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Training Manual on ICD 10

[for doctors, nurses and statisticians]

Management Information System
Directorate General of Health Services
Mohakhali, Dhaka 1212,
Bangladesh
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Introduction

International Classification of Diseases (ICD) is a global standard for reporting medical diagnoses, procedures and causes of death developed by the World Health Organization. This standard allows to exchange terminologies on medical diagnoses, procedures and causes of deaths across all languages in the world and simplifies statistical analysis. The current version of the classification is ICD-10. The Management Information System (MIS) of the DGHS, were facing enormous problem in processing disease and cause-specific data due to absence of practice of ICD-10 in health facilities. MIS was in urgent need for introducing use of ICD-10 in medical practice of Bangladesh in public and private settings. However, the immediate limitation was absence of a user friendly training manual considering country context.

Objectives

At the end of the sessions the participants will be able to

- Understand ICD 10
- List the importance of ICD 10
- Use the guidebook on ICD 10
- Use ICD 10 in morbidity and mortality recoding and reporting
- Write the appropriate code for the diagnosis of disease and cause of death according to ICD 10
- Write International Form of Medical Certification of Death according to ICD 10
- List the most common diagnosis and codes, which they regularly deal with.
- Acquire skills for clinical reasoning

Participants

1. Doctors
2. Nurses/Midwives
3. Statistician
4. Medical Record Keeper/Data-entry Operators/Coder

Targeted health facility

Indoor patient departments of the Primary, Secondary and Tertiary level health care facilities.

Duration of the Training

2 Days

1st day: Presentation and discussion;

2nd Day: Practical session, demonstration, hands on training and problem solving exercise

Method of training

- Interactive lectures

- Practical session and

- Exercise with examples

- Evaluation (Pre-test and post-test)

Training Aids

1. Multimedia
2. Laptop
3. Training Module (Guidebook on ICD 10 and Training Manual on ICD 10)
4. Power Point Presentation
5. Group work and exercise

Content details

Basic information on ICD 10

ICD stands for International Classification of Diseases. This classification system has been developed by the World Health Organization (WHO). ICD is the world's standard tool to capture mortality and morbidity data. It organizes and codes health information that is used for statistics and epidemiology, health care management, allocation of resources, monitoring and evaluation, research, primary care, prevention and treatment. It helps to provide a picture of the general health situation of the country and population. ICD is used world-wide for morbidity and mortality statistics, reimbursement systems and automated decision support in medicine. The design of ICD promotes international comparability in the collection, processing, classification and presentation of these statistics. The ICD contains only diagnosis codes. The WHO revises the ICD code-set periodically, and it is currently in its 10th edition. 11th revision ICD is ongoing and it will be effective by 2015. ICD-10 represents a fundamental overhaul of the previous ICD-9 coding system. The volume of ICD-10 codes as compared to ICD-9 codes is significant because in ICD-10, the code size has been expanded, code values and interpretations have been redefined and specificity has been further improved.

Importance of ICD 10

- Measuring the quality, safety (or medical errors) and efficacy of care
- Making clinical decisions based on output from multiple systems
- Conducting research, epidemiological studies and clinical trials
- Comparability between health facilities, regions and countries
- Setting health policy
- Designing healthcare delivery systems

- Monitoring resource utilization
- Improving clinical, financial and administrative performance
- Identifying fraudulent or abusive practices
- Managing care and disease processes
- Tracking public health and risks
- Providing data to consumers regarding costs and outcomes of treatment options.

Implementation of ICD-10 will impact the entire value chain of healthcare, including insurance, service delivery, scheduling, patient registration, patient care, customer service, revenue and reimbursement management, network management and risk management. It will bring about a change in collection and storage of data for analysis and evidence based decision making.

Why to write the ICD-10 code

- ICD is important because it provides a common language for reporting and monitoring diseases. This allows comparing and sharing of data in a consistent and standard way between hospitals, regions and countries over periods of time.

- It has been planned that ICD-10 codes will be introduced in all Bangladeshi hospitals, both in public and private.

- Initially ICD-10 codes will need to be reported for indoor patients.

