

# A critical assessment of mortality statistics in Thailand: potential for improvements

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**Abstract** This study evaluates the collection and flow of mortality and cause-of-death (COD) data in Thailand, identifying areas of weakness and presenting potential approaches to improve these statistics. Methods include systems analysis, literature review, and the application of the Health Metrics Network (HMN) self-assessment tool by key stakeholders. We identified two weaknesses underlying incompleteness of death registration and inaccuracy of COD attribution: problems in recording events or certifying deaths, and problems in transferring information from death certificates to death registers. Deaths occurring outside health facilities, representing 65% of all deaths in Thailand, contribute to the inaccuracy of cause-of-death data because they must be certified by village heads with limited knowledge and expertise in cause-of-death attribution. However, problems also exist with in-hospital cause-of-death certification by physicians. Priority should be given to training medical personnel in death certification, review of medical records by health personnel in district hospitals, and use of verbal autopsy techniques for assessing internal consistency. This should be coupled with stronger collaboration with district registrars for the 65% of deaths that occur outside hospitals. Training of physicians and data coders and harmonization of death certificates and registries would improve COD data for the 35% of deaths that take place in hospital. Public awareness of the importance of registering all deaths and the application of registration requirements prior to funerals would also improve coverage, though enforcement would be difficult.

**Keywords** Mortality/statistics; Data collection/methods; Death certificates; Cause of death; Autopsy/methods; Interviews/methods; Thailand (source: MeSH, NLM).

**Mots clés** Mortalité/statistique; Collecte données/méthodes; Certificat décès; Cause décès; Autopsie/méthodes; Entretien/méthodes; Thaïlande (source: MeSH, INSERM).

**Palabras clave** Mortalidad/estadística; Recolección de datos/métodos; Certificado de defunción; Causa de muerte; Autopsia/métodos; Entrevistas/métodos; Tailandia (fuente: DeCS, BIREME).

الكلمات المفتاحية: معدل الوفيات، إحصائيات معدلات الوفيات، تجميع المعطيات، طرق تجميع المعطيات، شهادات الوفاة، أسباب الوفاة، الصفة التشريحية، طرق الصفة التشريحية، مقابلات، طرق المقابلة، تايلاند. (المصدر: رؤوس الموضوعات الطبية، المكتب الإقليمي لشرق المتوسط)

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## Introduction

Sound statistics on deaths and their causes are vital for decision-makers because they provide information on the current health situation and allow for monitoring of trends in the overall burden of diseases (BOD). Both the magnitude and distribution of disease burden are crucial to inform policies, enable resource allocation to better address health needs, and monitor the impact of health interventions on health outcomes.

Thailand has a long history of registering deaths and is generally acknowledged as having relatively good data.

However, Mathers et al. recently classified mortality statistics in Thailand as low quality, with over 30% of deaths unregistered and more than 20% of those registered classified as due to ill-defined cause.<sup>1</sup>

Incomplete registration of deaths and unreliable attribution of causes of death are major policy concerns. High rates of unregistered deaths imply underreporting of mortality and a likely overestimation of life expectancy. Large proportions of ill-defined causes of death distort estimates on the distribution of causes and overall BOD patterns, thus hindering effective resource al-

location. The Royal Thai Government has affirmed its strong commitment to reducing both problems in order to permit better allocation of its resources and maintain its commitment to the Thai people regarding its health goals.

This study was undertaken as a response to the findings of the analysis by Mathers et al.<sup>1</sup> and presents a critical self-assessment of current mortality statistics in Thailand, in particular the completeness of death registration and the quality of cause-of-death (COD) attribution. The aim of the study was to assess the current status of mortality statistics in Thailand and to identify gaps and present

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