

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

**Based on ICD**

**International Statistical Classification of Diseases**

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## 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 specifically addresses the persons that fill in the medical certificate of cause of death. It should be distributed to certifiers separate from the coding instructions.

## 2. DEFINITION FOR DEATHS 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 preexisting conditions that are suspected of triggering a severe course of COVID-19.

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

In view of 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 assumed to have caused, or contributed to death.

### B- TERMINOLOGY

The use of 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, as from medical records, or about 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:

| <b>Frame A: Medical data: Part 1 and 2</b>  |   |  |                                   |
|---|---|--|-----------------------------------|
| <b>1</b><br>Report disease or condition directly leading to death on line a<br><br>Report chain of events in due to order (if applicable)<br><br>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:<br>Pneumonia                             | 10 days                           |
|   | c   | Due to:<br>COVID-19 (test positive)              | 14 days                           |
|   | d   | Due to:  |                                   |
| <b>2</b> Other significant conditions contributing to death (time intervals can be included in brackets after the condition)  |   | Underlying cause of death                        |                                   |
| <b>Manner of death:</b>   |   |  |                                   |
| <input 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 defunct.

## 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, such as these, they should be reported in Part 2 of the medical certificate of cause of death.

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:

| <b>Frame A: Medical data: Part 1 and 2</b>  |  |  |                                     |  |
|---|--|--|-------------------------------------|--|
| <b>1</b><br>Report disease or condition directly leading to death on line a<br><br>Report chain of events in due to order (if applicable)<br><br>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:<br>Pneumonia                | 10 days  |
|   |  | c  | Due to:<br>Suspected COVID-19       | 12 days  |
| <div style="border: 1px solid black; padding: 2px; display: inline-block;">Underlying cause of death</div>  |  |  |                                     |  |
| <b>2</b> 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] |                                     |  |
| <b>Manner of death:</b>   |  |  |                                     |  |
| <input 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 comorbidity. **The comorbidity is recorded in Part 2.**

| <b>Frame A: Medical data: Part 1 and 2</b>  |  |   |                                     |  |
|---|--|---|-------------------------------------|--|
| <b>1</b><br>Report disease or condition directly leading to death on line a<br><br>Report chain of events in due to order (if applicable)<br><br>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:<br>Pneumonia                | 10 days  |
|   |  | c   | Due to:<br>COVID-19                 | 10 days  |
| <div style="border: 1px solid black; padding: 2px; display: inline-block;">Underlying cause of death</div>  |  |   |                                     |  |
| <b>2</b> Other significant conditions contributing to death (time intervals can be included in brackets after the condition)  |  | Cerebral palsy [10 Years]                   |                                     |  |
| <b>Manner of death:</b>   |  |   |                                     |  |
| <input 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 comorbidity. **The comorbidity is recorded in Part 2.**

**E- OTHER EXAMPLES**

| <b>Frame A: Medical data: Part 1 and 2</b>  |   |  |  |
|---|---|--|--|
| <b>1</b><br>Report disease or condition directly leading to death on line a<br><br>Report chain of events in due to order (if applicable)<br><br>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:<br>Pneumonia                                     | 8 days   |
|   | c   | Due to:<br>Pregnancy complicated by COVID-19             | 12 days  |
|   |   | Due to:  |  |
| <b>2</b> Other significant conditions contributing to death (time intervals can be included in brackets after the condition)  |   |  |  |
| <b>Manner of death:</b>   |   |  |  |
| <input 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                         |  |
| <b>For women, was the deceased pregnant?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown  |   |  |  |
| <input 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 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.

| <b>Frame A: Medical data: Part 1 and 2</b>  |   |  |                                   |
|---|---|--|-----------------------------------|
| <b>1</b><br>Report disease or condition directly leading to death on line a<br><br>Report chain of events in due to order (if applicable)<br><br>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:<br>COVID-19                              | One week                          |
|   | c   | Due to:  |                                   |
|   |   | Due to:  |                                   |
|   |   | Due to:  |                                   |
| <b>2</b> Other significant conditions contributing to death (time intervals can be included in brackets after the condition)  |   | <b>HIV disease [5 years]</b>                     |                                   |
| <b>Manner of death:</b>   |   |  |                                   |
| <input 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 accident.

| <b>Frame A: Medical data: Part 1 and 2</b>  |   |  |                                   |
|---|---|--|-----------------------------------|
| <b>1</b><br>Report disease or condition directly leading to death on line a<br><br>Report chain of events in due to order (if applicable)<br><br>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:<br>Aortic dissection                   | 1 day                             |
|   | ↻   | c Due to:<br>Motor vehicle accident              | 2 days                            |
|   | ↻   | d Due to:  |                                   |
| <b>2</b> Other significant conditions contributing to death (time intervals can be included in brackets after the condition)  |   | COVID-19   | Underlying cause of death         |
| <b>Manner of death:</b>   |   |  |                                   |
| <input 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: Persons with COVID-19 may die of other diseases or accidents, such cases are not deaths due to COVID-19 and should not be certified as such. In case you think that COVID-19 aggravated the consequences of the accident, 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 an incident or other external cause.

