

INTERNATIONAL GUIDELINES FOR CERTIFICATION AND CLASSIFICATION (CODING) OF COVID-19 AS CAUSE OF DEATH

Based on ICD

International Statistical Classification of Diseases

(May 2025)

Table of Contents

| | |
|---|-----------|
| 1. PURPOSE OF THE DOCUMENT | 3 |
| 2. DEFINITION OF DEATH DUE TO COVID-19 | 3 |
| 3. GUIDELINES FOR CERTIFYING COVID-19 AS A CAUSE OF DEATH | 3 |
| A- RECORDING COVID-19 ON THE MEDICAL CERTIFICATE OF CAUSE OF DEATH..... | 3 |
| B- TERMINOLOGY | 3 |
| C- CHAIN OF EVENTS..... | 4 |
| D- COMORBIDITIES..... | 4 |
| E- OTHER EXAMPLES..... | 6 |
| 4. GUIDELINES FOR CODING COVID-19 FOR MORTALITY | 7 |
| A- ALL ICD CODES RELATING TO COVID-19 AND RELATED CONDITIONS AND CIRCUMSTANCES... | 8 |
| B- Cause of Death coding of COVID-19..... | 13 |
| C- CHAIN OF EVENTS..... | 14 |
| D- COMORBIDITIES | 15 |
| E- OTHER EXAMPLES..... | 16 |
| F- Additional WHO cause of death certification links..... | 18 |
| 5. ANNEX | 18 |

1. PURPOSE OF THE DOCUMENT

This document describes certification and classification (coding) of deaths related to COVID-19. The primary goal is to identify all deaths due to COVID-19.

A simplified section (section 3) specifically addresses the persons who fill in the medical certificate of cause of death. It may be distributed to certifiers separate from the coding instructions.

This document replaces previous guidelines issued on [20 April 2020](#) and [1 January 2021](#).

2. DEFINITION OF DEATH 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 more severe course of COVID-19.

3. GUIDELINES FOR CERTIFYING COVID-19 AS A CAUSE OF DEATH

In view of the global concern about COVID-19 it is important to record and report deaths due to COVID-19 in a uniform way.

A- RECORDING COVID-19 ON THE MEDICAL CERTIFICATE OF CAUSE OF DEATH

COVID-19 should be recorded on the medical certificate of cause of death for ALL decedents where the disease caused, or is believed to have caused, or contributed to death. It should not be recorded if the decedent was previously diagnosed with COVID-19 or had a positive test result but the disease did not cause or contribute to death.

B- TERMINOLOGY

The official terminology, **COVID-19**, should be used for all certification of this cause of death. As there are many types of coronaviruses, it is recommended not to use “coronavirus” in place of COVID-19. This helps to reduce uncertainty for the classification or coding and to correctly monitor these deaths.

C- CHAIN OF EVENTS

Specification of the causal sequence leading to death in Part 1 of the certificate is important. For example, in cases when COVID-19 causes pneumonia and fatal respiratory distress, both pneumonia and respiratory distress should be included, along with COVID-19, in Part 1. Certifiers should include as much detail as possible based on their knowledge of the case, for example from medical records or the results of laboratory testing.

Here, on the International Form of Medical Certificate of Cause of Death, is an example of how to certify this chain of events for deaths due to **COVID-19** in Part 1:

Example 1

| Frame A: Medical data: Part 1 and 2 | | | | |
|---|---|--|-------------------------------------|--|
| 1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line | | | Cause of death | Time interval from onset to death |
| | | a | Acute respiratory distress syndrome | 2 days |
| | | b | Due to: Pneumonia | 10 days |
| | | c | Due to: COVID-19 (test positive) | 14 days |
| | | d | Due to: | |
| 2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition) | | <div style="border: 1px solid black; padding: 5px; display: inline-block;">Underlying cause of death</div> | | |
| Manner of death: | | | | |
| <input checked="" type="checkbox"/> Disease | <input type="checkbox"/> Assault | <input type="checkbox"/> Could not be determined | | |
| <input type="checkbox"/> Accident | <input type="checkbox"/> Legal intervention | <input type="checkbox"/> Pending investigation | | |
| <input type="checkbox"/> Intentional self harm | <input type="checkbox"/> War | <input type="checkbox"/> Unknown | | |

Note: This is a typical course with a certificate that has been filled in correctly. Please remember to indicate whether the virus causing COVID-19 had been identified in the decedent.

D- COMORBIDITIES

There is increasing evidence that people with existing chronic conditions or compromised immune systems due to disability are at higher risk of death due to COVID-19. Chronic conditions may be non-communicable diseases such as coronary artery disease, chronic obstructive pulmonary disease (COPD), and diabetes or disabilities. If the decedent had existing chronic conditions, they should be reported in Part 2 of the medical certificate of cause of death.

