EUROPEAN CONFERENCE ON QUALITY IN OFFICIAL STATISTICS

2024 ESTORIL - PORTUGAL

Instituto Nacional de Estatística
Statistics Portugal

eurostat

The conference is partly
financed by the European Union


INSTITUTO NACIONAL DE ESTATÍSTICA
STATISTICS PORTUGAL
eurostat
The conference is partly
financed by the European Union
EUROPEAN CONFERENCE ON
QUALITY IN OFFICIAL STATISTICS
2024 ESTORIL - PORTUGAL

EUROPEAN CONFERENCE ON QUALITY IN OFFICIAL STATISTICS
2024 ESTORIL - PORTUGAL

Enhancing Quality Management in Mortality Surveillance: A Comprehensive Audit and Evaluation

Júlia Martinho, Afonso Moreira, Ana Paula Soares, Daniela Freitas, Liliana Bernardo, Sofia Pimenta, Pedro Pinto Leite

Directorate of Information and Analysis of the Directorate-General of Health, Lisbon, Portugal

INSTITUTO NACIONAL DE ESTATÍSTICA
STATISTICS PORTUGAL

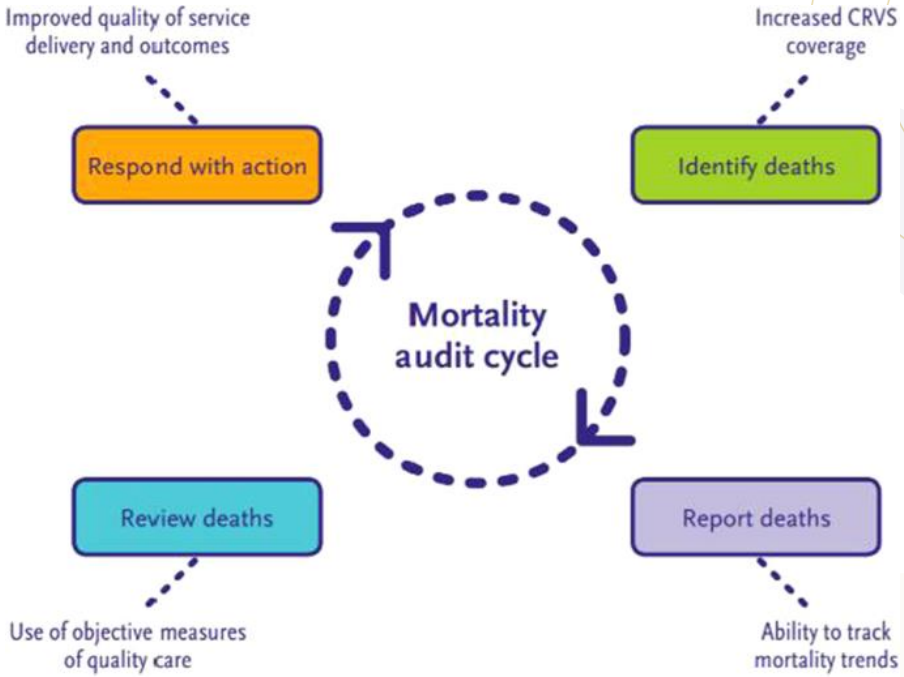
eurostat

The conference is partly financed by the European Union

The conference is partly financed by the European Union

Quality in Health

Portugal's National Strategy for Health Quality 2015-2020 prioritises improving clinical and organisational quality, highlighting the reinforcement of mechanisms for continuous quality improvement implementation.



Source: Russell, N., Tappis, H., Mwanga, J.P. et al. Implementation of maternal and perinatal death surveillance and response (MPDSR) in humanitarian settings: insights and experiences of humanitarian health practitioners and global technical expert meeting attendees. Confl Health 16, 23 (2022). https://doi.org/10.1186/s13031-022-00440-6.

