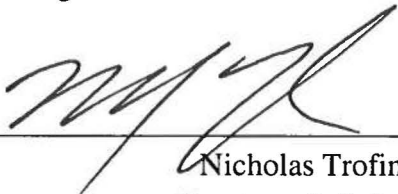|	
COURT FILE NUMBER:	2001-14300
COURT:	COURT OF QUEEN'S BENCH OF ALBERTA
JUDICIAL CENTRE:	CALGARY
APPLICANTS:	REBECCA MARIE INGRAM, HEIGHT BAPTIST CHURCH, NORTHSIDE BAPTIST CHURCH, ERIN BLACKLAWS and TORRY TANNER
RESPONDENTS:	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF ALBERTA and THE CHIEF MEDICAL OFFICER OF HEALTH

CERTIFICATE FOR FILING OF AFFIDAVIT

ADDRESS FOR SERVICE AND CONTACT INFORMATION OF COMMISSIONER OF DOCUMENT:	**Nicholas Trofimuk** Alberta Justice, Constitutional and Aboriginal Law 10th Floor, 102A Avenue Tower 10025 – 102A Avenue Edmonton, AB T5J 2Z2 Phone: 780-422-2917 Fax: 780-643-0852

CERTIFICATE OF NICHOLAS TROFIMUK
Dated 12 July 2021

1. Further to the Affidavit of Patricia Wood, I confirm that all necessary requirements for the electronic execution of the Affidavit as set out in the Notice to Profession & Public 2020-02, dated 25 March 2020, were met and that owing to public health concerns, it was not possible for the Affiant and I to be physically present together.

_____
Nicholas Trofimuk
Barrister & Solicitor

COURT FILE NUMBER	2001-14300	Clerk's Stamp
COURT	COURT OF QUEEN'S BENCH OF ALBERTA	
JUDICIAL CENTRE	CALGARY	
APPLICANT	REBECCA MARIE INGRAM, HEIGHTS BAPTIST CHURCH, NORTHSIDE BAPTIST CHURCH, ERIN BLACKLAWS and TORRY TANNER	
RESPONDENTS	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF ALBERTA and THE CHIEF MEDICAL OFFICER OF HEALTH	
DOCUMENT	**AFFIDAVIT OF PATRICIA WOOD**	
ADDRESS FOR SERVICE AND CONTACT INFORMATION OF PARTY FILING THIS DOCUMENT	Alberta Justice, Constitutional and Aboriginal Law 10th Floor, 102A Tower 10025 -102A Avenue Edmonton, Alberta T5J 2Z2	
	Attn: Nicholas Parker and Nicholas Trofimuk Tel: (780) 643-0853 Fax: (780) 643-0852	

AFFIDAVIT OF PATRICIA WOOD
AFFIRMED ON ۱۲ JULY 2021

I, Patricia Wood, of the City of Ottawa, in the Province of Ontario, AFFIRM AND

DECLARE THAT:

Introduction

1. My name is Patricia Wood. I am the senior mortality classification specialist at Statistics Canada. I have personal knowledge of the facts and matters hereinafter deposed to by me, except where same are stated to be based upon information and belief, and those I believe to be true.

2. I have read the portion of Dr Bhattacharya's expert report which states:

According to Statistics Canada, "When a pre-existing condition is suspected of putting a person at higher risk of a severe course of COVID-19 resulting in death, the death is counted as a death due to COVID-19 rather than a death due to the pre-existing condition. …"

(…)

Pre-existing conditions can also put people at a higher risk of severe courses of influenza resulting in death, but to my knowledge, such deaths are not counted as influenza deaths. Such a discrepancy in counting COVID-19 deaths and influenza deaths makes comparisons between the two respiratory illnesses difficult and results in artificially elevated death statistics due to COVID-19.[1]

3.   The assertion that Statistics Canada counts COVID-19 deaths and influenza deaths differently, resulting in 'artificially elevated' death statistics due to COVID-19, is not accurate: COVID-19 and influenza deaths are coded using the same World Health Organization ("WHO") international coding rules and guidelines for selecting underlying cause of death for statistical tabulation.

