The WHO application of ICD-10 to deaths during the perinatal period: ICD-PM

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Abbreviations and acronyms

ABO   ABO (ABH) blood group system

HRP   UNDP/UNFPA/UNICEF/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction

ICD   International Statistical Classification of Diseases and Related Health Problems

ICD-10   ICD, 10th revision

ICD-MM   *The WHO application of ICD-10 to deaths during pregnancy, childbirth and the puerperium: ICD-maternal mortality*

ICD-PM   *The WHO application of ICD-10 to deaths during the perinatal period: ICD-perinatal mortality*

NOS   not otherwise specified

TOP   termination of pregnancy

UNDP   United Nations Development Programme

UNFPA   United Nations Population Fund

UNICEF   United Nations Children's Fund

USAID   United States Agency for International Development

WHO   World Health Organization

Executive summary

With more than 5 million perinatal deaths occurring globally each year, ending preventable stillbirths and neonatal deaths will continue to form a significant part of the international public health agenda beyond 2015. The Every Newborn Action Plan clearly highlights that we will get a triple return on our investment if we focus on high coverage of care during birth and in the immediate neonatal period, resulting in saving the lives of both mothers and babies, alongside the prevention of stillbirth. In the regions with the highest mortality burden, perinatal deaths are poorly recorded and are therefore most likely to be unaccounted for. The first step in targeting programmes that address perinatal mortality is the accurate capture and classification of the causes of those deaths across all settings, using a globally applicable and comparable system.

The WHO application of ICD-10 to deaths during the perinatal period: ICD-perinatal mortality (ICD-PM) is modelled on *The WHO application of ICD-10 to deaths during pregnancy, childbirth and the puerperium: ICD-maternal mortality (ICD-MM)*. ICD-PM, in the same vein as ICD-MM, is based on the 10th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) and its coding rules. It is intended to facilitate the consistent collection, analysis and interpretation of information on perinatal deaths. Improved reporting will also facilitate the coding of conditions.

This document presents:

- a brief summary of the development of this guide;
- a grouping system for identification of perinatal deaths using existing ICD-10 codes, which countries can immediately implement.

ICD-PM is intended to be used by those who assist health-care providers and those charged with death certification, to guide them in correctly documenting the pertinent information by clarifying which conditions should be considered underlying causes of death, thus improving accurate death attribution. As a result, it will improve the information available to coders, programme managers, statistical offices and academics/researchers.

This document can help to clarify the application of ICD-10 and to standardize the identification of perinatal deaths. Its principles should be applicable for categorizing deaths via data collected through civil registration, surveys, hospital information systems, verbal autopsies, confidential enquires and other special studies.

There are three distinct features of ICD-PM:

1. It captures the time of a perinatal death in relation to its occurrence in the antepartum (before the onset of labour), intrapartum (during labour but before delivery) or neonatal period (up to day 7 of postnatal life).

Note: While ICD-PM is designed to be used for all antepartum, intrapartum and early neonatal deaths, it can also be used for late neonatal deaths, which – although falling outside the perinatal period according to ICD – may be a consequence of events in the perinatal period.

2. It applies a multilayered approach to the classification of cause of death, such that it reflects varying levels of available information depending on the setting. By using ICD-PM, mutually exclusive clinical conditions that lead to the identification of a single cause of perinatal death are determined and linked with an ICD code.

3. It links the contributing maternal condition, if any, with perinatal death, reflecting that the condition of the mother at the time of the death is closely linked with perinatal death, given that a maternal condition is frequently found in the context of a perinatal death.

By identifying the timing of death as part of a multilayered approach to classification, ICD-PM applies ICD-10 in such a way that it reflects locally available information. By requiring that a maternal condition be documented for every perinatal death (even if it is "no maternal condition"), the system reflects the inherently linked health outcomes of these two groups of patients.

Capturing the chain of events that led to the perinatal death, from both the maternal and the perinatal side, informs the design and development of preventative and therapeutic measures. Doing this imparts obvious benefit to both mother and baby when advocating for programmes aimed at one unifying pathology (e.g. hypertension) or clinical scenario (e.g. intrapartum care). ICD-PM draws on this evidence and logic to make capturing maternal condition an integral part of the classification of perinatal death. This also aligns with the recommendation in the Every Newborn Action Plan that encourages capturing maternal complications as part of perinatal death registration.

This document, the annexes and tables are intended to:

- facilitate consistent reporting of the clinical conditions in perinatal death
- identify codes for perinatal death according to the timing of death
- identify the conditions and codes for the maternal condition contributing to the perinatal outcome.

Ultimately, standardization of the attribution of cause of death will improve:

- interpretation of data on perinatal mortality
- interpretation of data on the maternal condition in the context of perinatal mortality
- analysis of the causes of perinatal mortality
- allocation of resources to both mother and baby programmes intended to address mortality.

Applying ICD-PM will decrease errors in coding and improve attribution of cause of perinatal death. This will enhance the usability and comparability of perinatal mortality statistics generated from ICD data. It is recommended that countries adopt ICD-PM, and that statistical offices and academics collect data according to it.

> This guide should always be used in conjunction with the three volumes of ICD-10. The suggested code should be verified, and possible additional information should be coded using the full ICD-10, volumes 1 and 3; rules for selection of underlying cause of death and certification of death apply in the way they are described in ICD-10 volume 2.[1]

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1   All online versions of ICD-10 are available at: http://www.who.int/classifications/icd/icdonlineversions/en/; the current 2016 version is available at: http://apps.who.int/classifications/icd10/browse/2016/en

1. Introduction

With more than 5 million perinatal deaths occurring globally each year *(1, 2)*, ending preventable stillbirths and neonatal deaths will continue to form a significant part of the international public health agenda beyond 2015 *(3)*. In the regions with the highest mortality burden, perinatal deaths are poorly recorded and are therefore most likely to be unaccounted for *(3)*. The first step in targeting programmes that address perinatal mortality is the accurate capture and classification of the causes of those deaths across all settings, using a globally applicable and comparable system. Perinatal outcomes are also intricately linked to maternal condition, and targeted programmes for reducing perinatal mortality may also affect maternal mortality, as the underlying causes are so entwined. Ideally programmes aimed at improving the health outcomes of these two groups should be integrated. Applying a classification system for perinatal death in such a way that the perinatal deaths are linked to maternal conditions and maternal death enables this process. *The WHO application of ICD-10 to deaths during the perinatal period: ICD-perinatal mortality (ICD-PM)* is outlined in this document.

ICD-PM is based on the 10th revision of the *International Statistical Classification of Diseases and Related Health Problems* (ICD-10) *(4)* and follows all rules for mortality coding as described in *ICD-10 volume 2: instruction manual (5)*. ICD-PM is a programmatically driven system with several advantageous features in the way the existing ICD-10 codes are applied. The relevance of existing codes is clarified, and there is meaningful grouping of ICD categories to enable both consistent application of ICD coding and rules, and analysis of that application to drive programmes aimed at reducing mortality.

In essence, the features of ICD-PM are:

1. It identifies the time of death as antepartum (before the onset of labour), intrapartum (during labour but before delivery) or neonatal (up to day 7 of postnatal life).

    Note: While ICD-PM is designed to be used for all antepartum, intrapartum and early neonatal deaths, it can also be used for late neonatal deaths, which – although falling outside the perinatal period according to ICD – may be a consequence of events in the perinatal period.

2. It is multilayered such that the depth of classification can reflect the locally available intensity of investigation (this reflects the current ICD-10 system where cause of death is assigned in a stepwise process, following the progression of underlying clinical conditions leading to death).

3. It links the contributing maternal condition, if any, with perinatal death.

Ultimately all of these features allow easy identification of where a programme intervention should be targeted to improve both maternal and perinatal outcomes.

The timing of a perinatal death may be the only piece of information captured when classifying a death in poorly resourced settings, where the burden of disease is the greatest *(6)*. In such settings, the data on timing can be used to make international comparisons as well as programmatic decisions to focus local efforts and interventions. Moreover, bringing stillbirth and neonatal death together in a standardized system of definitions and coding rules not only allows comparability but, given the widespread use of ICD (117 countries use ICD for mortality reporting), it has great potential to bring to the foreground those deaths that have previously gone unnoticed.

ICD-PM is designed to be used for all antepartum, intrapartum and early neonatal deaths. The early neonatal deaths fall within the perinatal period as defined by ICD-10, and therefore should always be classified using ICD-PM. Late neonatal deaths, while falling outside the period defined as perinatal by ICD, may occur as a consequence of events in the perinatal period; therefore, the benefit of using ICD-PM for these cases is the same as for the early neonatal deaths. Using the principles of ICD-PM in these late neonatal deaths and linking the condition of the baby and the mother is valuable from both a classification and a programmatic point of view. A good example of this is obstructed labour in a term pregnancy that results in hypoxic ischaemic encephalopathy, where the neonatal death occurs on day 8. With regard to capturing perinatal cause of death and maternal condition, there is little distinction between this case and a case with the same clinical scenario but where the neonatal death occurs on day 6. There is, however, a group of late neonatal deaths that are remote from the perinatal events and thus not necessarily adequately captured by using the ICD-PM-linked ICD codes that apply to perinatal deaths. For example, a neonate that has an uncomplicated antepartum, intrapartum and early neonatal period but returns to hospital on day 21 and subsequently dies following a diarrhoeal illness. As such, the members of the WHO Working Group on Perinatal Death Classification (who developed ICD-PM) decided that ICD-PM should *always* be used for early neonatal deaths, and can be used for late neonatal deaths.

It is critical that a standardized classification system is globally relevant. Therefore, a great deal of consideration has gone into ensuring that ICD-PM is applicable in low-resource settings, where the burden of perinatal mortality is greatest, and also in high-resource settings, where perinatal mortality is lower but present across all three time periods *(7)*. Accordingly, the ICD-PM approach to classification of cause of death allows deaths to be captured in settings where investigations such as post-mortem or placental histology alongside deaths are not feasible.

Reporting of results should be standardized while also reflecting local priorities. This allows standardized reporting of the causes of perinatal deaths and contributing maternal conditions. The structure of ICD-PM also allows local health-care facilities, districts and countries to investigate perinatal deaths based on local priorities. It is possible to look at deaths at the broad level of timing or ICD-PM groups, or to extract very specific causes of deaths and specific ICD-10 codes. ICD-PM will be made available through an interactive Excel-based system, which will be accessible via the website of the World Health Organization (WHO) Department of Reproductive Health and Research[2] and on request by contacting the department at mpa-info@who.int.

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2   Available at: http://www.who.int/reproductivehealth/en/

Training and education are integral to the implementation of the classification system. During pilot-testing of ICD-PM, clinicians and researchers who were not involved in the development of the system were trained in its use. What was learnt from that process informed the further development and the planned roll-out of ICD-PM (this document). In addition to this, WHO has developed the *Making every baby count: audit and review of stillbirths and neonatal deaths at facility* tool *(8)*. To classify stillbirths and neonatal deaths as part of audit and review, ICD-PM is embedded within this tool and addressed in the training and education being done along with its dissemination.

2. Development of *The WHO application of ICD-10 to deaths during the perinatal period: ICD-PM(ICD-perinatal mortality)*

The guide and groupings described here, based on ICD-10 *(4)*, were developed through a consultative process. WHO established a technical Working Group on Perinatal Death Classification, including obstetricians, neonatologists, epidemiologists and public health professionals from developing and developed countries to prepare this standard guide for capturing information relating to perinatal deaths.

A meeting of the Working Group in July 2014 resulted in a consensus decision on the underlying structure of ICD-PM. As part of the background work for the development of ICD-PM, a systematic review of existing classification systems was undertaken *(9)*, which identified more than 80 systems in use between 2009 and 2014. In addition, a Delphi survey of experts from 21 countries was conducted, which identified 17 key characteristics necessary for a perinatal death classification system *(10)*. There was also an exploration of the relationship between these key characteristics and existing classification systems *(11)*.

In developing ICD-PM, the approach of the Working Group involved three main principles: the system should be globally applicable, follow existing ICD-10 rules, and be compatible with the upcoming ICD-11 *(12)*.

Following the development of ICD-PM, pilot-testing was undertaken on two perinatal death databases in South Africa and the United Kingdom.[3] The steps taken in this process are outlined in Box 1. By undertaking pilot-testing on these databases, we were able to demonstrate the application of ICD-PM, its comparability between settings and its use in considering where programmes could be targeted to potentially address perinatal mortality. In addition, the pilot-testing identified areas where codes can be improved for future versions of ICD *(13)*.

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3   Four articles reporting on the results of this pilot-testing are being published as a mini-series in BJOG, in August 2016 (www.bjog.org).