- The MIS-DGHS will ask the hospitals to report morbidity and mortality as per ICD 10

- Use of ICD-10 codes will be integral part of this system.

Who is to write the ICD-10 code

- The doctor attending the patient will have the primary responsibility to write the ICD-10 code. The doctor who is writing the discharge, transfer, referral or death certificate of the patient will have to write or complete the ICD-10 code.

- The doctor writing the ICD-10 code should write his/her name legibly so that s/he can be contacted if required.

- The responsibility of ensuring ICD 10 code writing will be upon the supervisor or in-charge of the unit (RMOs/Assistant Registrars/Registrars/Specialists/Consultants/Unit heads/ UH&FPO/ Civil surgeon/ Superintendent/ Director)

- The completed case-sheet with ICD 10 code on discharge (including DOR, DORB), transfer, referral or death of patient will go to the medical record room for entry into national database. In case of incomplete or no ICD-10 code, the case-sheet/certificate will be returned to the corresponding doctor/unit for completing the job.

A few nomenclatures of ICD 10

There are three (3) main elements to the structure of the ICD-10. They are:

1. there are 3 volumes
2. there are 21 chapters (1 additional chapter for new codes)
3. the structure of the code is alphanumeric.

Volumes

ICD-10 comprises three volumes:

1. Volume 1 contains the main classifications;
2. Volume 2 provides guidance to users of the ICD; and
3. Volume 3 is the Alphabetical Index to the classification.

Volume 1 is the Tabular list, which is an alphanumeric listing of diseases and disease groups, along with inclusion and exclusion notes, some coding rules, special tabulation lists for mortality and morbidity, definitions and regulation.

Volume 2 is Instruction Manual. It provides:

- An introduction to, and instructions on how to use volumes 1 and 3;
- Guidelines for certification and rules for mortality coding;
- Guidelines for recording and coding for morbidity coding;
- Statistical presentation.

Volume 3 is the comprehensive Alphabetical index of the diseases and conditions found in the Tabular list.

Chapters

The classification is divided into 21 chapters. The first character of the ICD code is a letter, and each letter is associated with a particular chapter, except for the letter D, which is used in both Chapter II, Neoplasms, and Chapter III, Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism, and the letter H, which is used in both Chapter VII, Diseases of the eye and adnexa and Chapter VIII, Diseases of the ear and mastoid process.

Each chapter contains sufficient three-character categories to cover its content; not all available codes are used, allowing space for future revision and expansion.

1. Chapters I–XVII relate to diseases and other morbid conditions;
2. Chapter XIX to injuries, poisoning and certain other consequences of external causes;
3. The remaining chapters complete the range of subject matter nowadays included in diagnostic data;
4. Chapter XVIII covers Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified;

5. Chapter XX, External causes of morbidity and mortality, has also provided for any recorded external cause of diseases and other morbid conditions;
6. Finally, Chapter XXI, Factors influencing health status and contact with health services, is intended for the classification of data explaining the reason for contact with health-care services of a person not currently sick, or the circumstances in which the patient is receiving care at that particular time or otherwise having some bearing on that person's care;
7. There is one additional chapter which keeps provision for inclusion of new codes which are unavailable in the existing ICD.

Blocks of categories

The chapters are subdivided into homogeneous 'blocks' of three-character categories.

1. In Chapter I, the block titles reflect two axes of classification – mode of transmission and broad group of infecting organisms.
2. In Chapter II, the first axis is the behavior of the neoplasm; within behavior, the axis is mainly by site, although a few three-character categories are provided for important morphological types (e.g. leukaemias, lymphomas, melanomas, mesotheliomas, Kaposi sarcoma). The range of categories is given in parentheses after each block title.

Three-character categories

Within each block, some of the three-character categories are for single conditions, selected because of their frequency, severity or susceptibility to public health intervention, while others are for groups of diseases with some common characteristic. There is usually provision for 'other' conditions to be classified, allowing many different but rarer conditions, as well as 'unspecified' conditions, to be included.