If the death was not due to COVID-19, but the presence of COVID-19 is thought to have contributed to a death which was due to another condition, COVID-19 should be reported in Part 2 as a comorbidity and not in Part 1.

Here, on the International Form of Medical Certificate of Cause of Death, are examples of how to certify this chain of events for deaths due to **COVID-19** in Part 1, with comorbidities reported in Part 2:

COVID-19 - GUIDELINES FOR DEATH CERTIFICATION AND CODING

Example 2

| Frame A: Medical data: Part 1 and 2 | | | | |
|---|--|---|--|--|
| 1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line | | | Cause of death | Time interval from onset to death |
| | | a | Acute respiratory distress syndrome | 2 days |
| | | b | Due to: Pneumonia | 10 days |
| | | c | Due to: Suspected COVID-19 | 12 days |
| <div>Underlying cause of death</div> | | | Due to: | |
| 2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition) | | | Coronary artery disease [5 years], Type 2 diabetes [14 years], Chronic obstructive pulmonary disease [8 years] | |
| Manner of death: | | | | |
| <input checked="" type="checkbox"/> Disease | | <input type="checkbox"/> Assault | | <input type="checkbox"/> Could not be determined |
| <input type="checkbox"/> Accident | | <input type="checkbox"/> Legal intervention | | <input type="checkbox"/> Pending investigation |
| <input type="checkbox"/> Intentional self harm | | <input type="checkbox"/> War | | <input type="checkbox"/> Unknown |

Note: This is a typical course with a certificate that is filled in correctly. COVID-19 cases may have comorbidities. **The comorbidity is recorded in Part 2.**

Example 3

| Frame A: Medical data: Part 1 and 2 | | | | |
|---|--|---|-------------------------------------|--|
| 1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line | | | Cause of death | Time interval from onset to death |
| | | a | Acute respiratory distress syndrome | 2 days |
| | | b | Due to: Pneumonia | 10 days |
| | | c | Due to: COVID-19 | 10 days |
| <div>Underlying cause of death</div> | | | Due to: | |
| 2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition) | | | Cerebral palsy [10 years] | |
| Manner of death: | | | | |
| <input checked="" type="checkbox"/> Disease | | <input type="checkbox"/> Assault | | <input type="checkbox"/> Could not be determined |
| <input type="checkbox"/> Accident | | <input type="checkbox"/> Legal intervention | | <input type="checkbox"/> Pending investigation |
| <input type="checkbox"/> Intentional self harm | | <input type="checkbox"/> War | | <input type="checkbox"/> Unknown |

Note: This is a typical course with a certificate that has been filled in correctly. COVID-19 cases may have comorbidities. **The comorbidity is recorded in Part 2.**

E- OTHER EXAMPLES

Example 4

| Frame A: Medical data: Part 1 and 2 | | | | | |
|---|--|---|--|--|----------------------------------|
| 1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line | | | Cause of death | Time interval from onset to death | |
| | | a | Respiratory failure | 2 days | |
| | | b | Due to: Pneumonia | 8 days | |
| | | c | Due to: Pregnancy complicated by COVID-19 | 12days | |
| | | d | Due to: | | |
| 2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition) | | Underlying cause of death | | | |
| Manner of death: | | | | | |
| <input checked="" type="checkbox"/> Disease | | <input type="checkbox"/> Assault | | <input type="checkbox"/> Could not be determined | |
| <input type="checkbox"/> Accident | | <input type="checkbox"/> Legal intervention | | <input type="checkbox"/> Pending investigation | |
| <input type="checkbox"/> Intentional self harm | | <input type="checkbox"/> War | | <input type="checkbox"/> Unknown | |
| For women, was the deceased pregnant? | | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| <input checked="" type="checkbox"/> At time of death | | | <input type="checkbox"/> Within 42 days before the death | | |
| <input type="checkbox"/> Between 43 days up to 1 year before death | | | <input type="checkbox"/> Unknown | | |
| Did the pregnancy contribute to the death? | | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |

Note: This is a typical course with a certificate is filled in correctly. In case of a pregnancy, puerperium or birth leading to death in conjunction with COVID-19, please record the sequence of events as usual, and remember to enter the additional detail for pregnancies in frame B of the certificate of cause of death.