Box 1: Steps taken in ICD-PM pilot-testing

1. Identification of the denominator population
2. Verification and description of data collection procedures and methods for the original datasets
3. Assignment of cause of perinatal death and maternal condition at the time of perinatal death using ICD-PM groupings
4. Assessment of the difficulty/ease of using the proposed system
5. Identification of specific issues that would require further study.

The following sections will describe the ICD-10 procedures for death certificates and how to use ICD-PM in detail, as well as information on specific conditions and case examples.

3. ICD-10 procedures for death certificates

3.1 Perinatal cause of death and maternal condition on the death certificate

The first step in capturing the perinatal death and the maternal condition is undertaken by the care providers at any given health-care facility. This process is not one of coding, but of capturing all of the important clinical aspects of a perinatal death, telling the entire clinical story about both mother and baby. There is no need to have in-depth knowledge of ICD-10 codes to complete this process. Following documentation of the perinatal cause of death and maternal conditions, ICD-PM can be applied using a step-by-step process, whereby components of the clinical story are grouped into ICD-PM groups and linked to the appropriate ICD-10 code without prior knowledge of the codes.

3.2 Certification of cause of perinatal death

Cause of death is determined by the medical practitioner or other qualified certifier, who should use his or her clinical judgement in completing the medical certificate of cause of death, including documentation of the morbid conditions and events leading to the perinatal death. It is essential that at this stage all relevant information is recorded in its entirety. Medical certificates of cause of death used in ICD-10 aim to assist the certifier in this process.

A WHO perinatal death certificate has existed for some time, and variations of it are in use in a variety of settings. The relevant part of this certificate for perinatal death is shown in Box 2; it is specific to the disease or conditions in both the fetus or infant and the mother. Alternatively, WHO has a death certificate applicable to all deaths, regardless of age, as shown in Figure 1. The same information as for the perinatal death certificate is captured, but in a slightly different format. Figure 1 highlights the areas that relate to the main disease or condition in the fetus or infant, and to the main maternal disease or condition affecting the fetus or infant in this version of the death certificate.

Box 2: Perinatal death certificate cause of death section

Causes of death
(a) Main disease or condition in fetus or infant
(b) Other diseases of conditions in fetus or infant
(c) Main maternal disease or condition affecting fetus or infant
(d) Other maternal diseases or conditions affecting fetus or infant

Figure 1: WHO death certificate for all deaths, regardless of age

The main disease or condition in the fetus or infant is defined in ICD-10 as the disease or condition that initiated the morbid chain of events leading to death. This is the disease or condition that is entered on line (a) of the perinatal death certificate (Box 2, i.e. "main disease or condition in fetus or infant") or on line (d) of the WHO death certificate (Figure 1, i.e. "the underlying cause"). This is the single identified cause of death and it should be as specific as possible. Multiple other contributing conditions can be entered on line (b) of the perinatal death certificate or on section 2 of the WHO death certificate.

In addition to the main disease or condition in the fetus or infant, knowing the timing of the perinatal death is critical to ICD-PM. WHO proposes the collection of a minimum set of perinatal indicators around the time of all births and perinatal deaths (Box 3), which includes the timing of death.

Box 3: Collection of a minimum set of perinatal indicators

Minimum set of perinatal indicators to collect for all births and perinatal deaths						
Section 1: Identification						
1.1	ID # mother					
1.2	ID # baby					
1.3	Facility name:					
1.4	District name:					
Section 2: Pregnancy progress and care						
2.1 Obstetric history		all pregnancies	total live births	dead		
2.2 Mother's age			y			
2.3 Type of pregnancy		singleton	twin	higher multiple =		unknown
2.4 Antenatal care number of visits		4 or more	3	2	1	no visits	unknown
2.5 HIV status		HIV-negative	HIV-positive	not done	unknown
2.5.1	HIV-postive action		NVP	HAART	other:	
Section 3: Labour and birth						
3.1 Mother's LMP		DD	MM	YYYY		
3.2 Date of birth		DD	MM	YYYY		
3.2.1. Time of birth		:	h			
3.3 Gestational age		weeks				
3.3.1 Method of determination		sure LMP dates	unsure LMP dates	other, specify		
		early ultrasound	late ultrasound			
3.4 Place of delivery		facility	home	road	other, specify	unknown
3.5 Attendant at delivery		midwife nurse	doctor	other, specify	no one	unknown
3.6 Mode of delivery		CVD	assisted vaginal	caesarean	other, specify	unknown
3.7 Sex of baby		male	female			unknown
3.8 Birth weight		g	≥ 2500 g	1500–2499 g	1000–1499 g	< 1000 g	unknown
				LBW	VLBW	ELBW	
Section 4: Details of the deatl (complete only in case of death)						
4.1 Date of death		DD	MM	YYYY		
4.2 Time of death		:	h			
4.3 Type of death			neonatal	intrapartum SB	antepartum SB	SB, unknown timing

3.3 Certification of maternal condition at the time of perinatal death

The clinical team determines the main maternal condition at the time of presentation of the perinatal death. It should be a condition that would reasonably be considered to be part of the pathway leading to perinatal death (e.g. hypertensive disease in macerated stillbirth, breech extraction in acute intrapartum event). The main maternal condition is entered on line (c) of the perinatal death certificate (Box 2, i.e. "main maternal disease or condition affecting fetus or infant") or in the highlighted section in the lower half of the WHO death certificate (Figure 1, i.e. "conditions of mother that affected the fetus and newborn"). Multiple other contributing conditions can be entered on line (d) of the perinatal death certificate or in the same highlighted section of the WHO death certificate (following the main condition, which should be documented first).

If the woman is assessed by the clinicians as having no recognizable condition, and there were no maternal complications of labour and delivery (e.g. malpresentation), then the maternal condition of "no maternal condition" needs to be recorded. This clearly documents the absence of any maternal condition or deviation from standard intrapartum progress.

There are some maternal conditions that occur in mothers who are apparently healthy, and health workers need to consider this when completing the section on the main maternal disease or condition affecting the fetus or infant. For example, a woman may have had no known conditions throughout her pregnancy and may be otherwise clinically healthy when she presents with idiopathic preterm labour and whose baby subsequently dies in the neonatal period from hyaline membrane disease, which is an abnormal occurrence/complication of labour and delivery. In the interest of linking perinatal and maternal interventions, it is important that this woman is recorded as having the maternal condition of preterm spontaneous labour with preterm delivery.

Knowing the maternal condition as a component of the perinatal death adds information that may improve the accuracy of the "death story", particularly in settings where investigation is limited and verbal autopsy forms the mainstay of classification. For example, in the instance of a macerated antepartum stillbirth where the mother has tuberculosis, the perinatal death without autopsy or placental histology may be classified as "unexplained". However, there is a reasonable temporal relationship between tuberculosis and perinatal death, and recording the maternal condition at the time of perinatal death allows more information related to an otherwise unexplained perinatal death to be captured.

The other major benefit of requiring the recording of the maternal condition is to encourage the development of programmes and public health policies that would help both mother and baby. For example, in cases of pre-eclampsia, antepartum stillbirths could be reduced through increased antepartum surveillance for hypertension. Likewise, neonatal deaths following abnormal labour in otherwise healthy mothers could be reduced by training health workers in intrapartum emergency obstetric care.

3.4 Coding the death certificate

Coding the main and other disease(s) or condition(s) in the fetus or infant

A trained coder codes the conditions mentioned on the death certificate, applying ICD-10 rules. To summarize the process, one first considers coding a disease or condition using a specific ICD-10 four-character code. In most cases this is a letter and three numbers (e.g. P26.1, which is the code for massive pulmonary haemorrhage originating in the perinatal period). This can then be more broadly grouped in an ICD-10 three-character code group (e.g. P26, which is the code group for pulmonary haemorrhage originating in the perinatal period).

Coding rules mandate that the disease or condition recorded on line (a) of the perinatal death certificate (Box 2) or line (d) of the WHO death certificate (Figure 1) – in both cases the main perinatal cause of death – is coded to one of the codes in the range of P05–P96 (perinatal conditions) or Q00–Q99 (congenital anomalies). There are a small number of exceptions where other codes can be used; for example, neonatal tetanus is always coded to A33 tetanus neonatorum. Assignment of the conditions in each section follows the rules for perinatal mortality coding in ICD-10 volume 2 *(5)*.

Line (a) of the perinatal death certificate or line (d) of the WHO death certificate is the underlying cause of death, which in ICD terminology is defined as the disease or condition that initiated the morbid chain of events leading to death. This is the main identified cause of death and it should be as specific as possible.

Coding the maternal disease(s) and condition(s) affecting the fetus or infant

The assignment of three- and four-character codes for the main maternal condition is the same as for the perinatal cause of death. The condition entered on line (c) of the perinatal death certificate (Box 2) or in the highlighted area for the maternal condition on the WHO death certificate (Figure 1) can only be coded to P00–P04 (i.e. the codes for fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery). These same codes must also be used for any other maternal conditions captured.

4. *The WHO application of ICD-10 to deaths during the perinatal period*

4.1 Application of ICD-PM to the cause of perinatal death

Initially the timing of perinatal death is classified as antepartum (A), intrapartum (I) or neonatal (N). This information is part of the minimum set of perinatal indicators that need to be collected for all births and perinatal deaths. The timing may be the only piece of information captured in some settings; however, classifying death by timing still provides valuable information for analysis and targeting of programmes in these areas.

ICD-PM groups the main condition in the fetus or infant into a limited number of categories of cause of death under the three headings for timing of death (i.e. A, I or N; see Table 1). There are six groups of antepartum causes of death, designated by a leading "A"; seven groups of intrapartum causes of death, designated by a leading "I"; and 11 groups of neonatal causes of death, designated by a leading "N". All of the ICD-10 codes that can be assigned to the perinatal cause of death on a death certificate are represented in these new groupings. The ICD-10 codes have been reordered and clarified to better represent the pathologies at different times of perinatal death. Codes that are not considered to be a cause of perinatal death in these sections have been excluded from the ICD-PM groupings.

4.2 Application of ICD-PM to the maternal condition in perinatal death

The five existing ICD-10 groups of maternal conditions in perinatal death have been rearranged into four groups denoted with a leading "M" as follows: M1 – the complications of placenta, cord and membranes; M2 – maternal complications of pregnancy; M3 – complications related to labour and delivery; and M4 – the medical and surgical conditions which may or may not be related to the present pregnancy (e.g. pre-eclampsia or pre-existing hypertension). A fifth group has also been added: when no maternal condition that might have been on the causal pathway for the perinatal death was identified at the time of presentation of the perinatal death, it must be coded as M5 – "no maternal condition". The list of the main maternal ICD-10 conditions included in each of the ICD-PM maternal condition groups can be seen in Table 2.

The specific ICD-10 codes applying to each ICD-PM group within each of the groups of perinatal cause of death and the maternal conditions can be found in Annexes A–D.

Table 1: The ICD-PM system: perinatal causes of death and linked ICD-10 codes, separated by timing of death, and maternal condition at the time of perinatal death*

Main perinatal cause of death ICD-PM groups

	Antepartum death (A)	ICD-10 codes
A1	Congenital malformations, deformations and chromosomal abnormalities	Q00–Q99
A2	Infection	P35, P37, P39, A50
A3	Antepartum hypoxia	P20
A4	Other specified antepartum disorder (including codes specific to the antepartum period from haemorrhagic and haematological disorders of fetus and newborn)	P50, P52, P55, P56, P60, P61, P70, P75, P77, P83, P96.4, Misc.
A5	Disorders related to fetal growth	P05, P08
A6	Antepartum death of unspecified cause	P95
	Intrapartum death (I)	**ICD-10 codes**
I1	Congenital malformations, deformations and chromosomal abnormalities	Q00–Q99
I2	Birth trauma	P10–P15
I3	Acute intrapartum event	P20
I4	Infection	P35, P37, P39, A50
I5	Other specified intrapartum disorder (including codes specific to the intrapartum period from haemorrhagic and haematological disorders of fetus and newborn)	P50, P52, P55, P56, P60, P61, P70, P96, Misc.
I6	Disorders related to fetal growth	P05, P07, P08
I7	Intrapartum death of unspecified cause	P95

Main maternal condition ICD-PM groups

Maternal condition	ICD-10 codes
Complications of placenta, cord and membranes	P02
Maternal complications of pregnancy	P01
Other complications of labour and delivery	P03
Maternal medical and surgical conditions	P00
No maternal condition	

✻ Miscellaneous: While a perinatal death is most often coded to P05–P96 or a Q code, there are cases where codes from several other sections of ICD-10 should be used. For an extensive list, see ICD-10 (4) and ICD-10 volume 2: instruction manual (5).