Four-character subcategories

Although **not mandatory** for reporting at the international level, most of the three character categories are subdivided by means of a fourth, numeric character after a decimal point, allowing up to 10 subcategories. Where a three-character category is not subdivided, it is recommended that the **letter 'X'** be used to fill the fourth position so that the codes are of a standard length for data-processing.

How to find the code
It is easy to use computer software or ICD 10 website to find ICD codes

To find a code from ICD-10 guidebook

1. First find out the chapter to which the disease belongs to.
2. Then find out the block.
3. Then search the digit from the tabular list

How to write ICD-10 code

It is advised that each hospital ward will make a seal/printed in case sheet with the following information from the hospital's own local fund. Simple hand writing will also be allowed. However, all hand writings must be clear and legible.

ICD-10 Coding		
	Put tick mark	
	☐ Main Condition	☐ Other Condition
Chapter No		
Block No		
3-digit/4-digit Code		
Disease name		
Name of the Doctor		

❖ **At least 3 character category is mandatory level for reporting**

There may be question, why so many information to provide? Can we not simply go for writing 3-digit code or 4-digit code directly?

There are two reasons for requesting the information.

- First, to keep provision for cross-checking so that mistakes are identified and corrected.

- Second, to guide the doctor to follow the steps in sequence to easily find the correct ICD code.

Structure of the ICD-10 code:

The first character of the code is an alpha character, followed by two, three or four numeric characters.

The structure of the three-character category is:
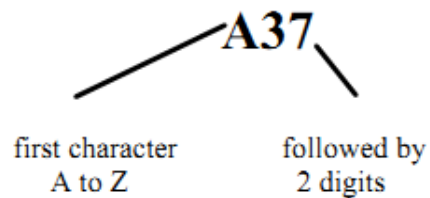
Most three-character categories are further subdivided into sub-categories to enable coding of a disease or condition more specifically.

A37.1

first character A-Z — followed by 2 digits — then a point — lastly another digit
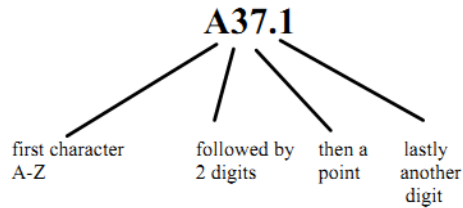
NOTE: In some countries and data collection systems, the decimal point may not be used, but for the purposes of this course the decimal point should be included in all exercises.

Writing Medical Certification of Cause of Death

In 1967, the Twentieth World Health Assembly defined the cause of death to be entered in the Medical Certification of Death as "all those diseases, morbid conditions or injuries which either resulted in or contributed to death and the circumstances of the accident or violence which produced any such injury". An International Form of Medical Certification of Death (please see below) has been developed and is in practice in most countries of the world. Unfortunately, this issue was not brought into due attention earlier in our country.

The death certificate is divided into three sections:

1. Part I—including diseases or conditions directly leading to death and antecedent causes

2. Part II—other significant conditions

3. a column to record the approximate interval between onset and death.

International Form of Medical Certification of Death

Causes of death		Approximate interval between onset and death
I. Disease or condition directly leading to death*	a) .... (Due to or as a consequence of)	....
Antecedent causes Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last	b) .... Due to or as a consequence of	....
	c) .... Due to or as a consequence of	....
	d) .... Due to or as a consequence of	....
II. Other significant conditions contributing to death, but not related to diseases or conditions causing it	....	....
*This does not mean the mode of dying, e.g., heart failure, respiratory failure. It means the disease, injury or complication that caused death		

With the improvement and growing demand of health information system, it is now a necessity that Bangladeshi hospitals will conform to the international standards of death certification and meet international obligation of death reporting for statistical purposes. Therefore, it has been decided that an Internationally Standard Medical Certification of Death Form will have to be enclosed with the deceased's case-sheet in case of any death event. The doctor writing the death certificate will have to complete the standard medical certification form.

Guidelines for mortality Coding

Concept of underlying cause of death:

Many Death Certificates give only a single cause of death. These are relatively simple to deal with and all you have to do is to code the single cause.