Example 5

| Frame A: Medical data: Part 1 and 2 | | | | |
|---|--|---|-------------------------------------|--|
| 1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line | | | Cause of death | Time interval from onset to death |
| | | a | Acute respiratory distress syndrome | 3 days |
| | | b | Due to: COVID-19 | 1 week |
| | | c | Due to: | |
| | | d | Due to: | |
| 2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition) | | HIV Disease [5 years] | | |
| Manner of death: | | | | |
| <input checked="" type="checkbox"/> Disease | | <input type="checkbox"/> Assault | | <input type="checkbox"/> Could not be determined |
| <input type="checkbox"/> Accident | | <input type="checkbox"/> Legal intervention | | <input type="checkbox"/> Pending investigation |
| <input type="checkbox"/> Intentional self harm | | <input type="checkbox"/> War | | <input type="checkbox"/> Unknown |

Note: This is a typical course with a certificate that is filled in correctly. The certifier has identified HIV disease as contributing to the death and recorded it in **Part 2**.

The examples below show recording of cases where death may have been influenced by **COVID-19**, but death was caused by another disease or an external cause.

COVID-19 - GUIDELINES FOR DEATH CERTIFICATION AND CODING

Example 6

| Frame A: Medical data: Part 1 and 2 | | | | |
|---|--|---|-----------------------------------|--|
| 1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line | | | Cause of death | Time interval from onset to death |
| | | a | Hypovolaemic shock | 1 day |
| | | b | Due to: Aortic dissection | 1 day |
| | | c | Due to: Motor vehicle accident | 2 days |
| | | d | Due to: | Underlying cause of death |
| 2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition) | | COVID-19 | | |
| Manner of death: | | | | |
| <input type="checkbox"/> Disease <input checked="" type="checkbox"/> Accident <input type="checkbox"/> Intentional self harm | | <input type="checkbox"/> Assault <input type="checkbox"/> Legal intervention <input type="checkbox"/> War | | <input type="checkbox"/> Could not be determined <input type="checkbox"/> Pending investigation <input type="checkbox"/> Unknown |

NOT COVID-19 DEATH

Note: Persons with COVID-19 may die of other diseases or external causes, such cases are not deaths due to COVID-19 and should not be certified as such. If COVID-19 aggravated the consequences of the accident or other external cause, you may report COVID-19 in Part 2. Please remember to indicate the manner of death and record in Part 1 the exact kind of accident or other external cause.

Example 7

| Frame A: Medical data: Part 1 and 2 | | | | |
|---|--|---|-----------------------------|--|
| 1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line | | | Cause of death | Time interval from onset to death |
| | | a | Heart failure | 1 day |
| | | b | Due to: Malignant tumour | 20 weeks |
| | | c | | Underlying cause of death |
| | | d | Due to: | |
| 2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition) | | COVID-19 | | |
| Manner of death: | | | | |
| <input checked="" type="checkbox"/> Disease <input type="checkbox"/> Accident <input type="checkbox"/> Intentional self harm | | <input type="checkbox"/> Assault <input type="checkbox"/> Legal intervention <input type="checkbox"/> War | | <input type="checkbox"/> Could not be determined <input type="checkbox"/> Pending investigation <input type="checkbox"/> Unknown |

NOT COVID-19 DEATH

Note: Persons with COVID-19 may die due to other conditions such as a malignant tumour (of any site). Such cases are not deaths due to COVID-19 and should not be certified as such.

4. GUIDELINES FOR CODING COVID-19 FOR MORTALITY

This document provides information about the ICD-10 and ICD-11 codes for COVID-19 and related conditions and includes mortality classification (coding) instructions for statistical tabulation in the context of COVID-19. Note that not all the codes for COVID-19 and related conditions and circumstances shown below are suitable for primary mortality tabulation or for coding the underlying cause of death (see also section 4.B.2).

A- ALL ICD CODES RELATING TO COVID-19 AND RELATED CONDITIONS AND CIRCUMSTANCES

A.1 Codes in ICD-10 (latest version):

U07.1 COVID-19, virus identified

- COVID-19 NOS

Excl.:

Coronavirus infection, unspecified site (B34.2)
Coronavirus as the cause of diseases classified to other chapters (B97.2)
Severe acute respiratory syndrome [SARS], unspecified (U04.9)

Note:

Use this code when COVID-19 has been confirmed by laboratory testing irrespective of severity of clinical signs or symptoms. Use additional code, if desired, to identify pneumonia or other manifestations. **In the absence of any information about laboratory testing, it is recommended, for mortality purposes only, to code COVID-19 provisionally to U07.1 unless it is stated as “probable” or “suspected”.**

<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

Excl.:

Coronavirus infection, unspecified site (B34.2)

COVID-19:

- confirmed by laboratory testing (U07.1)
- special screening examination (Z11.5)
- suspected but ruled out by negative laboratory results (Z03.8)