Main perinatal cause of death ICD-PM groups			Main maternal condition ICD-PM groups	
	Neonatal death (N)	ICD-10 codes	Maternal condition	ICD-10 codes
N1	Congenital malformations, deformations and chromosomal abnormalities	Q00–Q99		
N2	Disorders related to fetal growth	P05, P08		
N3	Birth trauma	P10–P15		
N4	Complications of intrapartum events	P20, P21,		
N5	Convulsions and disorders of cerebral status	P90, P91		
N6	Infection	P23, P35–P39		
N7	Respiratory and cardiovascular disorders	P22, P24–P29		
N8	Other neonatal conditions (including codes specific to the neonatal period from haemorrhagic and haematological disorders of fetus and newborn, transitory endocrine and metabolic disorders specific to fetus and newborn, digestive system disorders of fetus and newborn, conditions involving the integument and temperature regulation of fetus and newborn, other disorders originating in the perinatal period)	P50–P61, P70–P78, P80–P83, P92–P94		
N9	Low birth weight and prematurity	P07		
N10	Miscellaneous	∗ P96.4		
N11	Neonatal death of unspecified cause	P96		

∗ In order to group and tabulate a perinatal death, the user needs information on the timing of the perinatal death (antepartum/intrapartum/neonatal) as well as the ICD-10 cause of death code. The information provided about the cause of death and the maternal condition should meet the ICD-10 coding rules for assigning a specific code before any tabulation can be undertaken. The table above is indicative for tabulation of data; for coding deaths, ICD-10 (4) and ICD-10 volume 2 (5) should be utilized.

Table 2: Maternal conditions in ICD-PM and the main maternal conditions (defined by ICD-10) included in each group*

ICD-PM maternal condition group	Main maternal conditions included in group*
M1: Complications of placenta, cord and membranes	1. placenta praevia 2. other forms of placental separation and haemorrhage 3. placental dysfunction, infarction, insufficiency 4. fetal-placental transfusion syndromes 5. prolapsed cord, other compression of umbilical cord 6. chorioamnionitis 7. other complications of membranes
M2: Maternal complications of pregnancy	1. incompetent cervix 2. preterm rupture of membranes 3. oligohydramnios/polyhydramnios 4. ectopic pregnancy 5. multiple pregnancy 6. maternal death 7. malpresentation before labour 8. other complications of pregnancy
M3: Other complications of labour and delivery	1. breech delivery and extraction 2. other malpresentation, malposition and disproportion during labour and delivery 3. forceps delivery/vacuum extraction 4. caesarean delivery 5. precipitate delivery 6. preterm labour and delivery 7. other complications of labour and delivery, including termination of pregnancy
M4: Maternal medical and surgical conditions	1. pre-eclampsia, eclampsia 2. gestational hypertension 3. other hypertensive disorders 4. renal and urinary tract diseases 5. infectious and parasitic disease 6. circulatory and respiratory disease 7. nutritional disorders 8. injury 9. surgical procedure 10. other medical procedures 11. maternal diabetes, including gestational diabetes 12. maternal anaesthesia and analgesia 13. maternal medication 14. tobacco/alcohol/drugs of addiction 15. nutritional chemical substances 16. environmental chemical substances 17. unspecified maternal condition
M5: No maternal condition	1. no maternal condition identified (healthy mother)

* For a full list, definitions and the other and unspecified conditions that are listed in each group, see the current version of ICD-10 (4) and ICD-10 volume 2: instruction manual *(5)*.

4.3 Summary and tabulation of ICD-PM

In summary, perinatal deaths are classified in a three-step process:

1. Deaths are first grouped according to timing – whether the death occurred in the antepartum period (prior to the onset of labour), intrapartum or in the neonatal period (early neonatal: up to day 7 of postnatal life; or late neonatal: days 8–28 of postnatal life).

2. The main cause of perinatal death is assigned and grouped according to the new ICD-PM groupings.

3. The main maternal condition at the time of perinatal death is assigned and grouped according to the new ICD-PM groupings.

Following these steps, the perinatal cause of death and the maternal condition are tabulated in a way that highlights the linkages between the two (see Table 3).

Table 3: ICD-PM tabulation for perinatal cause of death and maternal condition separated by timing of death*

	Maternal condition	M1: Complications of placenta, cord and membranes	M2: Maternal complications of pregnancy	M3: Other complications of labour and delivery	M4: Maternal medical and surgical conditions	M5: No maternal condition identified	Other	Total (%)
Perinatal cause of death								
Antepartum death (A)								
A1: Congenital malformations, deformations and chromosomal abnormalities								
A2: Infection								
A3: Antepartum hypoxia								
A4: Other specified antepartum disorder								
A5: Disorders related to fetal growth								
A6: Fetal death of unspecified cause								
Total (%)								

Maternal condition	M1: Complications of placenta, cord and membranes	M2: Maternal complications of pregnancy	M3: Other complications of labour and delivery	M4: Maternal medical and surgical conditions	M5: No maternal condition identified	Other	Total (%)
Intrapartum death (I)							
I1: Congenital malformations, deformations and chromosomal abnormalities							
I2: Birth trauma							
I3: Acute intrapartum event							
I4: Infection							
I5: Other specified intrapartum disorder							
I6: Disorders related to fetal growth							
I7: Intrapartum death of unspecified cause							
Total (%)							
Neonatal death (N)							
N1: Congenital malformations, deformations and chromosomal abnormalities							
N2: Disorders related to fetal growth							
N3: Birth trauma							
N4: Complications of intrapartum events							
N5: Convulsions and disorders of cerebral status							
N6: Infection							
N7: Respiratory and cardiovascular disorders							
N8: Other neonatal conditions							
N9: Low birth weight and prematurity							
N10: Miscellaneous							
N11: Neonatal death of unspecified cause							
Total (%)							

* In order to group and tabulate a perinatal death, the user needs information on the timing of the perinatal death (antepartum/intrapartum/neonatal) as well as the ICD-10 cause of death code. The information provided about the cause of death and the maternal condition should meet the ICD-10 coding rules for assigning a specific code before any tabulation can be undertaken. The table above is indicative for tabulation of data; for coding deaths, the current version of ICD-10 *(4)* and ICD-10 volume 2: instruction manual *(5)* should be utilized.

5. Specific conditions

5.1 Growth restriction

It can be challenging to detect growth restriction in low- and middle-income countries. This is due to the frequent lack of early, accurate dating of pregnancy and the limitations of examination to detect growth restriction, in combination with the lack of resources – namely, ultrasound – to support or refute any clinical suspicion. Moreover, in high-income settings, the identification of growth restriction may be a consequence of an underlying pathology and, therefore, not the main cause of perinatal death. The line between causality and consequence is often unclear. One of the challenges of identifying growth restriction relates to the resources available in many settings to do this. There is no clear evidence that measurement of symphysis fundal height is able to identify growth restriction *(14)*; however, options for investigation other than this may be limited or non-existent. Moreover, there are obvious limitations to using the definition of the 10th centile based on a single plot of birth weight and gestational age at the time of perinatal death, and it may be difficult to distinguish the constitutionally small fetus or the fetus above the 10th centile that has had a significant drop in weight velocity *(15)*. Despite all of this, it is clear that growth-restricted fetuses remain a high-risk group for many adverse outcomes, including perinatal mortality, and are potentially under-recognized as contributing to the burden of global perinatal mortality.

It is preferable to consider an assessment of growth for gestational age (with the best assessment method available) for all fetuses. This information can be recorded in the minimum set of perinatal indicators (Box 3). Classifying each and every case in terms of fetal growth will give a clearer picture of the role of growth restriction in perinatal deaths.

5.2 Preterm labour

The contribution of prematurity to perinatal mortality is of great interest to clinicians and researchers alike. It is helpful to be able to distinguish those mothers with apparently idiopathic preterm labour from those with pathology or provider-initiated delivery. Those who review perinatal deaths and complete death certificates should remain mindful of this.

Preterm labour as a maternal condition applies to those mothers who present prior to 37 completed weeks of gestation with spontaneous onset of contractions and cervical change in the absence of any apparent underlying pathology (e.g. chorioamnionitis or urinary tract infection).

5.3 Prematurity

Volume 2 of ICD-10 requests that clinicians do not enter prematurity as the main disease or condition in the fetus or infant unless it was the only fetal or infant condition known *(5)*. There is a tendency in many settings to assign prematurity as a cause of death when further evidence to suggest a more definitive cause of death has not been actively sought.

As it stands, low birth weight and prematurity are coded together in ICD-10 (with the qualifying note that when both birth weight and gestational age are available, priority of assignment should be given to birth weight), yet while prematurity may be a cause of low birth weight, the inverse is not necessarily true. More importantly, the outcomes for babies born preterm and appropriately small are different from those for babies of the same weight yet small for gestational age *(16)*.

> It is preferable to only accept the diagnosis of prematurity as the main disease or condition in the infant if further evidence supports this notion, such as if a gestational age of less than 28 weeks was specified. Further to this, as per ICD-10 coding rules, if the only other cause of perinatal mortality reported is respiratory failure of the newborn, then the diagnosis of prematurity can be the main disease or condition in the infant.

5.4 Obstructed labour

Obstructed labour is addressed comprehensively in *The WHO application of ICD-10 to deaths during pregnancy, childbirth and the puerperium: ICD-maternal mortality (ICD-MM)* in relation to when this condition can be considered the underlying cause of maternal mortality and when it merely contributes to the outcome of maternal mortality *(17)*. As outlined in ICD-MM, "obstructed labour may be the start of a sequence leading to death, or may itself be due to some preceding condition such as contracted maternal pelvis or transverse lie". A similar logic applies when considering the role of obstructed labour in perinatal death. The programmatic aim is to prevent its occurrence in the first place or, in the absence of this, to be able to initiate prompt access to safe emergency obstetric care to the benefit of both mother and baby.

> Where the obstructed labour is the start of a sequence leading to perinatal death, this should be recorded as the main maternal condition. Where the obstructed labour is the consequence of another condition (e.g. malpresentation of the fetus), then this other condition should be recorded as the main maternal condition.

5.5 HIV and AIDS

There is a tendency in many parts of the world to attribute all deaths in people known to have HIV or AIDS to HIV or AIDS as the cause of death. However, such patients may die "from AIDS" (i.e. as the cause of death) or "with HIV" (i.e. not the cause of death). There is a concern that this tendency will translate into assigning the cause of death as HIV or AIDS in all perinatal deaths where there is maternal HIV or AIDS, regardless of the lack of evidence to support this as the cause of death.

While maternal HIV may increase the risk of perinatal death *(4)*, the causal relationship may be difficult to establish, and it is useful to distinguish those perinatal deaths in the context of other maternal conditions where the maternal HIV is incidental.

> It is preferable to classify each and every case in terms of maternal HIV status. This will give a clearer picture of the role of maternal HIV and AIDS in perinatal deaths.

6. Case examples

6.1 Case 1

A 19-year-old para 1, with a certain gestation of 38 weeks based on early clinical examination, presented in a healthy condition during labour with no significant history. A 2450 g baby was delivered after an 8-hour labour. An early neonatal death on day 2 of life from meconium aspiration syndrome of a 2450 g baby occurred. Factors that are potentially modifiable identified by clinical review of the case were fetal distress not detected in labour and personnel too junior to manage the patient.

The neonatal cause of death is meconium aspiration syndrome. The maternal condition is no maternal condition identified at the time of perinatal death. The time of the death is neonatal.

The death certificate was completed by the clinicians, and subsequently coded as follows:

Causes of death	Clinical details	ICD-10 code
(a) Main disease or condition in fetus or infant	Meconium aspiration syndrome	P24.0
(b) Other diseases of conditions in fetus or infant	Small for gestational age	P05.1
(c) Main maternal disease or condition affecting fetus or infant	No maternal condition	
(d) Other maternal diseases or conditions affecting fetus or infant		

The final ICD-PM groups would be: N7; M5

This case highlights the need for having "no maternal condition" identified as the maternal code at the time of perinatal death, as the ability to predict this death antenatally is limited. It also highlights the need for personnel to continue to be trained in intrapartum care and obstetric emergencies.

6.2 Case 2

A 30-year-old para 1 presented in labour at 39 weeks of gestation, based on a certain last menstrual period, with the fetus alive at admission. The woman was HIV-positive and on long-term antiretroviral therapy. There was poor progress in labour, with incorrect interpretation of the partograph. An acute intrapartum event occurred with a hypoxic intrapartum stillbirth. The fetus was delivered via caesarean section.

The intrapartum cause of death is intrapartum hypoxia, with the maternal condition of obstructed labour.

