

## THE CONTRIBUTION OF OPEN EDUCATION FOR IMPROVING CAUSES OF DEATH CERTIFICATION PRACTICES

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### Abstract

As recently demonstrated during the COVID-19 pandemic, mortality data provide a better understanding of epidemiological trends and the impacts of health policies within a population. The accurate and timely way information on causes of death is recorded, coded and published is therefore critical. Most countries apply the recommendations issued by the World Health Organization, in the International Statistical Classification of Diseases and Related Health Problems, currently in its 11<sup>th</sup> revision, [ICD-11] (WHO, 2023).

In the European Union, however, the quality of data on causes of death differs considerably between member states. Despite using an official online platform for registering death certificates since 2014 (Law 15/2012), which speeds up considerably the processing of statistical updates on death causes (DGS, 2013), Portugal records a relatively high proportion of deaths attributed to poor conditions or other codes unnecessary in public health analyses, the so-called ‘garbage codes’ (Fihel & Muszynska-Spielauer, 2021). This is mainly due to inappropriate certification practices by many medical doctors unaware of the fact. However, to retrain a wide community of practitioners scattered around the country in a speedy way represents a massive challenge for public health authorities. Due to the limited resources available, using traditional in presence learning formats does not seem sustainable.

In the framework of the European CODA-EU project (<https://coda-eu.site.ined.fr/en/>), supported by the Erasmus+ program, an international multidisciplinary team of experts from medical, social and education sciences designed a Multilingual MOOC on certification on the causes of death. It targets medical doctors, medical students and other health professionals for whom the competencies in cause-of-death certification are important and need to improve their knowledge on the recommendations and rules set by WHO for this purpose.

The MOOC “Certification of the Causes of Death” was produced in 4 different versions adapted to the specific national context and regulation framework of the member countries of the consortium (France, Poland, Greece and Portugal) and delivered in each country’s respective language. The MOOC takes approximately 3 hours to complete and consists of 3 main modules, as follows:

1. Legal and organisational aspects of death registration in each country,
2. International Statistical Classification of Diseases and Related Health Problems,
3. Most common errors in the certification of causes of death.

The course also includes prior knowledge and final assessments, an introduction, cases studies (scenarios to train the ability to determine the appropriate causes of death) and additional references. A certificate is provided for those who complete the final assessment with a 50% or higher mark.

The first iteration of the MOOC in Portuguese was launched in April 2023. It attracted 369 participants, of which 95 passed the final exam and obtained the respective certificate of completion. 40% of the approved participants reached a mark of 80% or over. The profile of the participants was quite diverse and representative of the medical community. It included experienced medical doctors, medical students and even representatives from the Ministry of Health. Consequently, the age of participants ranged from 19 to 66 years old.

The feedback collected from the participants demonstrates high satisfaction with this short but impactful learning experience. The quality of the content and the flexibility of the learning experience, combined with the accessibility and openness of the course were considered most appropriate to the learners' profile and professional context. Moreover, representatives from the Portuguese Ministry of Health have recognised the contribution of this MOOC and of other future dedicated open education provision for the timely updating and improving of medical staff competences in certification of causes of death.

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### **Keywords:**

Certification of Causes of Death; Open Education; MOOC; eLearning course.

### **References**

- Fihel, A. & Muszynska-Spielauer, M. M. (2021). Using multiple cause of death information to eliminate garbage codes. *Demographic Research*, Vol. 45 (JULY - DECEMBER 2021), pp. 345-360 (18 pages) <https://www.jstor.org/stable/48640782>
- Orientação nº 020/2013 da Direção-Geral de Saúde (2013). Certificado de óbito eletrónico – Utilização do Sistema de Informação dos Certificados de Óbito (SICO). <https://www.dgs.pt/directrizes-da-dgs/orientacoes-e-circulares-informativas/orientacao-n-0202013-de-31122013-pdf.aspx>
- Lei nº 15/2012 do Ministério da Saúde (2012). *Diário da República*: 1ª série, nº 67 (Lei de implementação do SICO). <https://files.dre.pt/1s/2012/04/06700/0171601718.pdf>
- World Health Organization (2023). ICD-11 - International Classification of Diseases for Mortality and Morbidity Statistics. Eleventh Revision. <https://icdcdn.who.int/icd11referenceguide/en/html/index.html>