Underlying**

| Select or search from the list |

**Additional Information**

- Birth: Select or search from the list
- Birthmark: Select or search from the list
- Stillbirth: Select or search from the list
- Birth Anoxia: Select or search from the list
- Birth Trauma: Select or search from the list
- Birth Hypoxia: Select or search from the list
- Birth Asphyxia: Select or search from the list
- Low Birth Weight: Select or search from the list
- Stillbirth (Fresh): Select or search from the list
- Severe Birth Asphyxia: Select or search from the list
Ghana: national workshop on SMoL 2016: include civil registrars, doctors and HMIS officers & coders
Multi-country workshop on SMoL in Dar es Salaam: July 2016

Global Fund sponsored the Tanzanian participants to the workshop. The workshop was conducted with a grant from Vital Strategies with financial support from the Bloomberg Family Foundation, Inc.
Progress in SMoL implementation: Ghana national roll-out

National roll-out in April 2017 (in all health facilities)

In the press

Team of Ridge Hospital & WHO, Accra – Dec 2017

Health Ministry launches system for tracking death statistics

April 12, 2017

Mr Kwaku Agyeman Manu, the Minister of Health has launched an improved facilitating technology known as the District Health Information Management System (DHIMS2) Dashboard, for programme tracking and improving cause of death statistics.

The DHIMS, which was first deployed by the Ghana Health Service (GHS) in 2012, had been used for the collection and analysing of routine health service data, and operated in all the 216 districts.

It is currently available to all health facilities and service delivery points.

Over 10,000 users from government, quasi-government, private and faith-based facilities currently submit their service reports each month through the DHIMS 2 Dashboard.
SMoL: Training of trainers: Geneva 2017
Progress in SMoL implementation:

Bangladesh

• Rolled out in 4 pilot hospitals (3 medical college hospitals and 1 upazila health complex)

• Soon training in 2 more medical college hospitals (Dhaka and Sylhet)

Tanzania

• Rolled out in all hospitals end 2017
Other progress

- SMoL French version under development
- Support from Global Fund to priority countries on SMoL implementation over next 5 years
- Data4Health group supports implementation in individual countries
- WHO 2016 medical certificate of cause of death adopted by several countries for e.g. Uganda, Tanzania, Rwanda, Ghana, Bangladesh
Project: vital events notification

Health sector

Births & deaths in health facilities are recorded

Health-facilities: medically-certified deaths by cause: full ICD-10 or Start-Up Mortality List

Cause-of-death data base

Notification data base: births and deaths

Notification module: • Notification forms • Checks for duplicates • Generates unique ID

A copy to the family

DHIS2 server

Dashboard: results on deaths and causes of death

Export for more in-depth analysis

Civil registration (CR)

Notifies event

Confirms registration done

Death certificate

Birth certificate

CR server

Birth certificate

Death certificate

Births & deaths in health facilities are recorded

Notifies event

Confirms registration done

Birth certificate

Death certificate

CR server

Birth certificate

Death certificate

CR server

Birth certificate

Death certificate

CR server
Project: expanding it to cover deaths in the community

- **Notification sub-module:**
  - Notification forms
  - Checks for duplicates
  - Generates unique ID

- **Cause-of-death data base:**
  - births and deaths

- **DHIS2 server**

- **Deaths outside of health-facilities:**
  - Conduct verbal autopsy on deaths
  - Obtain most plausible cause of death (CoD)
  - Push CoD into data base

- **Health-facilities:**
  - medically-certified deaths by cause: full ICD-10 or Start-Up Mortality List

- **Tablet or smartphone to notify events**

- **Find potential entry points:** e.g. programs for women and children’s health

- **Develop network of key informants:** CHW, village leaders

- **Allow tracking of newborns, mothers**

- **Dashboard:** results on causes of death

- **Export for more in-depth analysis**

- **Integrate vertical data collection systems on causes of deaths**
ICD-11 - launch in June 2018 for countries to start implementation work