The death certificate was completed by the clinicians, and subsequently coded as follows:

Causes of death	Clinical details	ICD-10 code
(a) Main disease or condition in fetus or infant	Intrapartum hypoxia	P20.1
(b) Other diseases of conditions in fetus or infant		
(c) Main maternal disease or condition affecting fetus or infant	Obstructed labour	P03.8
	HIV	P00.2
(d) Other maternal diseases or conditions affecting fetus or infant		

The final ICD-PM groups would be: I3; M3

This case highlights the need to capture maternal conditions other than HIV.

6.3 Case 3

A 16-year-old para 0 with no medical history presented in spontaneous labour at 29 certain weeks of gestation and subsequently had a forceps delivery of a liveborn baby weighing 1100 g. The baby died on day 2 of life from hyaline membrane disease. The neonatal cause of death is hyaline membrane disease, with the maternal condition of spontaneous preterm labour.

The death certificate was completed by the clinicians, and subsequently coded as follows:

Causes of death	Clinical details	ICD-10 code
(a) Main disease or condition in fetus or infant	Hyaline membrane disease	P22.0
(b) Other diseases of conditions in fetus or infant	Prematurity	P07.1
(c) Main maternal disease or condition affecting fetus or infant	Spontaneous preterm labour	P03.8
(d) Other maternal diseases or conditions affecting fetus or infant	Forceps delivery	P03.2

The final ICD-PM groups would be: N7; M3

This case highlights the need to identify a specific cause of neonatal premature death other than prematurity. In addition, although the mother had no medical history, the occurrence of spontaneous preterm labour is abnormal and so should be recorded as the main maternal condition contributing to the perinatal death.

6.4 Case 4

A 36-year-old para 5 presented at 35 weeks of gestation determined by clinical palpation, complaining of a headache and decreased fetal movements. A fetal death in utero was diagnosed. Clinical and biochemical investigation revealed maternal proteinuric hypertension. Spontaneous vaginal delivery of a macerated 2100 g stillborn followed induction of labour. The proteinuric hypertension subsequently resolved.

The antepartum cause of death is intrauterine hypoxia, and the maternal condition is pre-eclampsia.

The death certificate was completed by the clinicians, and subsequently coded as follows:

Causes of death	Clinical details	ICD-10 code
(a) Main disease or condition in fetus or infant	Intrauterine hypoxia	P20.0
(b) Other diseases of conditions in fetus or infant	Prematurity	P07.3
(c) Main maternal disease or condition affecting fetus or infant	Pre-eclampsia	P00.0
(d) Other maternal diseases or conditions affecting fetus or infant		

The final ICD-PM groups would be: A3; M4

This case highlights the need to always capture the maternal condition, as the fetal cause of death of intrauterine hypoxia provides less specific information than the maternal condition of pre-eclampsia.

7. Implications for practice and research

It is envisaged that ICD-PM will lead to better classification of perinatal deaths, as well as clearer linkage to the maternal condition in these deaths. The use of this guide and its groupings are recommended as part of the efforts to estimate and address the burden of perinatal mortality globally.

8. Perinatal audit

Consistent information about the nature and cause of death is needed for planning health systems and distributing resources, as well as for improving quality of care at the point of service delivery. These data are necessary for recommendations to be made, so that actions can be taken to prevent similar deaths in the future. Mortality audit is an established mechanism to examine the circumstances surrounding a death and the breakdowns in care that may be preventable. WHO has developed the *Making every baby count: audit and review of stillbirths and neonatal deaths* guide and tools *(8)*. Embedded within the data collection tools in that publication (i.e. in particular, the Stillbirth and Neonatal Death Case Review Form, and the Births and Deaths Summary Form), and addressed in the training and education being done in the dissemination of the guide, is a version of ICD-PM which can be used to classify the stillbirths and neonatal deaths as part of audit and response.

The ICD-PM classification is useful for mortality audit because the focus on the mother–baby dyad highlights areas requiring programmatic intervention that will benefit maternal and perinatal outcomes. It simplifies the certification of perinatal deaths, but it also offers programme officers and public health workers a means to identify solutions that meet the needs of both mother and baby concurrently. The categories on the data collection forms have been collapsed to facilitate ease of data entry and analysis, but they can also be expanded to include more specific causes and categories, depending on the capacity and interest of the facility staff and the perinatal mortality audit team.

9. Conclusion

The WHO application of ICD-10 to deaths during the perinatal period: ICD-PM uses the existing ICD-10 as a framework for a system that both separates out the timing of perinatal deaths and links perinatal deaths to maternal conditions (or lack thereof). It not only allows health workers clarity in certifying perinatal deaths but also enables programme officers and public health workers to drive interventions that meet the needs of both mother and baby concurrently.

ICD-PM builds on ICD-10 and is modelled on ICD-MM, so much will be familiar to users. The new concepts of timing of perinatal death and compulsory linkage to maternal condition will need to be monitored, and further research on the application of ICD-PM will be necessary.

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Annex A: ICD-PM groups and ICD-10 codes for antepartum deaths

In order to group and tabulate a perinatal death, the user needs information on the timing of the perinatal death (antepartum/intrapartum/neonatal) as well as the ICD-10 cause of death code. The information provided about the cause of death and the maternal condition should meet the ICD-10 coding rules for assigning a specific code before any tabulation can be undertaken. The codes included below are indicative for tabulation of data; for coding deaths, ICD-10 version:2016 and ICD-10 volume 2: instruction manual (2010) should be utilized.[4]

A1 Congenital malformations, deformations and chromosomal abnormalities

Q00 **Anencephaly and similar malformations**

Q01 **Encephalocele**

Q02 **Microcephaly**

Q03 **Congenital hydrocephalus**

Q04 **Other congenital malformations of brain**

Q05 **Spina bifida**

Q06 **Other congenital malformations of spinal cord**

Q07 **Other congenital malformations of nervous system**

Q10 **Congenital malformations of eyelid, lacrimal apparatus and orbit**

Q11 **Anophthalmos, microphthalmos and macrophthalmos**

Q12 **Congenital lens malformations**

Q13 **Congenital malformations of anterior segment of eye**

Q14 **Congenital malformations of posterior segment of eye**

Q15 **Other congenital malformations of eye**

Q16 **Congenital malformations of ear causing impairment of hearing**

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4   Available at: http://www.who.int/classifications/icd/icdonlineversions/en/

Q17 Other congenital malformations of ear

Q18 Other congenital malformations of face and neck

Q20 Congenital malformations of cardiac chambers and connections

Q21 Congenital malformations of cardiac septa

Q22 Congenital malformations of pulmonary and tricuspid valves

Q23 Congenital malformations of aortic and mitral valves

Q24 Other congenital malformations of heart

Q25 Congenital malformations of great arteries

Q26 Congenital malformations of great veins

Q27 Other congenital malformations of peripheral vascular system

Q28 Other congenital malformations of circulatory system

Q30 Congenital malformations of nose

Q31 Congenital malformations of larynx

Q32 Congenital malformations of trachea and bronchus

Q33 Congenital malformations of lung

Q34 Other congenital malformations of respiratory system

Q36 Cleft lip

Q37 Cleft palate with cleft lip

Q38 Other congenital malformations of tongue, mouth and pharynx

Q39 Congenital malformations of oesophagus

Q40 Other congenital malformations of upper alimentary tract

Q41 Congenital absence, atresia and stenosis of small intestine

Q42 Congenital absence, atresia and stenosis of large intestine

Q43 Other congenital malformations of intestine

Q44 Congenital malformations of gallbladder, bile ducts and liver

Q45 Other congenital malformations of digestive system

Q50 Congenital malformations of ovaries, fallopian tubes and broad ligaments

Q51 Congenital malformations of uterus and cervix

Q52 Other congenital malformations of female genitalia

Q53 Undescended testicle

Q54 Hypospadias

Q55 Other congenital malformations of male genital organs

Q56 Indeterminate sex and pseudohermaphroditism

Q60 Renal agenesis and other reduction defects of kidney

Q61 Cystic kidney disease

Q62 Congenital obstructive defects of renal pelvis and congenital malformations of ureter

Q63 Other congenital malformations of kidney

Q64 Other congenital malformations of urinary system

Q65 Congenital deformities of hip

Q66 Congenital deformities of feet

Q67 Congenital musculoskeletal deformities of head, face, spine and chest

Q68 Other congenital musculoskeletal deformities

Q69 Polydactyly

Q70 Syndactyly

Q71 Reduction defects of upper limb

Q72 Reduction defects of lower limb

Q73 Reduction defects of unspecified limb

Q74 Other congenital malformations of limb(s)

Q75 Other congenital malformations of skull and face bones

Q76 Congenital malformations of spine and bony thorax

Q77 Osteochondrodysplasia with defects of growth of tubular bones and spine

Q78 Other osteochondrodysplasias

Q79 Congenital malformations of the musculoskeletal system, not elsewhere classified

Q80 Congenital ichthyosis

Q81 Epidermolysis bullosa

Q82 Other congenital malformations of skin

Q83 Congenital malformations of breast

Q84 Other congenital malformations of integument

Q85 Phakomatoses, not elsewhere classified

Q86 Congenital malformation syndromes due to known exogenous causes, not else where classified

Q87 Other specified congenital malformation syndromes affecting multiple systems

Q89 Other congenital malformations, not elsewhere classified

Q90 Down syndrome

Q91 Edwards syndrome and Patau syndrome

Q92 Other trisomies and partial trisomies of the autosomes, not elsewhere classified

Q93 Monosomies and deletions from the autosomes, not elsewhere classified

Q95 Balanced rearrangements and structural markers, not elsewhere classified

Q96 Turner syndrome

Q97 Other sex chromosome abnormalities, female phenotype, not elsewhere classified

Q98 Other sex chromosome abnormalities, male phenotype, not elsewhere classified

Q99 Other chromosome abnormalities, not elsewhere classified

A2 Infection

A50 Congenital syphilis

A50.0 Early congenital syphilis, symptomatic

A50.1 Early congenital syphilis, latent

A50.2 Early congenital syphilis, unspecified

A50.9 Congenital syphilis, unspecified

P35 Congenital viral diseases

P35.0 Congenital rubella syndrome

Congenital rubella pneumonitis

P35.1 Congenital cytomegalovirus infection

P35.2 Congenital herpesviral [herpes simplex] infection

P35.3 Congenital viral hepatitis

P35.8 Other congenital viral diseases

Congenital varicella [chickenpox]

P35.9 Congenital viral disease, unspecified

P37 Other congenital infectious and parasitic diseases

P37.0 Congenital tuberculosis

P37.1 Congenital toxoplasmosis

Hydrocephalus due to congenital toxoplasmosis

P37.3 Congenital falciparum malaria

P37.4 Other congenital malaria

P37.8 Other specified congenital infectious and parasitic diseases

P37.9 Congenital infectious and parasitic disease, unspecified

P39 Other infections specific to the perinatal period

P39.2 Intra-amniotic infection of fetus, not elsewhere classified

P39.8 Other specified infections specific to the perinatal period

P39.9 Infection specific to the perinatal period, unspecified

A3 Acute antepartum event

P20 Intrauterine hypoxia

P20.0 Intrauterine hypoxia first noted before onset of labour

P20.9 Intrauterine hypoxia, unspecified

A4 Other specified antepartum disorder

P50 Fetal blood loss

P50.0 Fetal blood loss from vasa praevia

P50.1 Fetal blood loss from ruptured cord

P50.2 Fetal blood loss from placenta

P50.3 Haemorrhage into co-twin

P50.4 Haemorrhage into maternal circulation

P50.5 Fetal blood loss from cut end of co-twin's cord

P50.8 Other fetal blood loss

P50.9 Fetal blood loss, unspecified

Fetal haemorrhage NOS

P52 Intracranial nontraumatic haemorrhage of fetus and newborn

P52.0   **Intraventricular (nontraumatic) haemorrhage, grade 1, of fetus and newborn**

> Subependymal haemorrhage (without intraventricular extension)

P52.1   **Intraventricular (nontraumatic) haemorrhage, grade 2, of fetus and newborn**

> Subependymal haemorrhage with intraventricular extension

P52.2   **Intraventricular (nontraumatic) haemorrhage, grade 3 and grade 4, of fetus and newborn**

> Subependymal haemorrhage with both intraventricular and intracerebral extension

P52.3   **Unspecified intraventricular (nontraumatic) haemorrhage of fetus and newborn**

P52.4   **Intracerebral (nontraumatic) haemorrhage of fetus and newborn**

P52.5   **Subarachnoid (nontraumatic) haemorrhage of fetus and newborn**

P52.6   **Cerebellar (nontraumatic) and posterior fossa haemorrhage of fetus and newborn**

