COVID-19 and Death Registration

Monitoring excess mortality due to COVID-19 and making it make sense for policy makers

Mr Mark Landry, Regional Adviser, WHO South-East Asia Regional Office / 23 July 2020
Definition of deaths due to COVID-19

• A death due to COVID-19 is defined for surveillance purposes as a death resulting from a clinically compatible illness, in a probable or confirmed COVID-19 case, unless there is a clear alternative cause of death that cannot be related to COVID disease (e.g. trauma). There should be no period of complete recovery from COVID-19 between illness and death.

• A death due to COVID-19 may not be attributed to another disease (e.g. cancer) and should be counted independently of pre-existing conditions that are suspected of triggering a severe course of COVID-19.

• Deaths due to COVID-19 are the ones that are counted in cause of death data collection (for the purposes of COVID-19 death reporting)
Cumulative confirmed COVID-19 deaths
How many people die each day?

Source: Visual Capitalist
Medical certificate of cause of death

Chain of events

<table>
<thead>
<tr>
<th>Comorbidities</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>1. Report disease or condition directly leading to death on line a</th>
<th>Cause of death</th>
<th>Time interval from onset to death</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Other significant conditions contributing to death (time intervals can be included in brackets after the condition)</td>
<td>Cause of death</td>
<td>Time interval from onset to death</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
<td>----------------</td>
<td>----------------------------------</td>
</tr>
</tbody>
</table>

Manner of death:

- Disease
- Assault
- Accident
- Legal intervention
- Intentional self-harm
- War
- Could not be determined
- Pending investigation
- Unknown
Coding underlying cause of death using ICD-10 or ICD-11

ICD-10

• U07.1 COVID-19, virus identified
  https://icd.who.int/browse10/2019/en#/U07.1
• U07.2 COVID-19, virus not identified
  • Clinically-epidemiologically diagnosed COVID-19
  • Probable COVID-19
  • Suspected COVID-19
  https://icd.who.int/browse10/2019/en#/U07.2

ICD-11

• The code for the confirmed diagnosis of COVID-19 is RA01.0 and the code for the clinical diagnosis (suspected or probable) of COVID-19 is RA01.1
Excess mortality

- Mortality *above what would be expected during a certain period* based on the non-crisis mortality rate in the population of interest.

  **Example:** Excess mortality =

  \[ \text{Observed deaths}_{(June 2020)} - \text{Average number of deaths}_{(June 2015-2019)} \]

- Important to *stratify age, sex and location*—and if possible by ethnic and socioeconomic stratifiers

- The ICD is important because it provides a *common language for reporting and monitoring diseases* and allows the world to compare and *share data in a consistent and standard way*
Points of caution

- Some (but not all) countries only report COVID-19 deaths which occur in hospitals – people that die from the disease at home may not be recorded;
- Some countries only report deaths for which a COVID-19 test has confirmed that a patient was infected with the virus – untested individuals may not be included;
- Death reporting systems may be insufficient to accurately measure mortality – this is particularly true in poorer countries;
- The pandemic may result in increased deaths from other causes for a number of reasons including weakened healthcare systems; fewer people seeking treatment for other health risks; less available funding and treatment for other diseases (e.g. HIV/AIDS, malaria, tuberculosis);
- The pandemic may result in fewer deaths from other causes – for example, the mobility restrictions during the pandemic might lead to fewer deaths from road accidents.
Key message for policy makers

• Accurately reporting and analyzing cause of death (COD) data helps policy makers better understand the country’s burden of disease
• Facilitates evidence-based policy and targeting of specific health interventions
• For COVID-19 and future epidemics, will improve the efficiency and effectiveness of emergency preparedness and response
• Knowing the transmission patterns of disease can improve the health system readiness and resiliency
• Poor and vulnerable populations can be better protected and served
• Increased understanding of patterns and trends (co-morbidities, chain of events, epidemiological signature of the virus)
• Strengthening civil registration and vital statistics (CRVS) is critical
Thank you

Mark Landry
landrym@who.int