Mortality Surveillance

Simplified business process for community-based surveillance

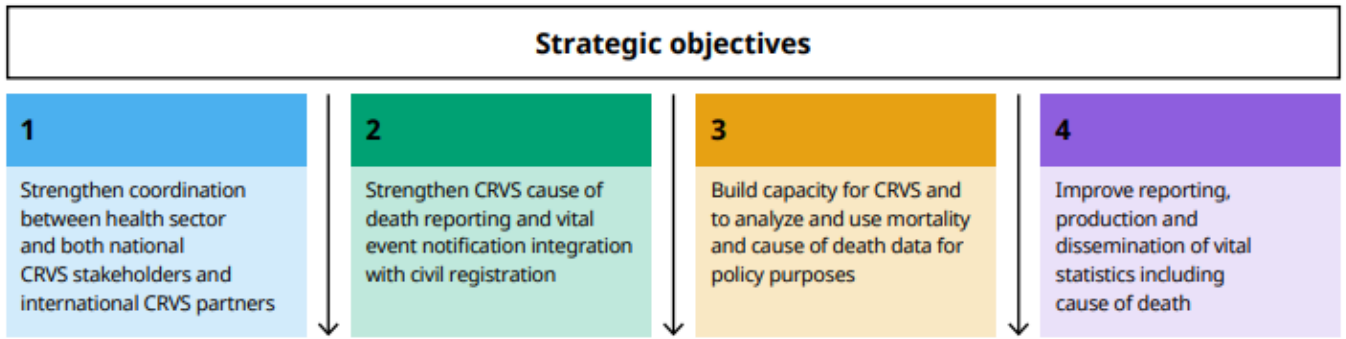
Rapid Mortality Surveillance

CLINICIAN	MEDICAL RECORDS	CENTRAL LEVEL	EPIDEMIC RESPONSE TEAM
Death occurs → Community/religious leader receives notice of death	Create and transmit daily/weekly lists of deaths by age, sex, location	Compile, analyze and graph indicators of total mortality	Examine levels and trends in mortality by age, sex, and location to inform action

Source: Vital Strategies, World Health Organization (2020). Revealing the Toll of COVID-19: A Technical Package for Rapid Mortality Surveillance and Epidemic Response. New York: Vital Strategies

The conference is partly financed by the European Union

FIGURE 4: Implementation of strategic objectives according to country progress on CRVS



Source: World Health Organization's Strategic Implementation Plan for Vital Statistics and Civil Registration 2021-2025.

Several targets and respective indicators of the United Nations' third Sustainable Development Goal refer to **mortality reduction**.

SICO and DGS

Established the Death Certificate Information System

Law no. 15/2012

Streamline death certification process

Better information quality, access and speed

Rational use of resources

Ensure citizens' privacy

DGS:

Database treatment

Death causes codification

Public health surveillance coordination

INSTITUTO NACIONAL DE ESTATÍSTICA
STATISTICS PORTUGAL

eurostat

The conference is partly financed by the European Union

INSTITUTO NACIONAL DE ESTATÍSTICA
STATISTICS PORTUGAL
eurostat
The conference is partly financed by the European Union

Mortality surveillance evaluation

SICO Internal Audits

- quality of the management system and compliance with national legal requirements
- quality of coding underlying cause of death due to COVID-19
- quality of information provided to the National Program for Cerebro-Cardiovascular Diseases

Opportunities for system improvement

- need for clear objectives
- process documentation
- minimum system requirements
- criteria for death certificate validation

Internal audit (2023)

Target: quality of information registered on death certificates

processes of: mortality monitoring and surveillance

death certification and SICO

Aim:

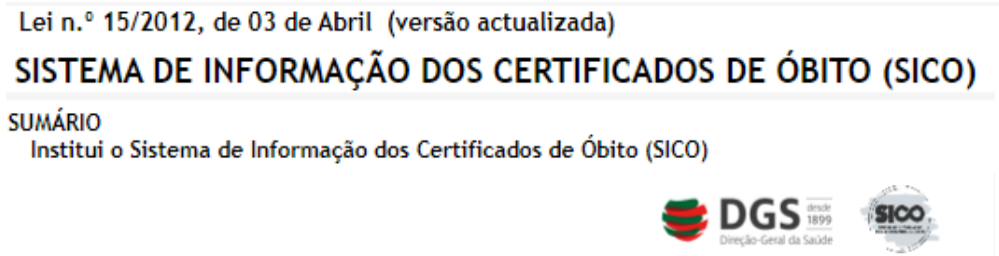
- enhance the overall quality of the mortality surveillance system
- assess the degree of compliance with international standards regarding quality of the information obtained
- propose preventive and corrective measures for any identified discrepancies
- identify opportunities to improve the mortality surveillance system and its performance

The conference is partly financed by the European Union

The conference is partly financed by the European Union

Methods

Audit criteria preparation


Lei n.º 15/2012, de 03 de Abril (versão actualizada)

SISTEMA DE INFORMAÇÃO DOS CERTIFICADOS DE ÓBITO (SICO)

SUMÁRIO

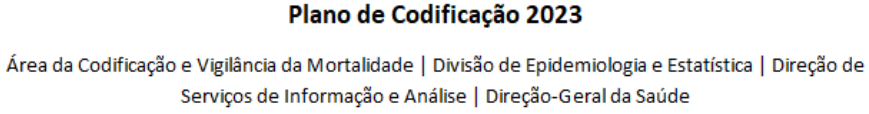
Institui o Sistema de Informação dos Certificados de Óbito (SICO)

DGS desde 1899 Direção-Geral da Saúde

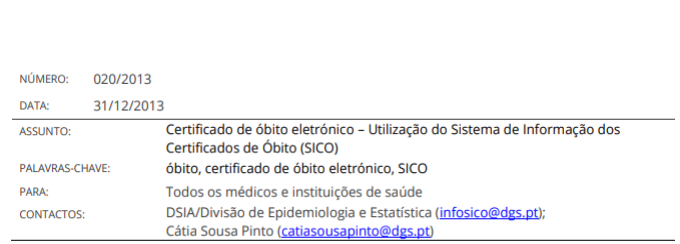
SICO

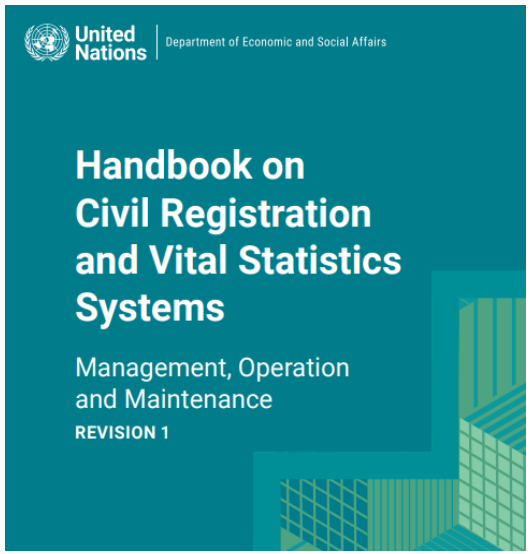

DGS desde 1899 Direção-Geral da Saúde


ORIENTAÇÃO |
da Direção-Geral da Saúde


Plano de Codificação 2023

Área da Codificação e Vigilância da Mortalidade | Divisão de Epidemiologia e Estatística | Direção de Serviços de Informação e Análise | Direção-Geral da Saúde