Note:

Use this code when COVID-19 is diagnosed clinically or epidemiologically but laboratory testing is inconclusive or not available. Use additional code, if desired, to identify pneumonia or other manifestations

<https://icd.who.int/browse10/2019/en#/U07.2>

U08.9 Personal history of COVID-19, unspecified

Note:

This optional code is used to record an earlier episode of COVID-19, confirmed or probable that influences the person's health status, and the person no longer suffers of COVID-19. **This code should not be used for primary mortality tabulation or underlying cause of death.**

<https://icd.who.int/browse10/2019/en#/U08.9>

U09.9 Post COVID-19 condition, unspecified

Note:

This optional code serves to allow the establishment of a link with COVID-19. This code is not to be used in cases that still are presenting COVID-19. **This code should not be used for primary mortality tabulation or underlying cause of death.**

Additional note:

This code should not be used because of any specific duration of COVID-19. Mention of 'Long COVID' should be coded as active COVID-19.

<https://icd.who.int/browse10/2019/en#/U09.9>

U10.9 Multisystem inflammatory syndrome associated with COVID-19, unspecified

- Cytokine storm) Temporally
- Kawasaki-like syndrome) associated
- Paediatric Inflammatory Multisystem Syndrome (PIMS)) with
- Multisystem Inflammatory Syndrome in Children (MIS-C)) COVID-19

Excl.:

Mucocutaneous lymph node syndrome [Kawasaki] (M30.3)

<https://icd.who.int/browse10/2019/en#/U10.9>

U11.9 Need for immunization against COVID-19, unspecified

- Prophylactic COVID-19 vaccination

Excl.:

Immunization not carried out (Z28.-)

Note:

This optional code is intended to be used when a person who may or may not be sick encounters health services for the specific purpose of receiving a COVID-19 vaccine. The use of this code may differ according to national practice and it should not be used for international comparison. **This code should not be used for primary mortality tabulation or underlying cause of death.**

<https://icd.who.int/browse10/2019/en#/U11.9>

U12.9 COVID-19 vaccines causing adverse effects in therapeutic use, unspecified

- Correct administration of COVID-19 vaccine in prophylactic therapeutic use as the cause of any adverse effect

Note:

This code is to be used as an external cause code (i.e. as a subcategory under **Y59 Other and unspecified vaccines and biological substances**). In addition to this, a code from another chapter of the classification should be used indicating the nature of the adverse effect. **The use of this code may differ according to national practice on coding of adverse effects of medications.**

Additional note:

If 'late effect' or a duration of more than 1 year is mentioned, it may be appropriate to code using **Y88.0 Sequelae of adverse effects caused by drugs, medicaments and biological substances in therapeutic use** according to national practice.

<https://icd.who.int/browse10/2019/en#/U12.9>

A.2 Codes in ICD-11 (latest release)¹:**RA01.0 COVID-19, virus identified***Inclusions:*

Coronavirus disease 2019
COVID-19 NOS

Exclusions:

Coronavirus infection, unspecified site (1D92)
Middle East respiratory syndrome (1D64)
Severe acute respiratory syndrome (1D65)

Coding Note:

Use this code when infection with the COVID-19 virus (SARS-CoV-2) has been confirmed by laboratory testing irrespective of severity of clinical signs or

¹ <https://icd.who.int/browse11/l-m/en#>

symptoms. **In the absence of any information about laboratory testing, it is recommended, for mortality purposes only, to code COVID-19 provisionally to RA01.0 unless it is stated as “probable” or “suspected”.**

URI: <http://id.who.int/icd/entity/1790791774>

RA01.1 **COVID-19, virus not identified**

Exclusions:

- COVID-19, virus identified (RA01.0)
- Coronavirus infection, unspecified site (1D92)
- Special screening examination for other viral diseases (QA08.5) suspected but ruled out by negative laboratory results (QA02) confirmed by laboratory testing (RA01.0)

Coding Note:

Use this code when COVID-19 is diagnosed clinically or epidemiologically but laboratory testing is inconclusive or not available.

URI: <http://id.who.int/icd/entity/563410356>

RA02 **Post COVID-19 condition**

Coding Note:

This optional code serves to allow the establishment of a link with COVID-19. This code is not to be used in cases that still are presenting COVID-19.