However, in many other cases, two or more morbid conditions contribute to death. These must all be recorded on the certificate. **In such cases it has been the practice in vital statistics to select one of the causes of death for coding and reporting purposes**. This single cause is called the Underlying Cause of Death. The concept of the underlying cause of death is central to mortality coding.

WHO has defined the underlying cause of death as:

- the disease or injury which initiated the train of morbid events leading directly to death; or
- the circumstances of the accident or violence which produced the fatal injury.

The person certifying the cause of death will enter the sequence of events leading to the death on the death certificate in the international format specified by WHO.

What would be the underlying cause of death in this case?
Coma resulting from the subdural haematoma after a fall from a ladder at work.

Sequence of events leading to death

Mortality statistics are based on the underlying cause of death, which is the disease or injury that initiated the sequence of events that led directly to death. For example, imagine a person dies of a cerebral haemorrhage following a motor vehicle accident. Cerebral haemorrhage is the direct cause of death—the motor vehicle accident is the underlying cause of death. The surgeon is concerned with the treatment of cerebral haemorrhage; the public health concern is to prevent deaths due to motor vehicle accidents (the underlying cause of death in this case). It is not always possible to complete all lines in the death certificate. On some death certificates, there will only be one cause of death, which becomes the underlying cause. But, in filling out death certificates, doctors should try to identify and record all the conditions in the sequence of events leading to death. For many deaths, there will more than one cause

and, in these cases, the doctor will need to establish a sequence of causes before determining the underlying cause.

Case study 1

A 50-year-old woman was admitted to the hospital vomiting blood and was diagnosed as having bleeding oesophageal varices. Investigation revealed portal hypertension. The woman had a history of hepatitis B infection. Three days later, she died. Figure-1 outlines the sequence of events that led to her death. It is extremely important that the underlying cause of each death is correctly determined and accurately recorded. In this case, hepatitis B was the underlying cause of death—not bleeding oesophageal varices, which was the immediate cause of death. Knowing this, the public health response is to implement immunisation programs against hepatitis B virus to prevent such deaths in future.
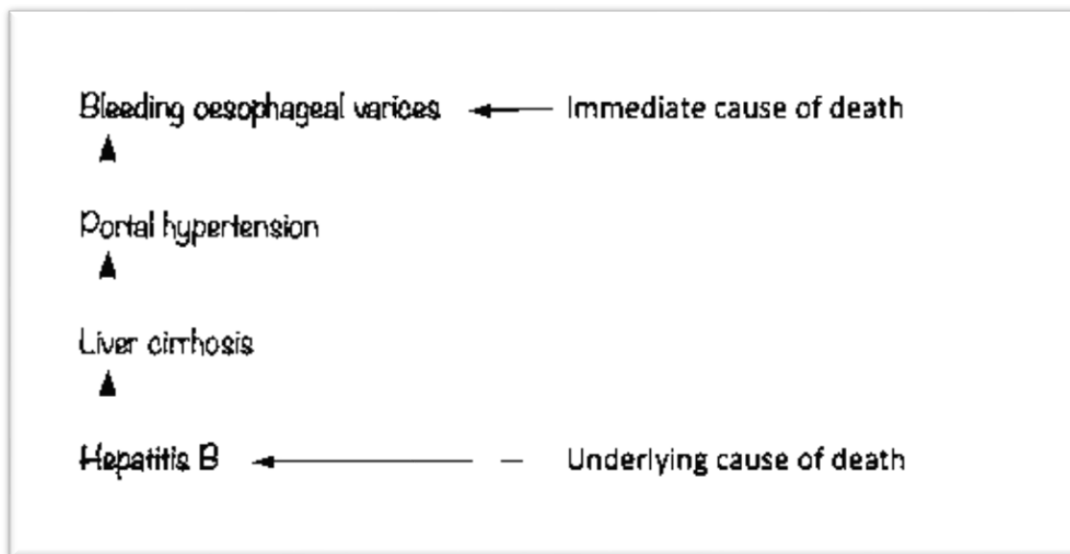
Figure-1

Contributory cause(s) of death

Causes that may have contributed to the death but do not form part of the sequence are listed on the death certificate as contributing causes. This will be discussed in details in Part II of the death certificate.