4.   At the outset of this pandemic, the WHO recommended that countries code COVID-19 related deaths using the same coding rules applied for influenza deaths. Attached as **Exhibit A** are the WHO's 'International guidelines for certification and classification (coding) of COVID-19 as a cause of death'[2], which state at page 8:

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.

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[1] Expert Report of Dr Jay Bhattacharya, pages 5-6.
[2] Available at https://www.who.int/classifications/icd/Guidelines_Cause_of_Death_COVID-19.pdf.
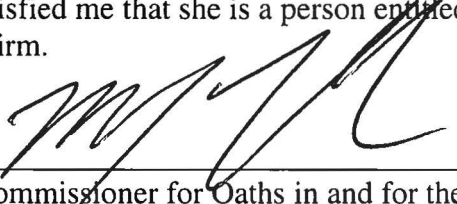
5.   Statistics Canada uses the international coding rules noted above to code causes of death based on the information provided in the Medical Certificate of Death ("MCOD") for the deceased person.

6.   If the MCOD indicates that the sequence of events leading to death was initiated by COVID-19, with or without mention of pre-existing conditions, then COVID-19 is selected as the underlying cause of death. In the same way, if the MCOD indicates that the sequence of events leading to death was initiated by influenza, with or without mention of pre-existing conditions, then influenza is selected as the underlying cause of death.

7.   If, on the other hand, the MCOD indicates that the sequence of events leading to death was initiated by another disease (e.g. cancer) or circumstance (e.g. trauma), with or without a coinciding COVID-19 or influenza infection, then the other disease or circumstance is selected as the underlying cause of death for statistical tabulation.

8.   I was not physically present before the Commissioner of Oaths, but was linked with the Commissioner of Oaths using video technology, and the process outlined in the Notice to the Profession 2020-02 was followed.

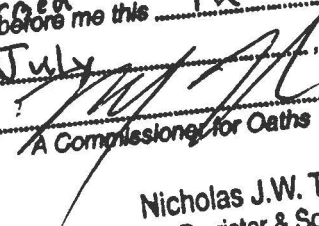|	
AFFIRMED BEFORE ME in the City of Ottawa, Province of Alberta, this 12th day of July, 2021. I certify that Patricia Wood satisfied me that she is a person entitled to affirm.	))))))
	) PATRICIA WOOD
(Commissioner for Oaths in and for the Province of Alberta)	))

Nicholas J.W. Trofimuk
Barrister & Solicitor

World Health
Organization

This is the Exhibit marked " A " referred to in the Affidavit of

Patricia Wood

affirmed / Sworn before me this 12th .... day

of July ...., 20 21

A Commissioner for Oaths

Nicholas J.W. Trofimuk
Barrister & Solicitor

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

Based on ICD

International Statistical Classification of Diseases

(16 April 2020)

WHO/HQ/DDI/DNA/CAT

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Table of Contents

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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:

Frame A: Medical data: Part 1 and 2				
1 Report disease or condition directly leading to death on line a			Cause of death	Time interval from onset to death
Report chain of events in due to order (if applicable)		a	Acute respiratory distress syndrome	2 days
		b	Due to: Pneumonia	10 days
State the underlying cause on the lowest used line		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)			Underlying cause of death	

Manner of death:		
▬ Disease	▬ Assault	▬ Could not be determined
▬ Accident	▬ Legal intervention	▬ Pending investigation
▬ Intentional self harm	▬ War	▬ 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.