Additional note:

This code should not be used because of any specific duration of COVID-19. Mention of ‘Long COVID’ should be coded as active COVID-19. **This code should not be used for primary mortality tabulation or underlying cause of death.**

URI: <http://id.who.int/icd/entity/2024855916>

RA03 **Multisystem inflammatory syndrome associated with COVID-19**

Inclusions:

- Cytokine storm temporally associated with COVID-19
- Kawasaki-like syndrome temporally associated with COVID-19
- Multisystem inflammatory syndrome in children temporally associated with COVID-19

Exclusions:

- Kawasaki syndrome (4A44.5)
- Mucocutaneous lymph node syndrome (4A44.5)

URI: <http://id.who.int/icd/entity/1195031154>

QC01.9

Need for immunization against COVID-19

Exclusions:

Immunization not carried out (QC04)

Additional note:

This optional code is intended to be used when a person who may or may not be sick encounters health services for the specific purpose of receiving a COVID-19 vaccine. The use of this code may differ according to national practice and it should not be used for international comparison. **This code should not be used for primary mortality tabulation or underlying cause of death.**

URI: <http://id.who.int/icd/entity/122701393>

QC42.0

Personal history of COVID-19

Additional note:

This code should not be used for primary mortality tabulation or underlying cause of death.

URI: <http://id.who.int/icd/entity/1550698926>

PL00

Drugs, medicaments or biological substances associated with injury or harm in therapeutic use

post-coordinated with Medication: **XM68M6** COVID-19 vaccines*

Exclusions:

Circumstances associated with exposure to a drug, medicament or biological substance influencing the episode of care without injury or harm (QA70-QA7Z)

* Extension codes under XM68M6 give further details of vaccines by type and brand name. URI: <http://id.who.int/icd/entity/894585096>

Additional note:

The use of this code may differ according to national practice on coding of adverse effects of medications. If 'late effect' or a duration of more than 1 year is mentioned, it may be appropriate to code using PL00 and the extension code **XT9C** Cause of late effect according to national practice.

URI: <http://id.who.int/icd/entity/1158914813>

B- Cause of Death coding of COVID-19

B.1 General principles

Certifiers use a range of terms to describe COVID-19 as a cause of death, a sample of these can be found in the Annex of this document.

Although both categories, U07.1 or RA01.0 (COVID-19, virus identified) and U07.2 or RA01.1 (COVID-19, virus not identified) are suitable for cause of death coding, it is recognized that in many countries detail as to the laboratory confirmation of COVID-19 will NOT be reported on the death certificate. In the absence of this detail, it is recommended, for mortality purposes only, to code COVID-19 provisionally to U07.1 or RA01.0 unless it is stated as “probable” or “suspected”.

The purpose of mortality classification (coding) is to produce the most useful cause of death statistics possible. Thus, whether a sequence is listed as ‘rejected’ or ‘accepted’ may reflect interests of importance for public health rather than what is acceptable from a purely medical point of view. Therefore, always apply these instructions, whether they can be considered medically correct or not. Individual countries should not correct what is assumed to be an error, since changes at the national level will lead to data that are less comparable to data from other countries, and thus less useful for analysis.

B.2 Special notes on coding and selecting underlying cause of death

The international rules and guideline for selecting the underlying cause of death for statistical tabulation apply when COVID-19 is reported on a death certificate but, given the intense public health requirements for data, COVID-19 is not considered as due to, or as an obvious consequence of, anything else (by analogy to the coding rules applied for influenza). Further to this, there is no provision in the classification to link COVID-19 to other causes or modify its coding in any way except as explained in these guidelines.

Because certain codes concerning COVID-19 cannot be used for underlying cause of death, the following codes should be treated as shown in the table:

| Code: | Action: |
|---|---|
| ICD-10 | |
| U08.9 Personal history of COVID-19, unspecified | If no other condition present, code underlying cause as R99 Other ill-defined and unspecified causes of mortality |
| U09.9 Post COVID-19 condition, unspecified | Consider U09.9 as due to U07.1 COVID-19, virus identified and proceed accordingly |
| U11.9 Need for immunization against COVID-19, unspecified | If no other condition present, code underlying cause as R99 Other ill-defined and unspecified causes of mortality |

| ICD-11 | |
|---|--|
| QC01.9 Need for immunization against COVID-19 | If no other condition present, code underlying cause as MH14 Other ill-defined and unspecified causes of mortality |
| QC42.0 Personal history of COVID-19 | If no other condition present, code underlying cause as MH14 Other ill-defined and unspecified causes of mortality |
| RA02 Post COVID-19 condition | Consider RA02 as due to RA01.0 COVID-19, virus identified and proceed accordingly |

If COVID-19 is mentioned in either Part 1 or Part 2 and any of ‘cytokine storm’, ‘Kawasaki-like syndrome’ or ‘multisystem inflammatory syndrome in children (MIS-C)’ is also mentioned, code to:

ICD-10: U10.9 Multisystem inflammatory syndrome associated with COVID-19, unspecified