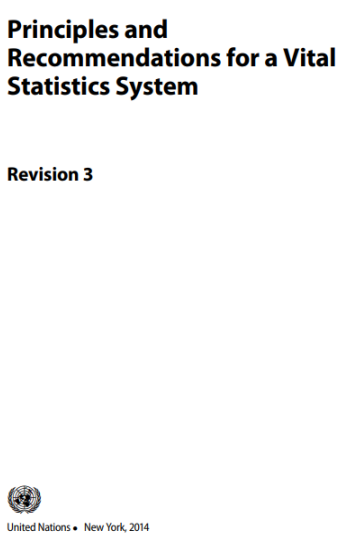

NÚMERO:	020/2013
DATA:	31/12/2013
ASSUNTO:	Certificado de óbito eletrónico – Utilização do Sistema de Informação dos Certificados de Óbito (SICO)
PALAVRAS-CHAVE:	óbito, certificado de óbito eletrónico, SICO
PARA:	Todos os médicos e instituições de saúde
CONTACTOS:	DSIA/Divisão de Epidemiologia e Estatística (infosico@dgs.pt); Cátia Sousa Pinto (catiasousapinto@dgs.pt)


United Nations | Department of Economic and Social Affairs

Handbook on Civil Registration and Vital Statistics Systems

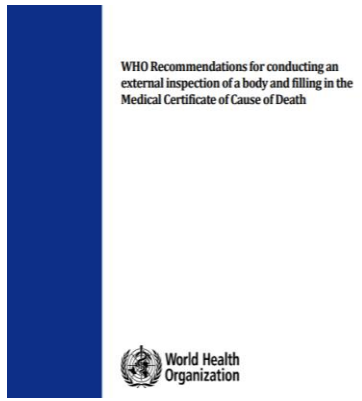
Management, Operation and Maintenance

REVISION 1

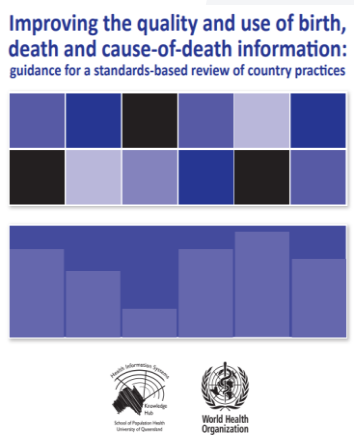

Principles and Recommendations for a Vital Statistics System

Revision 3

United Nations • New York, 2014


WHO Recommendations for conducting an external inspection of a body and filling in the Medical Certificate of Cause of Death

World Health Organization

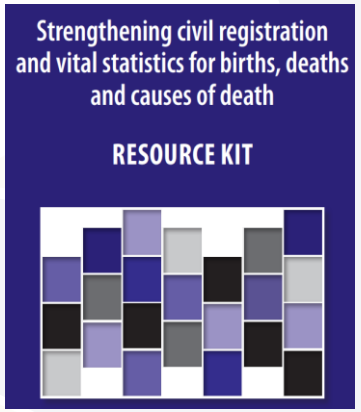

Improving the quality and use of birth, death and cause-of-death information:

guidance for a standards-based review of country practices

World Health Organization


Rapid assessment of national civil registration and vital statistics systems

World Health Organization


Strengthening civil registration and vital statistics for births, deaths and causes of death