P52.8   **Other intracranial (nontraumatic) haemorrhages of fetus and newborn**

P52.9   **Intracranial (nontraumatic) haemorrhage of fetus and newborn, unspecified**

P55 Haemolytic disease of fetus and newborn

P55.0   **Rhesus isoimmunization of fetus and newborn**

P55.1   **ABO isoimmunization of fetus and newborn**

P55.8   **Other haemolytic diseases of fetus and newborn**

P55.9   **Haemolytic disease of fetus and newborn, unspecified**

P56 Hydrops fetalis due to haemolytic disease

P56.0   **Hydrops fetalis due to isoimmunization**

P56.9   **Hydrops fetalis due to other and unspecified haemolytic disease**

P60 Disseminated intravascular coagulation of fetus and newborn

P61 Other perinatal haematological disorders

P61.3   **Congenital anaemia from fetal blood loss**

P61.4   Other congenital anaemias, not elsewhere classified

Congenital anaemia NOS

P61.8   Other specified perinatal haematological disorders

P61.9   Perinatal haematological disorder, unspecified

P75 Meconium ileus in cystic fibrosis

P77 Necrotizing enterocolitis of fetus and newborn

P83 Other conditions of integument specific to fetus and newborn

P83.2   Hydrops fetalis not due to haemolytic disease

Hydrops fetalis NOS

P83.3   Other and unspecified oedema specific to fetus and newborn

P83.8   Other specified conditions of integument specific to fetus and newborn

Bronze baby syndrome

Neonatal scleroderma

Urticaria neonatorum

P83.9   Condition of integument specific to fetus and newborn, unspecified

P96 Other conditions originating in the perinatal period

P96.0   Congenital renal failure

Uraemia of newborn

P96.4   Termination of pregnancy, affecting fetus and newborn

P96.5   Complications of intrauterine procedures, not elsewhere classified

P96.8   Other specified conditions originating in the perinatal period

P96.9   Condition originating in the perinatal period, unspecified

Congenital debility NOS

A5 Disorders related to length of gestation and fetal growth

P05 Slow fetal growth and fetal malnutrition

P05.0   Light for gestational age

Usually referred to as weight below but length above 10th centile for gestational age
Light-for-dates

P05.1   Small for gestational age

Usually referred to as weight and length below 10th centile for gestational age

Small-for-dates

Small-and-light-for-dates

P05.2 Fetal malnutrition without mention of light or small for gestational age

Infant, not light or small for gestational age, showing signs of fetal malnutrition, such as dry, peeling skin and loss of subcutaneous tissue

P05.9 Slow fetal growth, unspecified

Fetal growth retardation NOS

P08 Disorders related to long gestation and high birth weight

Note: When both birth weight and gestational age are available, priority of assignment should be given to birth weight.

P08.0   Exceptionally large baby

Usually implies a birth weight of 4500 g or more

P08.1   Other heavy for gestational age infants

Usually implies a birth weight > 90th percentile for gestational age or 4000 g or more at term

Other fetus or infant heavy- or large-for-dates regardless of period of gestation

P08.2   Post-term infant, not heavy for gestational age

Fetus or infant with gestation period of 42 completed weeks or more (294 days or more), not heavy- or large-for-dates

Postmaturity NOS

A6 Antepartum death of unspecified cause

P95 Fetal death of unspecified cause

Incl.: Deadborn fetus NOS

Stillbirth NOS

Annex B: ICD-PM groups and ICD-10 codes for intrapartum deaths

In order to group and tabulate a perinatal death, the user needs information on the timing of the perinatal death (antepartum/intrapartum/neonatal) as well as the ICD-10 cause of death code. The information provided about the cause of death and the maternal condition should meet the ICD-10 coding rules for assigning a specific code before any tabulation can be undertaken. The codes included below are indicative for tabulation of data; for coding deaths, ICD-10 version:2016 and ICD-10 volume 2: instruction manual (2010) should be utilized.[5]

I1 Congenital malformations, deformations and chromosomal abnormalities

Q00 **Anencephaly and similar malformations**

Q01 **Encephalocele**

Q02 **Microcephaly**

Q03 **Congenital hydrocephalus**

Q04 **Other congenital malformations of brain**

Q05 **Spina bifida**

Q06 **Other congenital malformations of spinal cord**

Q07 **Other congenital malformations of nervous system**

Q10 **Congenital malformations of eyelid, lacrimal apparatus and orbit**

Q11 **Anophthalmos, microphthalmos and macrophthalmos**

Q12 **Congenital lens malformations**

Q13 **Congenital malformations of anterior segment of eye**

Q14 **Congenital malformations of posterior segment of eye**

Q15 **Other congenital malformations of eye**

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5   Available at: http://www.who.int/classifications/icd/icdonlineversions/en/

Q16 Congenital malformations of ear causing impairment of hearing

Q17 Other congenital malformations of ear

Q18 Other congenital malformations of face and neck

Q20 Congenital malformations of cardiac chambers and connections

Q21 Congenital malformations of cardiac septa

Q22 Congenital malformations of pulmonary and tricuspid valves

Q23 Congenital malformations of aortic and mitral valves

Q24 Other congenital malformations of heart

Q25 Congenital malformations of great arteries

Q26 Congenital malformations of great veins

Q27 Other congenital malformations of peripheral vascular system

Q28 Other congenital malformations of circulatory system

Q30 Congenital malformations of nose

Q31 Congenital malformations of larynx

Q32 Congenital malformations of trachea and bronchus

Q33 Congenital malformations of lung

Q34 Other congenital malformations of respiratory system

Q36 Cleft lip

Q37 Cleft palate with cleft lip

Q38 Other congenital malformations of tongue, mouth and pharynx

Q39 Congenital malformations of oesophagus

Q40 Other congenital malformations of upper alimentary tract

Q41 Congenital absence, atresia and stenosis of small intestine

Q42 Congenital absence, atresia and stenosis of large intestine

Q43 Other congenital malformations of intestine

Q44 Congenital malformations of gallbladder, bile ducts and liver

Q45 Other congenital malformations of digestive system

Q50 Congenital malformations of ovaries, fallopian tubes and broad ligaments

Q51 Congenital malformations of uterus and cervix

Q52 Other congenital malformations of female genitalia

Q53 Undescended testicle

Q54 Hypospadias

Q55 Other congenital malformations of male genital organs

Q56 Indeterminate sex and pseudohermaphroditism

Q60 Renal agenesis and other reduction defects of kidney

Q61 Cystic kidney disease

Q62 Congenital obstructive defects of renal pelvis and congenital malformations of ureter

Q63 Other congenital malformations of kidney

Q64 Other congenital malformations of urinary system

Q65 Congenital deformities of hip

Q66 Congenital deformities of feet

Q67 Congenital musculoskeletal deformities of head, face, spine and chest

Q68 Other congenital musculoskeletal deformities

Q69 Polydactyly

Q70 Syndactyly

Q71 Reduction defects of upper limb

Q72 Reduction defects of lower limb

Q73 Reduction defects of unspecified limb

Q74 Other congenital malformations of limb(s)

Q75 Other congenital malformations of skull and face bones

Q76 Congenital malformations of spine and bony thorax

Q77 Osteochondrodysplasia with defects of growth of tubular bones and spine

Q78 Other osteochondrodysplasias

Q79 Congenital malformations of the musculoskeletal system, not elsewhere classified

Q80 Congenital ichthyosis

Q81 Epidermolysis bullosa

Q82 Other congenital malformations of skin

Q83 Congenital malformations of breast

Q84 Other congenital malformations of integument

Q85 Phakomatoses, not elsewhere classified

Q86   Congenital malformation syndromes due to known exogenous causes, not else where classified

Q87   Other specified congenital malformation syndromes affecting multiple systems

Q89   Other congenital malformations, not elsewhere classified

Q90   Down syndrome

I2 Birth trauma

P10 Intracranial laceration and haemorrhage due to birth injury

P10.0   Subdural haemorrhage due to birth injury

Subdural haematoma (localized) due to birth injury

P10.1   Cerebral haemorrhage due to birth injury

P10.2   Intraventricular haemorrhage due to birth injury

P10.3   Subarachnoid haemorrhage due to birth injury

P10.4   Tentorial tear due to birth injury

P10.8   Other intracranial lacerations and haemorrhages due to birth injury

P10.9   Unspecified intracranial laceration and haemorrhage due to birth injury

P11 Other birth injuries to central nervous system

P11.0   Cerebral oedema due to birth injury

P11.1   Other specified brain damage due to birth injury

P11.2   Unspecified brain damage due to birth injury

P11.5   Birth injury to spine and spinal cord

Fracture of spine due to birth injury

P11.9   Birth injury to central nervous system, unspecified

P12 Birth injury to scalp

P12.0   Cephalhaematoma due to birth injury

P12.1   Chignon due to birth injury

P12.2   Epicranial subaponeurotic haemorrhage due to birth injury

P12.3   Bruising of scalp due to birth injury

P12.4   Monitoring injury of scalp of newborn

Sampling incision

Scalp clip (electrode) injury

P12.8   Other birth injuries to scalp

P12.9   Birth injury to scalp, unspecified

P13 Birth injury to skeleton

P13.0   Fracture of skull due to birth injury

P13.1   Other birth injuries to skull

P13.2   Birth injury to femur

P13.3   Birth injury to other long bones

P13.4   Fracture of clavicle due to birth injury

P13.8   Birth injuries to other parts of skeleton

P13.9   Birth injury to skeleton, unspecified

P15 Other birth injuries

P15.0   Birth injury to liver

Rupture of liver due to birth injury

P15.1   Birth injury to spleen

Rupture of spleen due to birth injury

P15.2   Sternomastoid injury due to birth injury

P15.8   Other specified birth injuries

P15.9   Birth injury, unspecified

I3 Acute intrapartum event

P20 Intrauterine hypoxia

P20.1   Intrauterine hypoxia first noted during labour and delivery

P20.9   Intrauterine hypoxia, unspecified

I4 Infection

P35 Congenital viral diseases

P35.0 Congenital rubella syndrome

Congenital rubella pneumonitis

P35.1 Congenital cytomegalovirus infection

P35.2 Congenital herpesviral [herpes simplex] infection

P35.3 Congenital viral hepatitis

P35.8 Other congenital viral diseases

Congenital varicella [chickenpox]

P35.9 Congenital viral disease, unspecified

P37 Other congenital infectious and parasitic diseases

P37.0 Congenital tuberculosis

P37.1 Congenital toxoplasmosis

Hydrocephalus due to congenital toxoplasmosis

P37.3 Congenital falciparum malaria

P37.4 Other congenital malaria

P37.8 Other specified congenital infectious and parasitic diseases

P37.9 Congenital infectious and parasitic disease, unspecified

P39 Other infections specific to the perinatal period

P39.2 Intra-amniotic infection of fetus, not elsewhere classified

P39.8 Other specified infections specific to the perinatal period

P39.9 Infection specific to the perinatal period, unspecified

I5 Other specified intrapartum disorder

P50 Fetal blood loss

P50.0 Fetal blood loss from vasa praevia

P50.1 Fetal blood loss from ruptured cord

P50.2 Fetal blood loss from placenta

P50.3 Haemorrhage into co-twin

P50.4 Haemorrhage into maternal circulation

P50.5 Fetal blood loss from cut end of co-twin's cord

P50.8 Other fetal blood loss

P50.9 Fetal blood loss, unspecified

Fetal haemorrhage NOS

P52 Intracranial nontraumatic haemorrhage of fetus and newborn

P52.0 Intraventricular (nontraumatic) haemorrhage, grade 1, of fetus and newborn

Subependymal haemorrhage (without intraventricular extension)

P52.1 Intraventricular (nontraumatic) haemorrhage, grade 2, of fetus and newborn

Subependymal haemorrhage with intraventricular extension

P52.2 Intraventricular (nontraumatic) haemorrhage, grade 3 and grade 4, of fetus and newborn

Subependymal haemorrhage with both intraventricular and intracerebral extension

P52.3 Unspecified intraventricular (nontraumatic) haemorrhage of fetus and newborn

P52.4 Intracerebral (nontraumatic) haemorrhage of fetus and newborn

P52.5 Subarachnoid (nontraumatic) haemorrhage of fetus and newborn

P52.6 Cerebellar (nontraumatic) and posterior fossa haemorrhage of fetus and newborn