ICD-11: RA03 Multisystem inflammatory syndrome associated with COVID-19

C- CHAIN OF EVENTS

Here, on the International Form of Medical Certificate of Cause of Death, is an example of how to code this chain of events and select the underlying cause of death for deaths due to **COVID-19** in Part 1:

Example 8

| Frame A: Medical data: Part 1 and 2 | | | | |
|---|---|--|---|--|
| 1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line | | | Cause of death ICD-10 ICD-11 | Time interval from onset to death |
| | | a | Acute respiratory distress syndrome J80 CB00 | 2 days |
| | | b | Due to: Pneumonia J18.9 CA40.Z | 10 days |
| | | c | Due to: COVID-19 (test positive) U07.1 RA01.0 | 14 days |
| | | d | Due to: | |
| 2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition) | | <div style="border: 1px solid black; padding: 5px; display: inline-block;">Underlying cause of death</div> | | |
| Manner of death: | | | | |
| <input checked="" type="checkbox"/> Disease | <input type="checkbox"/> Assault | <input type="checkbox"/> Could not be determined | | |
| <input type="checkbox"/> Accident | <input type="checkbox"/> Legal intervention | <input type="checkbox"/> Pending investigation | | |
| <input type="checkbox"/> Intentional self harm | <input type="checkbox"/> War | <input type="checkbox"/> Unknown | | |

Note: Select COVID-19 as underlying cause of death. Step SP3 applies as causes have been reported on more than one line in Part 1 and the condition reported first on the lowest used line (COVID-19) can cause all the conditions, pneumonia (J18.9 or CA40.Z) and acute respiratory distress syndrome (J80 or CB00), mentioned on the lines above. [See ICD-10 2016 and later, Volume 2, Section 4.2.1/ICD-11 Reference Guide, Section 2.17.6].

D- COMORBIDITIES

Here, on the International Form of Medical Certificate of Cause of Death, are examples of how to code this chain of events and select the underlying cause of death for deaths due to **COVID-19** in Part 1, with comorbidities reported in Part 2:

Example 9

| Frame A: Medical data: Part 1 and 2 | | | | | |
|---|--|---|-------------------------------------|--|--|
| 1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line | | | Cause of death | ICD-10 ICD-11 | Time interval from onset to death |
| | | a | Acute respiratory distress syndrome | J80 CB00 | 2 days |
| | | b | Due to: Pneumonia | J18.9 CA40.Z | 10 days |
| | | c | Due to: COVID-19 (test positive) | U07.1 RA01.0 | 14 days |
| | | d | Due to: | | |
| 2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition) | | | Underlying cause of death | | |
| Manner of death: | | | | | |
| <input checked="" type="checkbox"/> Disease | | <input type="checkbox"/> Assault | | <input type="checkbox"/> Could not be determined | |
| <input type="checkbox"/> Accident | | <input type="checkbox"/> Legal intervention | | <input type="checkbox"/> Pending investigation | |
| <input type="checkbox"/> Intentional self harm | | <input type="checkbox"/> War | | <input type="checkbox"/> Unknown | |


Example 10

| Frame A: Medical data: Part 1 and 2 | | | | | |
|---|--|---|-------------------------------------|--|---|
| 1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line | | | Cause of death | ICD-10 ICD-11 | Time interval from onset to death |
| | | a | Acute respiratory distress syndrome | J80 CB00 | 2 days |
| | | b | Due to: Pneumonia | J18.9 CA40.Z | 10 days |
| | | c | Due to: Suspected COVID-19 | U07.2 RA01.1 | 12 days |
| | | d | Due to: | | |
| 2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition) | | | Underlying cause of death | | Coronary artery disease [5 years], Type 2 diabetes [14 years], Chronic obstructive pulmonary disease [8 years] I25.1, E11.9, J44.9 BA8Z, 5A11, CA22.Z |
| Manner of death: | | | | | |
| <input checked="" type="checkbox"/> Disease | | <input type="checkbox"/> Assault | | <input type="checkbox"/> Could not be determined | |
| <input type="checkbox"/> Accident | | <input type="checkbox"/> Legal intervention | | <input type="checkbox"/> Pending investigation | |
| <input type="checkbox"/> Intentional self harm | | <input type="checkbox"/> War | | <input type="checkbox"/> Unknown | |

Note: Code all entries in Part 1 and 2, and in this example select COVID-19, specified as suspected (the case has virus not confirmed) as underlying cause of death. Step SP3 applies as causes have been reported on more than one line in Part 1 and the condition reported first on the lowest used line (COVID-19) can cause all the conditions, pneumonia (J18.9 or CA40.Z) and acute respiratory distress syndrome (J80 or CB00), mentioned on the lines above. [See ICD-10 2016 and later, Volume 2, Section 4.2.1/ICD-11 Reference Guide, Section 2.17.6].