Case study 2

A man dies of cerebral haemorrhage due to secondary hypertension due to chronic pyelonephritis. The chronic pyelonephritis was due to outflow obstruction, which was due to prostatic adenoma. He also had a history of diabetes mellitus, which had been diagnosed 5 years before his death. Diabetes mellitus, which is not in the sequence of events leading to death, would have contributed to the death, and therefore should be entered in Part II of the death certificate.

Cerebral haemorrhage ← Immediate cause of death

Secondary hypertension

Chronic pyelonephritis due to outflow obstruction

Prostatic adenoma ← Underlying cause of death

Diabetes mellitus ← Contributory condition
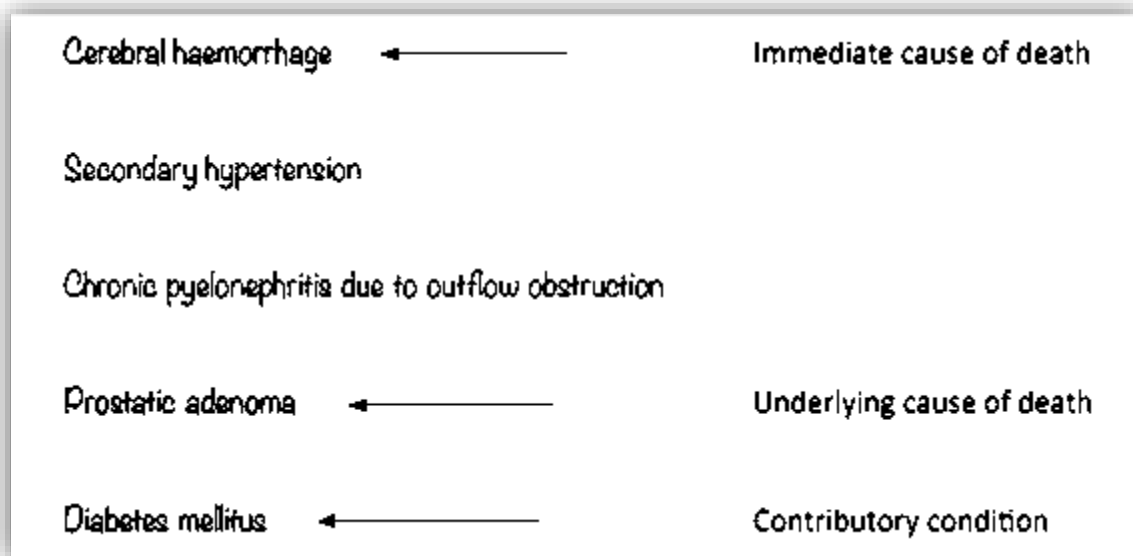
Part I of the death certificate

Part I of the death certificate has four lines for reporting the sequence of events leading to death; these are labelled I(a), I(b), I(c) and I(d). The immediate cause of death is entered at Part I(a). If the death was a consequence of another disease or condition, this underlying cause should be entered at I(b). If there are more events leading to death, write these in order at I(c) and I(d).

Important points

• Always use consecutive lines, never leave blank lines within the sequence of events.

• Each condition listed in Part I should cause the condition above it.

• If there is only one cause of death, it is entered at I(a).

The following examples are provided to highlight how a death certificate should be completed depending on the number of events there are in the sequence leading to death.

Case study 3

A 56-year-old man dies from acute myocardial infarction within 3 hours of its onset. He did not have any other illnesses. While it is rare to only have one event leading to death, it does occur.

In these cases, cause of death would be reported at I(a) and it would also form the underlying cause of the death, shown in Figure 2. If more information is available in the sequence of events leading to death, these must be reported using the lines provided at I(b), I(c) or I(d).