P52.8 Other intracranial (nontraumatic) haemorrhages of fetus and newborn

P52.9 Intracranial (nontraumatic) haemorrhage of fetus and newborn, unspecified

P55 Haemolytic disease of fetus and newborn

P55.0 Rhesus isoimmunization of fetus and newborn

P55.1 ABO isoimmunization of fetus and newborn

P55.8 Other haemolytic diseases of fetus and newborn

P55.9 Haemolytic disease of fetus and newborn, unspecified haemolytic disease

P56 Hydrops fetalis due to haemolytic disease

P56.0   **Hydrops fetalis due to isoimmunization**

P56.9   **Hydrops fetalis due to other and unspecified haemolytic disease**

P60 Disseminated intravascular coagulation of fetus and newborn

P61 Other perinatal haematological disorders

P61.3   **Congenital anaemia from fetal blood loss**

P61.4   **Other congenital anaemias, not elsewhere classified**

Congenital anaemia NOS

P61.8   **Other specified perinatal haematological disorders**

P61.9   **Perinatal haematological disorder, unspecified**

P96 Other conditions originating in the perinatal period

P96.0   **Congenital renal failure**

Uraemia of newborn

P96.4   **Termination of pregnancy, affecting fetus and newborn**

P96.5   **Complications of intrauterine procedures, not elsewhere classified**

P96.8   **Other specified conditions originating in the perinatal period**

P96.9   **Condition originating in the perinatal period, unspecified**

Congenital debility NOS

I6 Disorders related to fetal growth

P05 Slow fetal growth and fetal malnutrition

P05.0   Light for gestational age

Usually referred to as weight below but length above 10th centile for gestational age

Light-for-dates

P05.1   Small for gestational age

Usually referred to as weight and length below 10th centile for gestational age

Small-for-dates

Small-and-light-for-dates

P05.2   Fetal malnutrition without mention of light or small for gestational age

Infant, not light or small for gestational age, showing signs of fetal malnutrition, such as dry, peeling skin and loss of subcutaneous tissue

P05.9   Slow fetal growth, unspecified

Fetal growth retardation NOS

P07 Disorders related to short gestation and low birth weight, not elsewhere classified

Note: When both birth weight and gestational age are available, priority of assignment should be given to birth weight.

Incl.: the listed conditions, without further specification, as the cause of mortality, morbidity or additional care in newborn

P07.0   Extremely low birth weight

Birth weight 999 g or less

P07.1   Other low birth weight

Birth weight 1000–2499 g

P07.2   Extreme immaturity

Less than 28 completed weeks (less than 196 completed days) of gestation

P07.3 Other preterm infants

28 completed weeks or more but less than 37 completed weeks (196 completed days but less than 259 completed days) of gestation

Prematurity NOS

P08 Disorders related to long gestation and high birth weight

Note: When both birth weight and gestational age are available, priority of assignment should be given to birth weight.

P08.0 Exceptionally large baby

Usually implies a birth weight of 4500 g or more

P08.1 Other heavy for gestational age infants

Usually implies a birth weight > 90th percentile for gestational age or 4000 g or more at term

Other fetus or infant heavy- or large-for-dates regardless of period of gestation

P08.2 Post-term infant, not heavy for gestational age

Fetus or infant with gestation period of 42 completed weeks or more (294 days or more), not heavy- or large-for-dates

Postmaturity NOS

I7 Intrapartum death of unspecified cause

P95 Fetal death of unspecified cause

Incl.: Deadborn fetus NOS

Stillbirth NOS

Annex C: ICD-PM groups and ICD-10 codes for neonatal deaths

In order to group and tabulate a perinatal death, the user needs information on the timing of the perinatal death (antepartum/intrapartum/neonatal) as well as the ICD-10 cause of death code. The information provided about the cause of death and the maternal condition should meet the ICD-10 coding rules for assigning a specific code before any tabulation can be undertaken. The codes included below are indicative for tabulation of data; for coding deaths, ICD-10 version:2016 and ICD-10 volume 2: instruction manual (2010) should be utilized.[6]

N1 Congenital malformations, deformations and chromosomal abnormalities

Q00 Anencephaly and similar malformations

Q01 Encephalocele

Q02 Microcephaly

Q03 Congenital hydrocephalus

Q04 Other congenital malformations of brain

Q05 Spina bifida

Q06 Other congenital malformations of spinal cord

Q07 Other congenital malformations of nervous system

Q10 Congenital malformations of eyelid, lacrimal apparatus and orbit

Q11 Anophthalmos, microphthalmos and macrophthalmos

Q12 Congenital lens malformations

Q13 Congenital malformations of anterior segment of eye

Q14 Congenital malformations of posterior segment of eye

Q15 Other congenital malformations of eye

Q16 Congenital malformations of ear causing impairment of hearing

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6   Available at: http://www.who.int/classifications/icd/icdonlineversions/en/

Q17 Other congenital malformations of ear

Q18 Other congenital malformations of face and neck

Q20 Congenital malformations of cardiac chambers and connections

Q21 Congenital malformations of cardiac septa

Q22 Congenital malformations of pulmonary and tricuspid valves

Q23 Congenital malformations of aortic and mitral valves

Q24 Other congenital malformations of heart

Q25 Congenital malformations of great arteries

Q26 Congenital malformations of great veins

Q27 Other congenital malformations of peripheral vascular system

Q28 Other congenital malformations of circulatory system

Q30 Congenital malformations of nose

Q31 Congenital malformations of larynx

Q32 Congenital malformations of trachea and bronchus

Q33 Congenital malformations of lung

Q34 Other congenital malformations of respiratory system

Q36 Cleft lip

Q37 Cleft palate with cleft lip

Q38 Other congenital malformations of tongue, mouth and pharynx

Q39 Congenital malformations of oesophagus

Q40 Other congenital malformations of upper alimentary tract

Q41 Congenital absence, atresia and stenosis of small intestine

Q42 Congenital absence, atresia and stenosis of large intestine

Q43 Other congenital malformations of intestine

Q44 Congenital malformations of gallbladder, bile ducts and liver

Q45 Other congenital malformations of digestive system

Q50 Congenital malformations of ovaries, fallopian tubes and broad ligaments

Q51 Congenital malformations of uterus and cervix

Q52 Other congenital malformations of female genitalia

Q53 Undescended testicle

Q54 Hypospadias

Q55 Other congenital malformations of male genital organs

Q56 Indeterminate sex and pseudohermaphroditism

Q60 Renal agenesis and other reduction defects of kidney

Q61 Cystic kidney disease

Q62 Congenital obstructive defects of renal pelvis and congenital malformations of ureter

Q63 Other congenital malformations of kidney

Q64 Other congenital malformations of urinary system

Q65 Congenital deformities of hip

Q66 Congenital deformities of feet

Q67 Congenital musculoskeletal deformities of head, face, spine and chest

Q68 Other congenital musculoskeletal deformities

Q69 Polydactyly

Q70 Syndactyly

Q71 Reduction defects of upper limb

Q72 Reduction defects of lower limb

Q73 Reduction defects of unspecified limb

Q74 Other congenital malformations of limb(s)

Q75 Other congenital malformations of skull and face bones

Q76 Congenital malformations of spine and bony thorax

Q77 Osteochondrodysplasia with defects of growth of tubular bones and spine

Q78 Other osteochondrodysplasias

Q79 Congenital malformations of the musculoskeletal system, not elsewhere classified

Q80 Congenital ichthyosis

Q81 Epidermolysis bullosa

Q82 Other congenital malformations of skin

Q83 Congenital malformations of breast

Q84 Other congenital malformations of integument

Q85 Phakomatoses, not elsewhere classified

Q86 Congenital malformation syndromes due to known exogenous causes, not else where classified

Q87 Other specified congenital malformation syndromes affecting multiple systems

Q89 Other congenital malformations, not elsewhere classified

Q90 Down syndrome

N2 Disorders related to fetal growth

P05 Slow fetal growth and fetal malnutrition

P05.0 Light for gestational age

Usually referred to as weight below but length above 10th centile for gestational age

Light-for-dates

P05.1 Small for gestational age

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Small-for-dates

Small-and-light-for-dates

P05.2 Fetal malnutrition without mention of light or small for gestational age

Infant, not light or small for gestational age, showing signs of fetal malnutrition, such as dry, peeling skin and loss of subcutaneous tissue

P05.9 Slow fetal growth, unspecified

Fetal growth retardation NOS

P08 Disorders related to long gestation and high birth weight

Note: When both birth weight and gestational age are available, priority of assignment should be given to birth weight.

P08.0 Exceptionally large baby

Usually implies a birth weight of 4500 g or more

P08.1 Other heavy for gestational age infants

Usually implies a birth weight > 90th percentile for gestational age or 4000 g or more at term

Other fetus or infant heavy- or large-for-dates regardless of period of gestation

P08.2   Post-term infant, not heavy for gestational age

Fetus or infant with gestation period of 42 completed weeks or more (294 days or more), not heavy- or large-for-dates

Postmaturity NOS

N3 Birth trauma

P10 Intracranial laceration and haemorrhage due to birth injury

P10.0   Subdural haemorrhage due to birth injury

Subdural haematoma (localized) due to birth injury

P10.1   Cerebral haemorrhage due to birth injury

P10.2   Intraventricular haemorrhage due to birth injury

P10.3   Subarachnoid haemorrhage due to birth injury

P10.4   Tentorial tear due to birth injury

P10.8   Other intracranial lacerations and haemorrhages due to birth injury

P10.9   Unspecified intracranial laceration and haemorrhage due to birth injury

P11 Other birth injuries to central nervous system

P11.0   Cerebral oedema due to birth injury

P11.1   Other specified brain damage due to birth injury

P11.2   Unspecified brain damage due to birth injury

P11.3   Birth injury to facial nerve

Facial palsy due to birth injury

P11.4   Birth injury to other cranial nerves

P11.5   Birth injury to spine and spinal cord

Fracture of spine due to birth injury

P11.9   Birth injury to central nervous system, unspecified

P12 Birth injury to scalp

P12.0 **Cephalhaematoma due to birth injury**

P12.1 **Chignon due to birth injury**

P12.2 **Epicranial subaponeurotic haemorrhage due to birth injury**

P12.3 **Bruising of scalp due to birth injury**

P12.4 **Monitoring injury of scalp of newborn**

> Sampling incision
>
> Scalp clip (electrode) injury

P12.8 **Other birth injuries to scalp**

P12.9 **Birth injury to scalp, unspecified**

P13 Birth injury to skeleton

P13.0 **Fracture of skull due to birth injury**

P13.1 **Other birth injuries to skull**

P13.2 **Birth injury to femur**

P13.3 **Birth injury to other long bones**

P13.4 **Fracture of clavicle due to birth injury**

P13.8 **Birth injuries to other parts of skeleton**

P13.9 **Birth injury to skeleton, unspecified**

P14 Birth injury to peripheral nervous system

P14.0 **Erb paralysis due to birth injury**

P14.1 **Klumpke paralysis due to birth injury**

P14.2 **Phrenic nerve paralysis due to birth injury**

P14.3 **Other brachial plexus birth injuries**

P14.8 **Birth injuries to other parts of peripheral nervous system**

P14.9 **Birth injury to peripheral nervous system, unspecified**

P15 Other birth injuries

P15.0   Birth injury to liver

Rupture of liver due to birth injury

P15.1   Birth injury to spleen

Rupture of spleen due to birth injury

P15.2   Sternomastoid injury due to birth injury

P15.3   Birth injury to eye

Subconjunctival haemorrhage due to birth injury

Traumatic glaucoma due to birth injury

P15.4   Birth injury to face

Facial congestion due to birth injury

P15.5   Birth injury to external genitalia

P15.6   Subcutaneous fat necrosis due to birth injury

P15.8   Other specified birth injuries

P15.9   Birth injury, unspecified

N4 Complications of intrapartum events

P20 Intrauterine hypoxia

P20.1   Intrauterine hypoxia first noted during labour and delivery

P20.9   Intrauterine hypoxia, unspecified

P21 Birth asphyxia

Note: This category is not to be used for low Apgar score without mention of asphyxia or other respiratory problems.