NT

COVID-19 - GUIDELINES FOR DEATH CERTIFICATION AND CODING

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:

Frame A: Medical data: Part 1 and 2				
1 Report disease or condition directly leading to death on line a			Cause of death	Time interval from onset to death
		a	Acute respiratory distress syndrome	2 days
Report chain of events in due to order (if applicable)		b	Due to Pneumonia	10 days
State the underlying cause on the lowest used line		c	Due to Suspected COVID-19	12 days
Underlying cause of death				
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:		
▬ Disease	▬ Assault	▬ Could not be determined
▬ Accident	▬ Legal intervention	▬ Pending investigation
▬ Intentional self harm	▬ War	▬ 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.**

Frame A: Medical data: Part 1 and 2				
1 Report disease or condition directly leading to death on line a			Cause of death	Time interval from onset to death
		a	Acute respiratory distress syndrome	2 days
Report chain of events in due to order (if applicable)		b	Due to Pneumonia	10 days
State the underlying cause on the lowest used line		c	Due to COVID-19	10 days
Underlying cause of death		d	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:		
▬ Disease	▬ Assault	▬ Could not be determined
▬ Accident	▬ Legal intervention	▬ Pending investigation
▬ Intentional self harm	▬ War	▬ 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.**

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E- OTHER EXAMPLES

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	12 days
			Due to	

Underlying cause of death (pointing to line c)

2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)		

Manner of death:		
— Disease	— Assault	— Could not be determined
— Accident	— Legal intervention	— Pending investigation
— Intentional self harm	— War	— Unknown

For women, was the deceased pregnant?	— Yes — No — Unknown		
— At time of death	— Within 42 days before the death		
— Between 43 days up to 1 year before death	— Unknown		
Did the pregnancy contribute to the death?	— Yes	— No	— 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.

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	One week
		c	Due to	
		d	Due to	

Underlying cause of death (pointing to line b)

2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)	**HIV disease [5 years]**

Manner of death:		
— Disease	— Assault	— Could not be determined
— Accident	— Legal intervention	— Pending investigation
— Intentional self harm	— War	— 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**.

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COVID-19 - GUIDELINES FOR DEATH CERTIFICATION AND CODING

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.

Frame A: Medical data: Part 1 and 2				
1 Report disease or condition directly leading to death on line a			Cause of death	Time interval from onset to death
		a	Hypovolaemic shock	1 day
Report chain of events in due to order (if applicable)		b	Due to Aortic dissection	1 day
State the underlying cause on the lowest used line		c	Due to Motor vehicle accident	2 days
		d	Due to	
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)			COVID-19	Underlying cause of death

Manner of death:

▭ Disease	▭ Assault	▭ Could not be determined
▭ Accident	▭ Legal intervention	▭ Pending investigation
▭ Intentional self harm	▭ War	▭ Unknown

NOT COVID-19 DEATH

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.

Frame A: Medical data: Part 1 and 2				
1 Report disease or condition directly leading to death on line a			Cause of death	Time interval from onset to death
		a	Heart failure	1 day
Report chain of events in due to order (if applicable)		b	Due to Myocardial infarction	5 days
State the underlying cause on the lowest used line		c	Due to	
		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:

▭ Disease	▭ Assault	▭ Could not be determined
▭ Accident	▭ Legal intervention	▭ Pending investigation
▭ Intentional self harm	▭ War	▭ Unknown

NOT COVID-19 DEATH

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.

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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
  - o 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

COVID-19 - GUIDELINES FOR DEATH CERTIFICATION AND CODING

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:

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	J80	2 days
		b	Pneumonia	J18.9	10 days
		c	COVID-19 (test positive)	U07.1	14 days
		d			
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)			Underlying cause of death		

Manner of death:		
▬ Disease	▬ Assault	▬ Could not be determined
▬ Accident	▬ Legal intervention	▬ Pending investigation
▬ Intentional self harm	▬ War	▬ 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].

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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:

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 J80	2 days
		b	Due to Pneumonia J18.9	10 days
		c	Due to Suspected COVID-19 U07.2	12 days
Underlying cause of death				
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] I25.1, E11.9, J44.9	

Manner of death:

▬ Disease	▬ Assault	▬ Could not be determined
▬ Accident	▬ Legal intervention	▬ Pending investigation
▬ Intentional self harm	▬ War	▬ 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].