RESOURCE KIT

Audit criteria

Table 2: Audit criteria by audit area

Audit area	Audit criteria
1. Quality of medical certification	1. The SNS user number of the deceased person, if it exists, was filled in on the death certificate by the certifying doctor. 2. The chain of events leading directly to death was completed in Part I. 3. Other major illnesses, conditions, or injuries that contributed to the death but did not result in the underlying cause of death were completed in Part II. 4. The underlying cause of death was filled in on the death certificate. 5. The death certificate contained an etiological sequence that ends with the terminal condition. 6. Only one cause of death per line was filled in. 7. In cancer deaths, cancer type was mentioned on the death certificate. 8. In cancer deaths, cancer site was mentioned on the death certificate. 9. In deaths due to infectious etiology, the microorganism was mentioned in the certificate of death. 10. In deaths due to heart failure, the specific etiology was mentioned. 11. The duration between the onset of illness and death was filled in on the death certificate. 12. The time intervals indicated in Part I of the death certificate increased or remained stable from top to bottom. 13. No abbreviations were used on the death certificate.
2. Compatibility and consistency of data integration processes	1. SICO received information from the national registry about the death certificate number, its date and the registry office where it was drawn up. 2. In situations of violent death or an unknown cause, when the death occurred in public or private health institutions, the Clinical and/or Circumstantial Information Bulletin (BIC) was filled out. 3. In situations of violent death or an unknown cause, when the death occurred in public or private health institutions, the death certificate was not issued until the Public Prosecutor's Office decided on whether to carry out a medico-legal autopsy or its dismissal. 4. Information on the cause of death resulting from clinical and medico-legal autopsies was registered in SICO associated with the respective death certificate.
3. Mortality surveillance	1. Death certificates for mortality ages 0 to 30 were coded in real time. 2. Maternal mortality death certificates were coded in real time. 3. Fetal mortality death certificates were coded in real time. 4. Maternal mortality death certificates were object of multiple codification. 5. Death certificates for fetal and neonatal mortality were object of multiple codification. 6. Death certificates for mortality up to 5 years of age were object of multiple codification. 7. Death certificates registering a notifiable disease were object of multiple codification.

The conference is partly financed by the European Union

Methods

Opening meeting

Evidence collection

- Between August and November

Sampling strategy

- 408 death certificates
- 12-month period (August 1, 2022 to July 31, 2023)
- Same distribution per region and months
- Random selection (first certificate in a certain, predefined timeslot)

The conference is partly financed by the European Union

Methods

Evidence analysis and preparation of the preliminar audit report

- Multiple meetings of the auditing team to evaluate findings, determine compliance and propose corrective actions
- Calculated compliance proportions (global, by audit area and by audit criteria)
- Checklist completion

Closing meeting

- Present audit findings, conclusions, and improvement recommendations

Final audit report and quality manual creation

Results

Table 1: Summary of audit findings

Audit Area	Proportion of compliance
1. Quality of medical certification	69.23%
2. Compatibility and consistency of data integration processes	75%
3. Mortality surveillance	100%

Overall compliance: 19 out of 24 audit criteria

(5 non-compliant)

Compliance rate: 79.17%

(non-compliance rate: 20.83%)

The conference is partly financed by the European Union

Results

Table 4: Summary of recommendations by audit area

Audit Area	Recommendations
1. Quality of medical certification	Provide targeted training for certifying doctors. Implement auxiliary alerts in the certification system. Establish procedures for handling unknown causes of death.
2. Compatibility and consistency of data integration processes	Implement electronic alerts for missing autopsy reports. Implement electronic alerts for mandatory notifications.
3. Mortality surveillance	Include regional analysis in mortality monitoring. Use intuitive quality indicator analysis tools, such as ANACoD3.

The conference is partly financed by the European Union

The conference is partly financed by the European Union

Conclusions

In the future:

- Identify systematic errors
- Certifying doctors who issue more death certificates

Primary utility: developing the checklist

- Enable regular audits
- Facilitate monitoring of improvements implementation onwards

Proposed corrective measures

- Priority: ANACoD3
- Easy to implement
- Address multiple audit criteria effectively

Challenges for corrective measures

- Reliance on the actions of external entities
- Substantial workload on team members
- Increased human resources availability

INSTITUTO NACIONAL DE ESTATÍSTICA
STATISTICS PORTUGAL

eurostat

The conference is partly financed by the European Union

EUROPEAN CONFERENCE ON QUALITY IN OFFICIAL STATISTICS

2024 ESTORIL - PORTUGAL

INSTITUTO NACIONAL DE ESTATÍSTICA
STATISTICS PORTUGAL

eurostat

The conference is partly
financed by the European Union