

Ill-defined causes of death used within medically certified deaths in Malaysia in 2019

Nur Hamizah Nasaruddin¹, Khaw Wan-Fei¹, Mohd Azahadi Omar², Shubash Shander Ganapathy¹, Nazirah Alias¹, Tan Lee Ann¹, Tham Sin Wan¹, Wan Kim Sui¹

¹Institute for Public Health, National Institutes of Health, Selangor, Malaysia, ²Sector for Biostatistics and Data Repository, National Institutes of Health, Selangor, Malaysia

ABSTRACT

Introduction: A well-defined cause of death such as “lung cancer”, denotes explicitly the underlying cause of death. In contrast, an ill-defined cause such as “sepsis”, could result from various diseases or injuries as the true underlying cause. Ill-defined causes distort true mortality patterns, impacting resource allocation and potentially misleading public health policies. **Objective:** This study aims to describe the ill-defined causes of death used within medically certified deaths (MCD) in Malaysia. **Materials and Methods:** This cross-sectional study utilized 2019 MCD data from the Department of Statistics Malaysia. The causes of death were classified as well-defined or ill-defined based on their ICD-10 codes, following guidelines from the Global Burden of Disease and Malaysian Burden of Disease studies. SPSS was used to describe the ill-defined causes by source of medical certification (hospital setting or verbal autopsy), sex, and age groups. The most common ill-defined causes were then identified accordingly. **Results:** Out of 109,164 MCD, 27,462 (25.2%) were classified as ill-defined cause of death. The ill-defined causes were more commonly used in hospital settings (26.2%) compared to verbal autopsies (19.4%). However, the proportion was similar for males (25.0%) and females (25.4%). Within age groups, ill-defined causes were more common in the 5-14 years age group (33.4%), followed by 15-29 years (30.5%), while other age groups range between 23.4-29.0%. The most common ill-defined causes of death were ‘other sepsis’ (A41), ‘shock not elsewhere classified’ (R57), ‘unspecified diabetes mellitus’ (E14), ‘unspecified event, undetermined intent’ (Y34), and ‘other ill-defined and unspecified causes of mortality’ (R99). However, this pattern differs across source, sex, and age groups. **Conclusion:** A quarter of MCD assigned by medical practitioners were ill-defined causes of death, raising serious concerns about the accuracy of current mortality statistics. Improving medical practitioners' ability to assign well-defined causes of death is essential for enhancing data accuracy and informing better policy decisions.