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 J80	2 days
		b	Due to Pneumonia J18.9	10 days
		c	Due to COVID-19 U07.1	10 days
Underlying cause of death		d	Due to	
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)			Cerebral palsy [10 Years] G80.9	

Manner of death:

▬ Disease	▬ Assault	▬ Could not be determined
▬ Accident	▬ Legal intervention	▬ Pending investigation
▬ Intentional self harm	▬ War	▬ 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

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COVID-19 - GUIDELINES FOR DEATH CERTIFICATION AND CODING

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

Frame A: Medical data: Part 1 and 2				
1 Report disease or condition directly leading to death on line a			Cause of death	Time interval from onset to death
Report chain of events in due to order (if applicable)		a	Respiratory failure *Code both. O99.5 and J96.9*	2 days
		b	Pneumonia *Code both. O99.5 and J18.9*	8 days
State the underlying cause on the lowest used line		c	Pregnancy complicated by COVID-19 *Code both. O98.5 and U07.1*	12 days
2 Other significant conditio~~ns~~ intervals can be included in brackets after the condition)	Underlying cause of death			

Manner of death:					
▬ Disease		▭ Assault		▭ Could not be determined	
▭ Accident		▭ Legal intervention		▭ Pending investigation	
▭ Intentional self harm		▭ War		▭ Unknown	
For women, was the deceased pregnant?			▬ Yes	▭ No	▭ Unknown
▬ At time of death			▭ Within 42 days before the death		
▭ Between 43 days up to 1 year before death			▭ Unknown		
Did the pregnancy contribute to the death?			▬ Yes	▭ No	▭ 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) 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)].

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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) Underlying cause of death			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		

2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)	

Manner of death:

▬ Disease	▬ Assault	▬ Could not be determined
▬ Accident	▬ Legal intervention	▬ Pending investigation
▬ Intentional self harm	▬ War	▬ 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].

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 Underlying cause of death			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		

2 ...to death (time intervals can be included in brackets after the condition)	COVID-19	U07.1

NOT COVID-19 DEATH ⚠

Manner of death:

▬ Disease	▬ Assault	▬ Could not be determined
▬ Accident	▬ Legal intervention	▬ Pending investigation
▬ Intentional self harm	▬ War	▬ 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].

NT

COVID-19 - GUIDELINES FOR DEATH CERTIFICATION AND CODING

Frame A: Medical data: Part 1 and 2					
1 Report disease or condition directly leading to death on line a			Cause of death		Time interval from onset to death
Report chain of events in due to order (if applicable)		a	Heart failure	I50.9	1 day
		b	Due to Myocardial infarction	I21.9	5 days
State the underlying cause on the lowest used line		c	Due to		
		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		U07.1
Manner of death:					
— Disease	— Assault			— Could not be determined	
— Accident	— Legal intervention			— Pending investigation	
— Intentional self harm	— War			— Unknown	

NOT COVID-19 DEATH

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-10
  DeathCertificate/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

- International form of medical certificate of cause of death (Section 7.1.1)

  https://icd.who.int/browse10/Content/statichtml/ICD10Volume2_en_2016.pdf

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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

NT

COURT FILE NUMBER	2001-14300	Clerk's Stamp
COURT	COURT OF QUEEN'S BENCH OF ALBERTA	
JUDICIAL CENTRE	CALGARY	
APPLICANT	REBECCA MARIE INGRAM, HEIGHTS BAPTIST CHURCH, NORTHSIDE BAPTIST CHURCH, ERIN BLACKLAWS and TORRY TANNER	
RESPONDENTS	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF ALBERTA and THE CHIEF MEDICAL OFFICER OF HEALTH	
DOCUMENT	**AFFIDAVIT OF PATRICIA WOOD**	
ADDRESS FOR SERVICE AND CONTACT INFORMATION OF PARTY FILING THIS DOCUMENT	Alberta Justice, Constitutional and Aboriginal Law 10th Floor, 102A Tower 10025 -102A Avenue Edmonton, Alberta T5J 2Z2	