P21.0   Severe birth asphyxia

Pulse less than 100 per minute at birth and falling or steady, respiration absent or gasping, colour poor, tone absent

Asphyxia with 1-minute Apgar score 0–3

White asphyxia

P21.1   Mild and moderate birth asphyxia

Normal respiration not established within 1 minute, but heart rate 100 or above, some muscle tone present, some response to stimulation

Asphyxia with 1-minute Apgar score 4–7

Blue asphyxia

P21.9   Birth asphyxia, unspecified

Anoxia NOS

Asphyxia NOS

Hypoxia NOS

N5 Convulsions and disorders of cerebral status

P90 Convulsions of newborn

P91 Other disturbances of cerebral status of newborn

P91.0   Neonatal cerebral ischaemia

P91.1   Acquired periventricular cysts of newborn

P91.2   Neonatal cerebral leukomalacia

P91.3   Neonatal cerebral irritability

P91.4   Neonatal cerebral depression

P91.5   Neonatal coma

P91.6   Hypoxic ischaemic encephalopathy of newborn

P91.8   Other specified disturbances of cerebral status of newborn

P91.9   Disturbance of cerebral status of newborn, unspecified

N6 Infection

A33   Tetanus neonatorum

A50   Congenital syphilis

A50.0   Early congenital syphilis, symptomatic

A50.1   Early congenital syphilis, latent

A50.2 Early congenital syphilis, unspecified

A50.9 Congenital syphilis, unspecified

G00 Bacterial meningitis, not elsewhere classified

G00.0 Haemophilus meningitis

Meningitis due to *Haemophilus influenzae*

G00.1 Pneumococcal meningitis

G00.2 Streptococcal meningitis

G00.3 Staphylococcal meningitis

G00.8 Other bacterial meningitis

G00.9 Bacterial meningitis, unspecified

G01 Meningitis in bacterial diseases classified elsewhere

G02 Meningitis in other infectious and parasitic diseases classified elsewhere

G02.0 Meningitis in viral diseases classified elsewhere

G02.1 Meningitis in mycoses

G02.8 Meningitis in other specified infectious and parasitic diseases classified elsewhere

G03 Meningitis due to other and unspecified causes

G03.0 Nonpyogenic meningitis

Nonbacterial meningitis

G03.1 Chronic meningitis

G03.2 Benign recurrent meningitis [Mollaret]

G03.8 Meningitis due to other specified causes

G03.9 Meningitis, unspecified

G04   Encephalitis, myelitis and encephalomyelitis

G04.0 Acute disseminated encephalitis

G04.1 Tropical spastic paraplegia

G04.2 Bacterial meningoencephalitis and meningomyelitis, not elsewhere classified

G04.8 Other encephalitis, myelitis and encephalomyelitis

G04.9 Encephalitis, myelitis and encephalomyelitis, unspecified

G05   Encephalitis, myelitis and encephalomyelitis in diseases classified elsewhere

G05.0 Encephalitis, myelitis and encephalomyelitis in bacterial diseases classified elsewhere

G05.1 Encephalitis, myelitis and encephalomyelitis in viral diseases classified elsewhere

G05.2 Encephalitis, myelitis and encephalomyelitis in other infectious and parasitic diseases classified elsewhere

G06   Intracranial and intraspinal abscess and granuloma

G06.0 Intracranial abscess and granuloma

G06.1 Intraspinal abscess and granuloma

G06.2 Extradural and subdural abscess, unspecified

G07   Intracranial and intraspinal abscess and granuloma in diseases classified elsewhere

G08   Intracranial and intraspinal phlebitis and thrombophlebitis

G09   Sequelae of inflammatory diseases of central nervous system

P23 Congenital pneumonia

Incl.: infective pneumonia acquired in utero or during birth

P23.0 Congenital pneumonia due to viral agent

P23.1 Congenital pneumonia due to Chlamydia

P23.2 Congenital pneumonia due to staphylococcus

P23.3 Congenital pneumonia due to streptococcus, group B

P23.4 Congenital pneumonia due to Escherichia coli

P23.5 Congenital pneumonia due to Pseudomonas

P23.6 Congenital pneumonia due to other bacterial agents

Haemophilus influenzae

Klebsiella pneumoniae

Mycoplasma

Streptococcus, except group B

P23.8 Congenital pneumonia due to other organisms

P23.9 Congenital pneumonia, unspecified

P35 Congenital viral diseases

P35.0 Congenital rubella syndrome

Congenital rubella pneumonitis

P35.1 Congenital cytomegalovirus infection

P35.2 Congenital herpesviral [herpes simplex] infection

P35.3 Congenital viral hepatitis

P35.8 Other congenital viral diseases

Congenital varicella [chickenpox]

P35.9 Congenital viral disease, unspecified

P36 Bacterial sepsis of newborn

Incl.: congenital septicaemia

P36.0 Sepsis of newborn due to streptococcus, group B

P36.1 Sepsis of newborn due to other and unspecified streptococci

P36.2 Sepsis of newborn due to Staphylococcus aureus

P36.3 Sepsis of newborn due to other and unspecified staphylococci

P36.4 Sepsis of newborn due to Escherichia coli

P36.5 Sepsis of newborn due to anaerobes

P36.8   Other bacterial sepsis of newborn

P36.9   Bacterial sepsis of newborn, unspecified

P37 Other congenital infectious and parasitic diseases

P37.0   Congenital tuberculosis

P37.1   Congenital toxoplasmosis

Hydrocephalus due to congenital toxoplasmosis

P37.2   Neonatal (disseminated) listeriosis

P37.3   Congenital falciparum malaria

P37.4   Other congenital malaria

P37.5   Neonatal candidiasis

P37.8   Other specified congenital infectious and parasitic diseases

P37.9   Congenital infectious and parasitic disease, unspecified

P38 Omphalitis of newborn with or without mild haemorrhage

P39 Other infections specific to the perinatal period

P39.0   Neonatal infective mastitis

P39.1   Neonatal conjunctivitis and dacryocystitis

Neonatal chlamydial conjunctivitis

Ophthalmia neonatorum NOS

P39.2   Intra-amniotic infection of fetus, not elsewhere classified

P39.3   Neonatal urinary tract infection

P39.4   Neonatal skin infection

Neonatal pyoderma

P39.8   Other specified infections specific to the perinatal period

P39.9   Infection specific to the perinatal period, unspecified

N7 Respiratory and cardiovascular disorders

P22 Respiratory distress of newborn

P22.0 **Respiratory distress syndrome of newborn**

Hyaline membrane disease

P22.1 **Transient tachypnoea of newborn**

P22.8 **Other respiratory distress of newborn**

P22.9 **Respiratory distress of newborn, unspecified**

P24 Neonatal aspiration syndromes

Incl.: neonatal pneumonia resulting from aspiration

P24.0 **Neonatal aspiration of meconium**

P24.1 **Neonatal aspiration of amniotic fluid and mucus**

Aspiration of liquor (amnii)

P24.2 **Neonatal aspiration of blood**

P24.3 **Neonatal aspiration of milk and regurgitated food**

P24.8 **Other neonatal aspiration syndromes**

P24.9 **Neonatal aspiration syndrome, unspecified**

Neonatal aspiration pneumonia NOS

P25 Interstitial emphysema and related conditions originating in the perinatal period

P25.0 **Interstitial emphysema originating in the perinatal period**

P25.1 **Pneumothorax originating in the perinatal period**

P25.2 **Pneumomediastinum originating in the perinatal period**

P25.3 **Pneumopericardium originating in the perinatal period**

P25.8 **Other conditions related to interstitial emphysema originating in the perinatal period**

P26 Pulmonary haemorrhage originating in the perinatal period

P26.0 **Tracheobronchial haemorrhage originating in the perinatal period**

P26.1 **Massive pulmonary haemorrhage originating in the perinatal period**

P26.8   Other pulmonary haemorrhages originating in the perinatal period

P26.9   Unspecified pulmonary haemorrhage originating in the perinatal period

P27 Chronic respiratory disease originating in the perinatal period

P27.0   Wilson-Mikity syndrome

Pulmonary dysmaturity

P27.1   Bronchopulmonary dysplasia originating in the perinatal period

P27.8   Other chronic respiratory diseases originating in the perinatal period

Congenital pulmonary fibrosis

Ventilator lung in newborn

P27.9   Unspecified chronic respiratory disease originating in the perinatal period

P28 Other respiratory conditions originating in the perinatal period

P28.0   Primary atelectasis of newborn

Primary failure to expand terminal respiratory units

Pulmonary:

· hypoplasia associated with short gestation
· immaturity NOS

P28.1   Other and unspecified atelectasis of newborn

Atelectasis:

· NOS
· partial
· secondary

Resorption atelectasis without respiratory distress syndrome

P28.2   Cyanotic attacks of newborn

P28.3   Primary sleep apnoea of newborn

Sleep apnoea of newborn:

· central
· NOS
· obstructive

P28.4   Other apnoea of newborn

Apnoea (of):

- newborn, obstructive
- prematurity

P28.5   Respiratory failure of newborn

P28.8   Other specified respiratory conditions of newborn

Congenital (laryngeal) stridor NOS

Snuffles in newborn

P28.9   Respiratory condition of newborn, unspecified

P29   Cardiovascular disorders originating in the perinatal period

P29.0   Neonatal cardiac failure

P29.1   Neonatal cardiac dysrhythmia

P29.2   Neonatal hypertension

P29.3   Persistent fetal circulation

Delayed closure of ductus arteriosus

Pulmonary hypertension of newborn (persistent)

P29.4   Transient myocardial ischaemia of newborn

P29.8   Other cardiovascular disorders originating in the perinatal period

P29.9   Cardiovascular disorder originating in the perinatal period, unspecified

N8 Other neonatal conditions

P50 Fetal blood loss

P50.0   Fetal blood loss from vasa praevia

P50.1   Fetal blood loss from ruptured cord

P50.2   Fetal blood loss from placenta

P50.3   Haemorrhage into co-twin

P50.4   Haemorrhage into maternal circulation

P50.5   Fetal blood loss from cut end of co-twin's cord

P50.8   Other fetal blood loss

P50.9 Fetal blood loss, unspecified

Fetal haemorrhage NOS

P51 Umbilical haemorrhage of newborn

P51.0 Massive umbilical haemorrhage of newborn

P51.8 Other umbilical haemorrhages of newborn

Slipped umbilical ligature NOS

P51.9 Umbilical haemorrhage of newborn, unspecified

P52 Intracranial nontraumatic haemorrhage of fetus and newborn

P52.0 Intraventricular (nontraumatic) haemorrhage, grade 1, of fetus and newborn

Subependymal haemorrhage (without intraventricular extension)

P52.1 Intraventricular (nontraumatic) haemorrhage, grade 2, of fetus and newborn

Subependymal haemorrhage with intraventricular extension

P52.2 Intraventricular (nontraumatic) haemorrhage, grade 3, and grade 4 of fetus and newborn

Subependymal haemorrhage with both intraventricular and intracerebral extension

P52.3 Unspecified intraventricular (nontraumatic) haemorrhage of fetus and newborn

P52.4 Intracerebral (nontraumatic) haemorrhage of fetus and newborn

P52.5 Subarachnoid (nontraumatic) haemorrhage of fetus and newborn

P52.6 Cerebellar (nontraumatic) and posterior fossa haemorrhage of fetus and newborn

P52.8 Other intracranial (nontraumatic) haemorrhages of fetus and newborn

P52.9 Intracranial (nontraumatic) haemorrhage of fetus and newborn, unspecified

P53 Haemorrhagic disease of fetus and newborn

Incl.: Vitamin K deficiency of newborn

P54 Other neonatal haemorrhages

P54.0 Neonatal haematemesis

P54.1 Neonatal melaena

P54.2 **Neonatal rectal haemorrhage**

P54.3 **Other neonatal gastrointestinal haemorrhage**

P54.4 **Neonatal adrenal haemorrhage**

P54.5 **Neonatal cutaneous haemorrhage**

P54.6 **Neonatal vaginal haemorrhage**

Pseudomenses

P54.8 **Other specified neonatal haemorrhages**

P54.9 **Neonatal haemorrhage, unspecified**

P55 Haemolytic disease of fetus and newborn

P55.0 **Rhesus isoimmunization of fetus and newborn**

P55.1 **ABO isoimmunization of fetus and newborn**

P55.8 **Other haemolytic diseases of fetus and newborn**

P55.9 **Haemolytic disease of fetus and newborn, unspecified**

P56 Hydrops fetalis due to haemolytic disease

P56.0 **Hydrops fetalis due to isoimmunization**

P56.9 **Hydrops fetalis due to other and unspecified haemolytic disease**

P57 Kernicterus

P57.0 **Kernicterus due to isoimmunization**

P57.8 **Other specified kernicterus**

P57.9 **Kernicterus, unspecified**

P58 Neonatal jaundice due to other excessive haemolysis

P58.0 **Neonatal jaundice due to bruising**

P58.1 **Neonatal jaundice due to bleeding**

P58.2 **Neonatal jaundice due to infection**

P58.3 **Neonatal jaundice due to polycythaemia**

P58.4 **Neonatal jaundice due to drugs or toxins transmitted from mother or given to newborn**