E- OTHER EXAMPLES

Example 11

| Frame A: Medical data: Part 1 and 2 | | | | | |
|---|---|---|--|--|--|
| 1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line |  | | Cause of death | ICD-10 ICD-11 | Time interval from onset to death |
| | | a | Respiratory failure | O99.5 and J96.9 JB64.5 and CB41.2Z | 2 days |
| | | b | Due to: Pneumonia | O99.5 and J18.9 JB64.5 and CA40.Z | 8 days |
| | | c | Due to: Pregnancy complicated by COVID-19 | O98.5 and U07.1 JB63.5 and RA01.0 | 12 days |
| | | d | Due to: | | |
| 2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition) | | | <div style="border: 1px solid black; padding: 5px; display: inline-block;">Underlying cause of death</div> | | |
| Manner of death: | | | | | |
| <input checked="" type="checkbox"/> Disease | | <input type="checkbox"/> Assault | | <input type="checkbox"/> Could not be determined | |
| <input type="checkbox"/> Accident | | <input type="checkbox"/> Legal intervention | | <input type="checkbox"/> Pending investigation | |
| <input type="checkbox"/> Intentional self harm | | <input type="checkbox"/> War | | <input type="checkbox"/> Unknown | |
| For women, was the deceased pregnant? | | | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown | | |
| <input checked="" type="checkbox"/> At time of death | | | <input type="checkbox"/> Within 42 days before the death | | |
| <input type="checkbox"/> Between 43 days up to 1 year before death | | | <input type="checkbox"/> Unknown | | |
| Did the pregnancy contribute to the death? | | | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown | | |

Note: Code all entries in Part 1 and 2, and in this example select other viral diseases complicating pregnancy, childbirth and the puerperium (O98.5 or JB63.5) as underlying cause of death. Step SP3 applies as causes have been reported on more than one line in Part 1 and the condition reported first on the lowest used line (other viral diseases complicating pregnancy, childbirth and the puerperium) can cause all the conditions, pneumonia (O99.5 or JB64.5 and J18.9 or CA40.Z) and acute respiratory distress syndrome (O99.5 or JB64.5 and J80 or CB41.2Z), mentioned on the lines above. [See ICD-10 2016 and later, Volume 2, Section 4.2.1/ICD-11 Reference Guide, Section 2.17.6]. Use additional code to retain COVID-19. [See ICD-10 2016 and later, Volume 2, Section 4.2.8 Special instructions on maternal mortality (Step M4) /ICD-11 Reference Guide, Section 2.19.7]. **The use of the maternal codes may vary according to national practice. In ICD-11 postcoordination may be used, for example ‘JB63.5/RA01.0’.**

Example 12

| Frame A: Medical data: Part 1 and 2 | | | | | |
|---|---|---|--|--|--|
| 1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line |  | | Cause of death | ICD-10 ICD-11 | Time interval from onset to death |
| | | a | Acute respiratory distress syndrome | J80 CB00 | 3 days |
| | | b | Due to: COVID-19 | U07.1 RA01.0 | 1 week |
| | | c | Due to: HIV disease | B24 1C62.Z | 5 years |
| | | d | Due to: | | |
| 2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition) | | | <div style="border: 1px solid black; padding: 5px; display: inline-block;">Underlying cause of death</div> | | |
| Manner of death: | | | | | |
| <input checked="" type="checkbox"/> Disease | | <input type="checkbox"/> Assault | | <input type="checkbox"/> Could not be determined | |
| <input type="checkbox"/> Accident | | <input type="checkbox"/> Legal intervention | | <input type="checkbox"/> Pending investigation | |
| <input type="checkbox"/> Intentional self harm | | <input type="checkbox"/> War | | <input type="checkbox"/> Unknown | |

COVID-19 - GUIDELINES FOR DEATH CERTIFICATION AND CODING

Note: The certifier should have added the HIV disease as a comorbidity in Part 2 of the certificate, however the selection rules of ICD allow to identify COVID-19 as underlying cause of death. (COVID-19) is reported in a sequence ending with a terminal condition (Acute respiratory distress syndrome due to COVID-19). Mortality coding rule step SP4 applies as causes have been reported on more than one line in Part 1 and the condition reported first on the lowest used line (HIV disease) cannot cause all the conditions. [See ICD-10 2016 and later, Volume 2, Section 4.2.1/ICD-11 Reference Guide, Section 2.17.6].