Attn: Nicholas Parker and Nicholas Trofimuk
Tel: (780) 643-0853
Fax: (780) 643-0852

AFFIDAVIT OF PATRICIA WOOD
AFFIRMED ON 12 JULY 2021

I, Patricia Wood, of the City of Ottawa, in the Province of Ontario, AFFIRM AND

DECLARE THAT:

Introduction

1. My name is Patricia Wood. I am the senior mortality classification specialist at Statistics Canada. I have personal knowledge of the facts and matters hereinafter deposed to by me, except where same are stated to be based upon information and belief, and those I believe to be true.

2. I have read the portion of Dr Bhattacharya's expert report which states:

According to Statistics Canada, "When a pre-existing condition is suspected of putting a person at higher risk of a severe course of COVID-19 resulting in death, the death is counted as a death due to COVID-19 rather than a death due to the pre-existing condition. ..."

(...)

Pre-existing conditions can also put people at a higher risk of severe courses of influenza resulting in death, but to my knowledge, such deaths are not counted as influenza deaths. Such a discrepancy in counting COVID-19 deaths and influenza deaths makes comparisons between the two respiratory illnesses difficult and results in artificially elevated death statistics due to COVID-19.[1]

3.   The assertion that Statistics Canada counts COVID-19 deaths and influenza deaths differently, resulting in 'artificially elevated' death statistics due to COVID-19, is not accurate: COVID-19 and influenza deaths are coded using the same World Health Organization ("WHO") international coding rules and guidelines for selecting underlying cause of death for statistical tabulation.

4.   At the outset of this pandemic, the WHO recommended that countries code COVID-19 related deaths using the same coding rules applied for influenza deaths. Attached as **Exhibit A** are the WHO's 'International guidelines for certification and classification (coding) of COVID-19 as a cause of death'[2], which state at page 8:

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.

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[1] Expert Report of Dr Jay Bhattacharya, pages 5-6.
[2] Available at https://www.who.int/classifications/icd/Guidelines_Cause_of_Death_COVID-19.pdf.

2

5.   Statistics Canada uses the international coding rules noted above to code causes of death based on the information provided in the Medical Certificate of Death ("MCOD") for the deceased person.

6.   If the MCOD indicates that the sequence of events leading to death was initiated by COVID-19, with or without mention of pre-existing conditions, then COVID-19 is selected as the underlying cause of death. In the same way, if the MCOD indicates that the sequence of events leading to death was initiated by influenza, with or without mention of pre-existing conditions, then influenza is selected as the underlying cause of death.

7.   If, on the other hand, the MCOD indicates that the sequence of events leading to death was initiated by another disease (e.g. cancer) or circumstance (e.g. trauma), with or without a coinciding COVID-19 or influenza infection, then the other disease or circumstance is selected as the underlying cause of death for statistical tabulation.

8.   I was not physically present before the Commissioner of Oaths, but was linked with the Commissioner of Oaths using video technology, and the process outlined in the Notice to the Profession 2020-02 was followed.

AFFIRMED BEFORE ME in the City of Ottawa, Province of Alberta, this 12ᵗʰ day of July, 2021. I certify that Patricia Wood satisfied me that she is a person entitled to affirm.	)))))))))

AFFIRMED BEFORE ME in the City of
Ottawa, Province of Alberta, this 12th day of
July, 2021. I certify that Patricia Wood
satisfied me that she is a person entitled to
affirm.