P58.5   Neonatal jaundice due to swallowed maternal blood

P58.8   Neonatal jaundice due to other specified excessive haemolysis

P58.9   Neonatal jaundice due to excessive haemolysis, unspecified

P59 Neonatal jaundice from other and unspecified causes

P59.0   Neonatal jaundice associated with preterm delivery

Hyperbilirubinaemia of prematurity

Jaundice due to delayed conjugation associated with preterm delivery

P59.1   Inspissated bile syndrome

P59.2   Neonatal jaundice from other and unspecified hepatocellular damage

Fetal or neonatal giant cell hepatitis

Fetal or neonatal (idiopathic) hepatitis

P59.3   Neonatal jaundice from breast-milk inhibitor

P59.8   Neonatal jaundice from other specified causes

P59.9   Neonatal jaundice, unspecified

Physiological jaundice (intense) (prolonged) NOS

P60 Disseminated intravascular coagulation of fetus and newborn

P61 Other perinatal haematological disorders

P61.0   Transient neonatal thrombocytopenia

Neonatal thrombocytopenia due to:

- exchange transfusion
- idiopathic maternal thrombocytopenia
- isoimmunization

P61.1   Polycythaemia neonatorum

P61.2   Anaemia of prematurity

P61.3   Congenital anaemia from fetal blood loss

P61.4   Other congenital anaemias, not elsewhere classified

Congenital anaemia NOS

P61.5 Transient neonatal neutropenia

P61.6 Other transient neonatal disorders of coagulation

P61.8 Other specified perinatal haematological disorders

P61.9 Perinatal haematological disorder, unspecified

P75 Meconium ileus in cystic fibrosis

P76 Other intestinal obstruction of newborn

P76.0 Meconium plug syndrome

Meconium ileus in cases where cystic fibrosis is known not to be present

P76.1 Transitory ileus of newborn

P76.2 Intestinal obstruction due to inspissated milk

P76.8 Other specified intestinal obstruction of newborn

P76.9 Intestinal obstruction of newborn, unspecified

P77 Necrotizing enterocolitis of fetus and newborn

P78 Other perinatal digestive system disorders

P78.0 Perinatal intestinal perforation

Meconium peritonitis

P78.1 Other neonatal peritonitis

Neonatal peritonitis NOS

P78.2 Neonatal haematemesis and melaena due to swallowed maternal blood

P78.3 Noninfective neonatal diarrhoea

P78.8 Other specified perinatal digestive system disorders

Congenital cirrhosis (of liver)

Neonatal oesophageal reflux

Peptic ulcer of newborn

P78.9 Perinatal digestive system disorder, unspecified

P80 Hypothermia of newborn

P80.0 Cold injury syndrome

Severe and usually chronic hypothermia associated with a pink flushed appearance, oedema, and neurological and biochemical abnormalities

P80.8 Other hypothermia of newborn

Mild hypothermia of newborn

P80.9   Hypothermia of newborn, unspecified

P81 Other disturbances of temperature regulation of newborn

P81.0 Environmental hyperthermia of newborn

P81.8 Other specified disturbances of temperature regulation of newborn

P81.9 Disturbance of temperature regulation of newborn, unspecified

Fever of newborn NOS

P83 Other conditions of integument specific to fetus and newborn

P83.0 Sclerema neonatorum

P83.1 Neonatal erythema toxicum

P83.2 Hydrops fetalis not due to haemolytic disease

Hydrops fetalis NOS

P83.3 Other and unspecified oedema specific to fetus and newborn

P83.8 Other specified conditions of integument specific to fetus and newborn

Bronze baby syndrome

Neonatal scleroderma

Urticaria neonatorum

P83.9 Condition of integument specific to fetus and newborn, unspecified

P92 Feeding problems of newborn

P92.0 Vomiting in newborn

P92.1 Regurgitation and rumination in newborn

P92.2   Slow feeding of newborn

P92.3   Underfeeding of newborn

P92.4   Overfeeding of newborn

P92.5   Neonatal difficulty in feeding at breast

P92.8   Other feeding problems of newborn

P92.9   Feeding problem of newborn, unspecified

P93 Reactions and intoxications due to drugs administered to fetus and newborn

Incl.: Grey syndrome from chloramphenicol administration in newborn

P94 Disorders of muscle tone of newborn

P94.0   Transient neonatal myasthenia gravis

P94.1   Congenital hypertonia

P94.2   Congenital hypotonia

Nonspecific floppy baby syndrome

P94.8   Other disorders of muscle tone of newborn

P94.9   Disorder of muscle tone of newborn, unspecified

N9 Low birth weight and prematurity

P07 Disorders related to short gestation and low birth weight, not elsewhere classified

Note: When both birth weight and gestational age are available, priority of assignment should be given to birth weight.

Incl.: the listed conditions, without further specification, as the cause of mortality, morbidity or additional care in newborn

P07.0   Extremely low birth weight

Birth weight 999 g or less

P07.1   Other low birth weight

Birth weight 1000–2499 g

P07.2 Extreme immaturity

Less than 28 completed weeks (less than 196 completed days) of gestation

P07.3 Other preterm infants

28 completed weeks or more but less than 37 completed weeks (196 completed days but less than 259 completed days) of gestation

Prematurity NOS

N10 Miscellaneous

While a perinatal death is most often coded to P05–P96 or a Q code, there are cases where codes from several other sections of ICD-10 should be used. For an extensive list see ICD-10 version:2016 and ICD-10 volume 2: instruction manual (2010)[7]

N11 Neonatal death of unspecified cause

P96 Other conditions originating in the perinatal period

P96.0 Congenital renal failure

Uraemia of newborn

P96.1 Neonatal withdrawal symptoms from maternal use of drugs of addiction

Drug withdrawal syndrome in infant of dependent mother

Neonatal abstinence syndrome

P96.2 Withdrawal symptoms from therapeutic use of drugs in newborn

P96.4 Termination of pregnancy, affecting fetus and newborn

P96.5 Complications of intrauterine procedures, not elsewhere classified

P96.8 Other specified conditions originating in the perinatal period

P96.9 Condition originating in the perinatal period, unspecified

Congenital debility NOS

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7   Available at: http://www.who.int/classifications/icd/icdonlineversions/en/

Annex D: ICD-PM groups and ICD-10 codes for maternal conditions in perinatal death

In order to group and tabulate a perinatal death, the user needs information on the timing of the perinatal death (antepartum/intrapartum/neonatal) as well as the ICD-10 cause of death code. The information provided about the cause of death and the maternal condition should meet the ICD-10 coding rules for assigning a specific code before any tabulation can be undertaken. The codes included below are indicative for tabulation of data; for coding deaths, ICD-10 version:2016 and ICD-10 volume 2: instruction manual (2010) should be utilized.[8]

M1 Complications of placenta, cord and membranes

P02 Fetus and newborn affected by complications of placenta, cord and membranes

P02.0   Fetus and newborn affected by placenta praevia

P02.1   Fetus and newborn affected by other forms of placental separation and haemorrhage

Abruptio placentae

Accidental haemorrhage

Antepartum haemorrhage

Damage to placenta from amniocentesis, caesarean section or surgical induction

Maternal blood loss

Premature separation of placenta

P02.2   Fetus and newborn affected by other and unspecified morphological and functional abnormalities of placenta

Placental:

- dysfunction
- infarction
- insufficiency

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8   Available at: http://www.who.int/classifications/icd/icdonlineversions/en/

P02.3 Fetus and newborn affected by placental transfusion syndromes

Placental and cord abnormalities resulting in twin-to-twin or other transplacental transfusion

Use additional code, if desired, to indicate resultant condition in the fetus or newborn.

P02.4 Fetus and newborn affected by prolapsed cord

P02.5 Fetus and newborn affected by other compression of umbilical cord

Cord (tightly) around neck

Entanglement of cord

Knot in cord

P02.6 Fetus and newborn affected by other and unspecified conditions of umbilical cord

Short cord

Vasa praevia

P02.7 Fetus and newborn affected by chorioamnionitis

Amnionitis

Membranitis

Placentitis

P02.8 Fetus and newborn affected by other abnormalities of membranes

P02.9 Fetus and newborn affected by abnormality of membranes, unspecified

M2 Maternal complications of pregnancy

P01 Fetus and newborn affected by maternal complications of pregnancy

P01.0 Fetus and newborn affected by incompetent cervix

P01.1 Fetus and newborn affected by premature rupture of membranes

P01.2 Fetus and newborn affected by oligohydramnios

P01.3 Fetus and newborn affected by polyhydramnios

Hydramnios

P01.4 Fetus and newborn affected by ectopic pregnancy

Abdominal pregnancy

P01.5 **Fetus and newborn affected by multiple pregnancy**

Triplet (pregnancy)

Twin (pregnancy)

P01.6 **Fetus and newborn affected by maternal death**

P01.7 **Fetus and newborn affected by malpresentation before labour**

P01.8 **Fetus and newborn affected by other maternal complications of pregnancy**

Spontaneous abortion, fetus

P01.9 **Fetus and newborn affected by maternal complication of pregnancy, unspecified**

M3 Other complications of labour and delivery

P03 Fetus and newborn affected by other complications of labour and delivery

P03.0 **Fetus and newborn affected by breech delivery and extraction**

P03.1 **Fetus and newborn affected by other malpresentation, malposition and dispro portion during labour and delivery**

Contracted pelvis

Fetus or newborn affected by conditions classifiable to O64–O66

Persistent occipitoposterior

Transverse lie

P03.2 **Fetus and newborn affected by forceps delivery**

P03.3 **Fetus and newborn affected by delivery by vacuum extractor [ventouse]**

P03.4 **Fetus and newborn affected by caesarean delivery**

P03.5 **Fetus and newborn affected by precipitate delivery**

Rapid second stage

P03.6 **Fetus and newborn affected by abnormal uterine contractions**

Fetus or newborn affected by conditions classifiable to O62.-, except O62.3

Hypertonic labour

Uterine inertia

P03.8 Fetus and newborn affected by other specified complications of labour and delivery

Abnormality of maternal soft tissues

Destructive operation to facilitate delivery

Fetus or newborn affected by conditions classifiable to O60–O75 and by proce dures used in labour and delivery not included in P02.– and P03.0–P03.6

Induction of labour

P03.9 Fetus and newborn affected by complication of labour and delivery, unspecified

M4 Maternal medical and surgical conditions

P00 Fetus and newborn affected by maternal conditions that may be unrelated to present pregnancy

P00.0 Fetus and newborn affected by maternal hypertensive disorders

Fetus or newborn affected by maternal conditions classifiable to O10–O11, O13–O16

P00.1 Fetus and newborn affected by maternal renal and urinary tract diseases

Fetus or newborn affected by maternal conditions classifiable to N00–N39

P00.2 Fetus and newborn affected by maternal infectious and parasitic diseases

Fetus or newborn affected by maternal infectious disease classifiable to A00–B99 and J09–J11, but not itself manifesting that disease

P00.3 Fetus and newborn affected by other maternal circulatory and respiratory diseases

Fetus or newborn affected by maternal conditions classifiable to I00–I99, J00–J99, Q20–Q34 and not included in P00.0, P00.2

P00.4 Fetus and newborn affected by maternal nutritional disorders

Fetus or newborn affected by maternal disorders classifiable to E40–E64

Maternal malnutrition NOS

P00.5 Fetus and newborn affected by maternal injury

Fetus or newborn affected by maternal conditions classifiable to S00–T79

P00.6 Fetus and newborn affected by surgical procedure on mother

P00.7 Fetus and newborn affected by other medical procedures on mother, not else where classified

Fetus or newborn affected by radiology on mother

P00.8 Fetus and newborn affected by other maternal conditions

Fetus or newborn affected by:

- conditions classifiable to T80–T88
- maternal genital tract and other localized infections
- maternal systemic lupus erythematosus

P00.9 Fetus and newborn affected by unspecified maternal condition

P04 Fetus and newborn affected by noxious influences transmitted via placenta or breast-milk

Incl.: nonteratogenic effects of substances transmitted via placenta

P04.0 Fetus and newborn affected by maternal anaesthesia and analgesia in pregnancy, labour and delivery

Reactions and intoxications from maternal opiates and tranquillizers administered during labour and delivery

P04.1 Fetus and newborn affected by other maternal medication

Cancer chemotherapy

Cytotoxic drugs

P04.2 Fetus and newborn affected by maternal use of tobacco

P04.3 Fetus and newborn affected by maternal use of alcohol

P04.4 Fetus and newborn affected by maternal use of drugs of addiction

P04.5 Fetus and newborn affected by maternal use of nutritional chemical substances

P04.6 Fetus and newborn affected by maternal exposure to environmental chemical substances

P04.8 Fetus and newborn affected by other maternal noxious influences

P04.9 Fetus and newborn affected by maternal noxious influence, unspecified

M5 No maternal condition

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