Example 13

| Frame A: Medical data: Part 1 and 2 | | | | |
|---|--|---|---|--|
| 1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line | | | Cause of death | ICD-10 ICD-11 Time interval from onset to death |
| | | a | Hypovolaemic shock | T79.4 NF04.A 1 day |
| | | b | Due to: Thoracic aortic dissection | S25.0 NB30.0Y 1 day |
| | | c | Due to: Motor vehicle traffic accident | V89.2 PA0Z 2 days |
| | | d | Due to: | |
| 2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition) | | COVID-19 U07.1 RA01.0 | | |
| Manner of death: | | | | |
| <input type="checkbox"/> Disease <input checked="" type="checkbox"/> Accident <input type="checkbox"/> Intentional self harm | | <input type="checkbox"/> Assault <input type="checkbox"/> Legal intervention <input type="checkbox"/> War | | <input type="checkbox"/> Could not be determined <input type="checkbox"/> Pending investigation <input type="checkbox"/> Unknown |

Underlying cause of death (time intervals can be included in brackets after the condition)

NOT COVID-19 DEATH

Note: Code all entries in Part 1 and 2, and in this example select motor vehicle accident (V89.2 or PA0Z) as underlying cause of death. Step SP3 applies as causes have been reported on more than one line in Part 1 and the condition reported first on the lowest used line, motor vehicle accident (V89.2 or PA0Z), can cause all the conditions, traumatic thoracic aortic dissection (S25.0 or NB30.0Y) and traumatic hypovolemic shock (T79.4 or NF04.4), mentioned on the lines above. [See ICD-10 2016 and later, Volume 2, Section 4.2.1/ICD-11 Reference Guide, Section 2.17.6].

Example 14

| Frame A: Medical data: Part 1 and 2 | | | | |
|---|--|---|-----------------------------|--|
| 1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line | | | Cause of death | ICD-10 ICD-11 Time interval from onset to death |
| | | a | Heart failure | I50.9 BD1Z 1 day |
| | | b | Due to: Malignant tumour | C80.9 2D4Z 20 weeks |
| | | c | Due to: | |
| | | d | Due to: | |
| 2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition) | | COVID-19 U07.1 RA01.0 | | |
| Manner of death: | | | | |
| <input checked="" type="checkbox"/> Disease <input type="checkbox"/> Accident <input type="checkbox"/> Intentional self harm | | <input type="checkbox"/> Assault <input type="checkbox"/> Legal intervention <input type="checkbox"/> War | | <input type="checkbox"/> Could not be determined <input type="checkbox"/> Pending investigation <input type="checkbox"/> Unknown |

Underlying cause of death

NOT COVID-19 DEATH

Note: Code all entries in Part 1 and 2, and in this example select malignant tumour of unspecified site (C80.9 or 2D4Z) as underlying cause of death. Step SP3 applies as causes have been reported on more than one line in Part 1 and the condition reported first on the lowest used line, malignant tumour of unspecified site (C80.9 or 2D4Z) can cause the condition, heart failure (I50.9 or BD1Z), mentioned on the line above. [See ICD-10 2016 and later, Volume 2, Section 4.2.1/ICD-11 Reference Guide, Section 2.17.6].

F- Additional WHO cause of death certification links

- WHO Recommendations for conducting an external inspection of a body and filling in the Medical Certificate of Cause of Death (MCCD)
<https://www.who.int/publications/m/item/who-recommendations-for-conducting-an-external-inspection-of-a-body-and-filling-in-the-medical-certificate-of-cause-of-death>
- Cause of death certification flyer: A tool for certifying physicians
<https://www.who.int/publications/m/item/cause-of-death-certification-flyer---a-tool-for-certifying-physicians>
- WHO Interactive self-learning tool <https://icd.who.int/training/icd10training/ICD-10%20Death%20Certificate/html/index.html>
- International form of medical certificate of cause of death (ICD-11 Reference Guide section 2.15.2) <https://icdcdn.who.int/icd11referenceguide/en/html/index.html#data-source-the-international-form-of-medical-certificate-of-cause-of-death-mccd>

5. ANNEX

Examples of terms used by certifiers to describe COVID-19 and that can be coded as synonyms of COVID-19:

COVID Positive
Coronavirus Pneumonia
COVID-19 Infection
Sars-Cov-2 Infection (Coronavirus Two Infection)
COVID-19 Coronavirus
Infection – COVID-19 (Coroner Informed)
Hospital Acquired Pneumonia - COVID-Positive
Corona Virus two infection (SARS-Cov-2)
Corona Virus Pneumonia (COVID-19)
Coronavirus-Two Infection
New coronavirus
Novel coronavirus