| <b>Frame A: Medical data: Part 1 and 2</b>  |   |  |                                   |
|---|---|--|-----------------------------------|
| <b>1</b><br>Report disease or condition directly leading to death on line a<br><br>Report chain of events in due to order (if applicable)<br><br>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:<br>Myocardial infarction               | 5 days                            |
|   | ↻   | c Due to:  |                                   |
|   | ↻   | d Due to:  |                                   |
| <b>2</b> Other significant conditions contributing to death (time intervals can be included in brackets after the condition)  |   | COVID-19   | Underlying cause of death         |
| <b>Manner of death:</b>   |   |  |                                   |
| <input 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: Persons with COVID-19 may die due to other conditions such as myocardial infarction. 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 codes for COVID-19 and includes mortality classification (coding) instructions for statistical tabulation in the context of COVID-19. It includes a reference to the WHO case definitions for surveillance.

New ICD-10 codes for COVID-19:

- U07.1 COVID-19, virus identified  
<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

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

Details of the updates to ICD-10 are available online at:

<https://www.who.int/classifications/icd/icd10updates/en/>

### A- ICD-10 Cause of Death coding of COVID-19

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

Although both categories, U07.1 (COVID-19, virus identified) and U07.2 (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 unless it is stated as “probable” or “suspected”.

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 in 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.

With reference to section 4.2.3 of volume 2 of ICD-10, 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.

A manual plausibility check is recommended for certificates where COVID-19 is reported, in particular for certificates where COVID-19 was reported but not selected as the underlying cause of death for statistical tabulation.

**B- 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:

| <b>Frame A: Medical data: Part 1 and 2</b>  |   |  |                                     |                                   |         |
|---|---|--|-------------------------------------|-----------------------------------|---------|
| <b>1</b><br>Report disease or condition directly leading to death on line a<br><br>Report chain of events in due to order (if applicable)<br><br>State the underlying cause on the lowest used line |   |  | Cause of death                      | Time interval from onset to death |         |
|   |   | a  | Acute respiratory distress syndrome | J80                               | 2 days  |
|   |   | b  | Due to:<br>Pneumonia                | J18.9                             | 10 days |
|   |   | c  | Due to:<br>COVID-19 (test positive) | U07.1                             | 14 days |
|   |   | d  | Due to:                             |                                   |         |
| <b>2</b> 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> |                                     |                                   |         |
| <b>Manner of death:</b>   |   |  |                                     |                                   |         |
| <input 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) and acute respiratory distress syndrome (J80), mentioned on the lines above. [See ICD-10 2016 and later, Volume 2, Section 4.2.1].

## C- 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:

| <b>Frame A: Medical data: Part 1 and 2</b>  |  |  |                                     |  |         |
|---|--|--|-------------------------------------|--|---------|
| <b>1</b><br>Report disease or condition directly leading to death on line a<br><br>Report chain of events in due to order (if applicable)<br><br>State the underlying cause on the lowest used line |  |  | Cause of death                      | Time interval from onset to death                |         |
|   |  | a  | Acute respiratory distress syndrome | J80  | 2 days  |
|   |  | b  | Due to:<br>Pneumonia                | J18.9  | 10 days |
|   |  | c  | Due to:<br>Suspected COVID-19       | U07.2  | 12 days |
| Underlying cause of death   |  |  |                                     |  |         |
| <b>2</b> 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] I25.1, E11.9, J44.9 |                                     |  |         |
| <b>Manner of death:</b>   |  |  |                                     |  |         |
| <input 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) and acute respiratory distress syndrome (J80), mentioned on the lines above. [See ICD-10 2016 and later, Volume 2, Section 4.2.1].

| <b>Frame A: Medical data: Part 1 and 2</b>  |  |   |                                     |  |         |
|---|--|---|-------------------------------------|--|---------|
| <b>1</b><br>Report disease or condition directly leading to death on line a<br><br>Report chain of events in due to order (if applicable)<br><br>State the underlying cause on the lowest used line |  |   | Cause of death                      | Time interval from onset to death                |         |
|   |  | a   | Acute respiratory distress syndrome | J80  | 2 days  |
|   |  | b   | Due to:<br>Pneumonia                | J18.9  | 10 days |
|   |  | c   | Due to:<br>COVID-19                 | U07.1  | 10 days |
|   |  | d   | Due to:                             |  |         |
| Underlying cause of death   |  |   |                                     |  |         |
| <b>2</b> Other significant conditions contributing to death (time intervals can be included in brackets after the condition)  |  | Cerebral palsy [10 Years] G80.9             |                                     |  |         |
| <b>Manner of death:</b>   |  |   |                                     |  |         |
| <input 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 as underlying cause of death (the case probably has been tested positive). 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) and acute respiratory distress syndrome (J80), mentioned on the lines above. [See ICD-10 2016 and later, Volume 2, Section 4.2.1].