_____
PATRICIA WOOD

_____
(Commissioner for Oaths in and for the
Province of Alberta)

3

World Health Organization

This is the Exhibit marked " A " referred
to in the Affidavit of
Patricia Wood
Sworn before me this 12 th day
of July , 20 21
A Commissioner for Oaths

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

Based on ICD

International Statistical Classification of Diseases

(16 April 2020)

WHO/HQ/DDI/DNA/CAT

Table of Contents

COVID-19 - GUIDELINES FOR DEATH CERTIFICATION AND CODING

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:

Frame A: **Medical data: Part 1 and 2**				
1 Report disease or condition directly leading to death on line a			Cause of death	Time interval from onset to death
		a	Acute respiratory distress syndrome	2 days
Report chain of events in due to order (if applicable)		b	Pneumonia	10 days
State the underlying cause on the lowest used line		c	COVID-19 (test positive)	14 days
		d		
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)		Underlying cause of death		

Manner of death:		
▬ Disease	▬ Assault	▬ Could not be determined
▬ Accident	▬ Legal intervention	▬ Pending investigation
▬ Intentional self harm	▬ War	▬ 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.

COVID-19 - GUIDELINES FOR DEATH CERTIFICATION AND CODING

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:

Frame A: Medical data: Part 1 and 2

1 Report disease or condition directly leading to death on line a			Cause of death	Time interval from onset to death
Report chain of events in due to order (if applicable)		a	Acute respiratory distress syndrome	2 days
		b	Due to Pneumonia	10 days
State the underlying cause on the lowest used line		c	Due to Suspected COVID-19	12 days
Underlying cause of death				
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:

Disease	Assault	Could not be determined
Accident	Legal intervention	Pending investigation
Intentional self harm	War	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.**

Frame A: Medical data: Part 1 and 2

1 Report disease or condition directly leading to death on line a			Cause of death	Time interval from onset to death
Report chain of events in due to order (if applicable)		a	Acute respiratory distress syndrome	2 days
		b	Due to Pneumonia	10 days
State the underlying cause on the lowest used line		c	Due to COVID-19	10 days
Underlying cause of death			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:

Disease	Assault	Could not be determined
Accident	Legal intervention	Pending investigation
Intentional self harm	War	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.**

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E- OTHER EXAMPLES

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	Pneumonia	8 days
		c	Pregnancy complicated by COVID-19	12 days

Underlying cause of death

2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)	

Manner of death:

Disease	Assault	Could not be determined
Accident	Legal intervention	Pending investigation
Intentional self harm	War	Unknown

For women, was the deceased pregnant?	Yes	No	Unknown
At time of death	Within 42 days before the death		
Between 43 days up to 1 year before death	Unknown		
Did the pregnancy contribute to the death?	Yes	No	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.

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	COVID-19	One week
		c		
		d		

Underlying cause of death

2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)	HIV disease [5 years]

Manner of death:

Disease	Assault	Could not be determined
Accident	Legal intervention	Pending investigation
Intentional self harm	War	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**.

COVID-19 - GUIDELINES FOR DEATH CERTIFICATION AND CODING

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.

Frame A: Medical data: Part 1 and 2

1 Report disease or condition directly leading to death on line a			Cause of death	Time interval from onset to death
		a	Hypovolaemic shock	1 day
Report chain of events in due to order (if applicable)		b	Due to Aortic dissection	1 day
State the underlying cause on the lowest used line		c	Due to Motor vehicle accident	2 days
		d	Due to	
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)			COVID-19	Underlying cause of death

Manner of death:

Disease	Assault	Could not be determined
Accident	Legal intervention	Pending investigation
Intentional self harm	War	Unknown

NOT COVID-19 DEATH

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.

Frame A: Medical data: Part 1 and 2

1 Report disease or condition directly leading to death on line a			Cause of death	Time interval from onset to death
		a	Heart failure	1 day
Report chain of events in due to order (if applicable)		b	Due to Myocardial infarction	5 days
State the underlying cause on the lowest used line		c	Due to	
		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:

Disease	Assault	Could not be determined
Accident	Legal intervention	Pending investigation
Intentional self harm	War	Unknown

NOT COVID-19 DEATH

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
    o 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

COVID-19 - GUIDELINES FOR DEATH CERTIFICATION AND CODING

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:

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	J80	2 days
		b	Due to Pneumonia	J18 9	10 days
		c	Due to COVID-19 (test positive)	U07.1	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:					
▬ Disease	▬ Assault			▬ Could not be determined	
▬ Accident	▬ Legal intervention			▬ Pending investigation	
▬ Intentional self harm	▬ War			▬ 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:

Frame A: Medical data: Part 1 and 2				
1 Report disease or condition directly leading to death on line a			Cause of death	Time interval from onset to death
		a	Acute respiratory distress syndrome J80	2 days
Report chain of events in due to order (if applicable)		b	Pneumonia J18 9	10 days
State the underlying cause on the lowest used line		c	Suspected COVID-19 U07.2	12 days
Underlying cause of death				
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]	I25 1, E11 9, J44 9

Manner of death:		
▬ Disease	▬ Assault	▬ Could not be determined
▬ Accident	▬ Legal intervention	▬ Pending investigation
▬ Intentional self harm	▬ War	▬ 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].

Frame A: Medical data: Part 1 and 2				
1 Report disease or condition directly leading to death on line a			Cause of death	Time interval from onset to death
		a	Acute respiratory distress syndrome J80	2 days
Report chain of events in due to order (if applicable)		b	Pneumonia J18 9	10 days
State the underlying cause on the lowest used line		c	COVID-19 U07 1	10 days
Underlying cause of death		d		
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)			Cerebral palsy [10 Years]	G80 9

Manner of death:		
▬ Disease	▬ Assault	▬ Could not be determined
▬ Accident	▬ Legal intervention	▬ Pending investigation
▬ Intentional self harm	▬ War	▬ 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

COVID-19 - GUIDELINES FOR DEATH CERTIFICATION AND CODING

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

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 *Code both, O99.5 and J96.9*		2 days
		b	Due to Pneumonia *Code both, O99.5 and J18.9*		8 days
		c	Due to Pregnancy complicated by COVID-19 *Code both, O98.5 and U07.1*		12 days
		Underlying cause of death			
2 Other significant conditi intervals can be included in brackets after the condition)					
Manner of death:					
▬ Disease	▭ Assault			▭ Could not be determined	
▬ Accident	▬ Legal intervention			▭ Pending investigation	
▭ Intentional self harm	▭ War			▭ Unknown	
For women, was the deceased pregnant?			▬ Yes	▬ No ▭ Unknown	
▬ At time of death			▭ Within 42 days before the death		
▬ Between 43 days up to 1 year before death			▭ Unknown		
Did the pregnancy contribute to the death?			▭ Yes	▬ No	▭ 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) 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)].

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) St lo **Underlying cause of death**			Cause of death		Time interval from onset to death
		a	Acute respiratory distress syndrome	J80	3 days
		b	COVID-19	U07.1	One week
		c	HIV disease	B24	5 years
		d			
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)					

Manner of death:		
— Disease	— Assault	— Could not be determined
— Accident	— Legal intervention	— Pending investigation
— Intentional self harm	— War	— 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].

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 **Underlying cause of death**			Cause of death		Time interval from onset to death
		a	Hypovolaemic shock	T79.4	1 day
		b	Aortic dissection	S25 0	1 day
		c	Motor vehicle accident	V89.2	2 days
		d			
2 ⌐ to death (time intervals can be included in brackets after the condition)			COVID-19		U07.1

Manner of death:		
— Disease	— Assault	— Could not be determined
— Accident	— Legal intervention	— Pending investigation
— Intentional self harm	— War	— 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].

COVID-19 - GUIDELINES FOR DEATH CERTIFICATION AND CODING

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	I50.9	1 day
		b	Due to Myocardial infarction	I21.9	5 days
		c	Due to		
		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		U07.1
Manner of death:					
▬ Disease			▬ Assault	▬ Could not be determine	
▬ Accident			▬ Legal intervention	▬ Pending investigation	
▬ Intentional self harm			▬ War	▬ Unknown	

NOT COVID-19 DEATH

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-10 DeathCertificate/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

- International form of medical certificate of cause of death (Section 7.1.1)

  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