**D- OTHER EXAMPLES**

| <b>Frame A: Medical data: Part 1 and 2</b>  |   |  |                                   |
|---|---|--|-----------------------------------|
| <b>1</b><br>Report disease or condition directly leading to death on line a<br><br>Report chain of events in due to order (if applicable)<br><br>State the underlying cause on the lowest used line |   | Cause of death   | Time interval from onset to death |
|   | a   | Respiratory failure <i>Code both, O99.5 and J96.9</i>                          | 2 days                            |
|   | b   | Due to:<br>Pneumonia <i>Code both, O99.5 and J18.9</i>                         | 8 days                            |
|   | c   | Due to:<br>Pregnancy complicated by COVID-19 <i>Code both, O98.5 and U07.1</i> | 12 days                           |
| <b>2</b> Other significant conditions (intervals can be included in brackets after the condition)   |   |  |                                   |
| <b>Manner of death:</b>   |   |  |                                   |
| <input 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   |                                   |
| <b>For women, was the deceased pregnant?</b>  |   |  |                                   |
| <input type="checkbox"/> Yes  |   | <input type="checkbox"/> No  |                                   |
| <input 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 type="checkbox"/> Yes   | <input type="checkbox"/> No       |
|   |   | <input type="checkbox"/> Unknown   |                                   |

Underlying cause of death

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) 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 and J18.9) and acute respiratory distress syndrome (O99.5 and J80), mentioned on the lines above. [See ICD-10 2016 and later, Volume 2, Section 4.2.1]. 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)].

| <b>Frame A: Medical data: Part 1 and 2</b>  |   |   |   |  |
|---|---|---|---|--|
| <b>1</b><br>Report disease or condition directly leading to death on line a<br><br>Report chain of events in due to order (if applicable)<br><br>State the underlying cause on the lowest used line |   |   | Cause of death                          | Time interval from onset to death                |
|   | a |   | Acute respiratory distress syndrome J80 | 3 days   |
|   | b | Due to:   | COVID-19 U07.1                          | One week   |
|   | c | Due to:   | HIV disease B24                         | 5 years  |
|   | d | Due to:   |   |  |
| <b>2</b>  |   | Other significant conditions contributing to death (time intervals can be included in brackets after the condition) |   |  |
| <b>Manner of death:</b>   |   |   |   |  |
| <input 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: 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].

| <b>Frame A: Medical data: Part 1 and 2</b>  |   |   |                              |  |
|---|---|---|------------------------------|--|
| <b>1</b><br>Report disease or condition directly leading to death on line a<br><br>Report chain of events in due to order (if applicable)<br><br>State the underlying cause on the lowest used line |   |   | Cause of death               | Time interval from onset to death                |
|   | a |   | Hypovolaemic shock T79.4     | 1 day  |
|   | b | Due to:                                     | Aortic dissection S25.0      | 1 day  |
|   | c | Due to:                                     | Motor vehicle accident V89.2 | 2 days   |
|   | d | Due to:                                     |                              |  |
| <b>2</b>  |   | COVID-19 U07.1                              |                              |  |
| <b>Manner of death:</b>   |   |   |                              |  |
| <input 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 motor vehicle accident (V89.2) 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), can cause all the conditions, traumatic aortic dissection (S25.0) and traumatic hypovolemic shock (T79.4), mentioned on the lines above. [See ICD-10 2016 and later, Volume 2, Section 4.2.1].

| <b>Frame A: Medical data: Part 1 and 2</b>  |   |  |                                   |
|---|---|--|-----------------------------------|
| <b>1</b><br>Report disease or condition directly leading to death on line a<br><br>Report chain of events in due to order (if applicable)<br><br>State the underlying cause on the lowest used line |   | Cause of death                                   | Time interval from onset to death |
|   | a   | Heart failure I50.9                              | 1 day                             |
|   | b   | Due to:<br>Myocardial infarction I21.9           | 5 days                            |
|   | c   | Due to:  |                                   |
|   | d   | Due to:  |                                   |
| <b>2</b> Other significant conditions contributing to death (time intervals can be included in brackets after the condition)  |   | COVID-19   | U07.1                             |
| <b>Manner of death:</b>   |   |  |                                   |
| <input 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 acute myocardial infarction (I21.9) 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, myocardial infarction (I21.9), can cause the condition, heart failure (I50.9), mentioned on the line above. [See ICD-10 2016 and later, Volume 2, Section 4.2.1].

**E- Additional WHO cause of death certification links**

- How to fill in a death certificate: Interactive Self Learning Tool (WHO)  
<http://apps.who.int/classifications/apps/icd/icd10training/ICD-10DeathCertificate/html/index.html>
- Cause of Death on the Death Certificate: Quick Reference Guide (Section 7.1.2)  
[https://icd.who.int/browse10/Content/statichtml/ICD10Volume2\\_en\\_2016.pdf](https://icd.who.int/browse10/Content/statichtml/ICD10Volume2_en_2016.pdf)
- International form of medical certificate of cause of death (Section 7.1.1)  
[https://icd.who.int/browse10/Content/statichtml/ICD10Volume2\\_en\\_2016.pdf](https://icd.who.int/browse10/Content/statichtml/ICD10Volume2_en_2016.pdf)

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