INTERNATIONAL FORM OF MEDICAL CERTIFICATE OF CAUSE OF DEATH

	Cause of death	Approximate interval between onset and death
I Disease or condition directly leading to death*	(a) _Acute myocardial infarction_	_3 hours_
	due to (or as a consequence of)	
Antecedent causes Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last	(b) _____	_____
	due to (or as a consequence of)	
	(c) _____	_____
	due to (or as a consequence of)	
	(d) _____	_____
II Other significant conditions contributing to the death, but not related to the disease or condition causing it	_____ _____	_____ _____

* This does not mean the mode of dying, e.g. heart failure, respiratory failure. It means the disease, injury or complication that caused death.

Figure 2

Case study 4

A 56-year-old person dies from abscess of the lung, which resulted from lobar pneumonia of the left lung. When there are two causes of death reported, these are written in at I(a) and I(b), as shown in Figure 3. In this case, underlying cause of death is recorded in line I(b).

INTERNATIONAL FORM OF MEDICAL CERTIFICATE OF CAUSE OF DEATH

Cause of death		Approximate Interval between onset and death
I Disease or condition directly leading to death*	(a) _Abscess of lung_ due to (or as a consequence of)	_5 days_
Antecedent causes Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last	(b) _Lobar pneumonia left lung_ due to (or as a consequence of) (c) _____ due to (or as a consequence of) (d) _____	_2 weeks_ _____ _____
II Other significant conditions contributing to the death, but not related to the disease or condition causing it	_____ _____	_____ _____

*This does not mean the mode of dying, e.g. heart failure, respiratory failure.
It means the disease, injury or complication that caused death.

Figure 3

Case study 5

A 23-year-old man dies from traumatic shock after sustaining multiple fractures when he was hit by a truck. Figure 4 shows a death certificate that has used three lines. These events are recorded at I(a), I(b) and I(c). In this case, underlying cause of death is recorded in the line I(c).

INTERNATIONAL FORM OF MEDICAL CERTIFICATE OF CAUSE OF DEATH

Cause of death		Approximate interval between onset and death
I Disease or condition directly leading to death*	(a) Traumatic shock	I hour
	due to (or as a consequence of)	
Antecedent causes Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last	(b) Multiple fractures	5 hours
	due to (or as a consequence of)	
	(c) Pedestrian hit by truck	5 hours
	due to (or as a consequence of)	
	(d)	
II Other significant conditions contributing to the death, but not related to the disease or condition causing it		

This does not mean the mode of dying, e.g. heart failure, respiratory failure. It means the disease, injury or complication that caused death.

Figure 4

Case study 6

A 70-year-old man dies from cerebral haemorrhage 3 days after its onset. This resulted from secondary hypertension, which he had for the last year. The hypertension was secondary to chronic pyelonephritis, which he had for the last 2 years. He had also had a prostatic adenoma for the last 5 years. Figure 5 shows a death certificate that has used four lines. These events are recorded at I(a), I(b), I (c) and I(d).The underlying cause of death is reported in line I(d). In rare situations, there could be more than four sequences leading to death. In this case, you can add a line I(e) and record the underlying cause of death in that line. Do not record underlying cause of death in Part II of the death certificate.

INTERNATIONAL FORM OF MEDICAL CERTIFICATE OF CAUSE OF DEATH

Cause of death		Approximate Interval between onset and death
I Disease or condition directly leading to death*	(a) Cerebral haemorrhage	3 days
	due to (or as a consequence of)	
Antecedent causes Morbid conditions, If any, giving rise to the above cause, stating the underlying condition last	(b) Hypertension	1 year
	due to (or as a consequence of)	
	(c) Chronic pyelonephritis	2 years
	due to (or as a consequence of)	
	(d) Prostatic adenoma	5 years
II Other significant conditions contributing to the death, but not related to the disease or condition causing it		

* This does not mean the mode of dying, e.g. heart failure, respiratory failure.
It means the disease, injury or complication that caused death.

Figure 5

Part II of the death certificate

Part II of the death certificate records all other significant or contributory diseases or conditions that were present at the time of death, but did not directly lead to the underlying cause of death listed in Part I.

Case study 7

A 60-year-old hypertensive patient was admitted to the surgical casualty ward with severe abdominal pain and vomiting. She was diagnosed as having strangulated femoral hernia with a bowel perforation.

She underwent surgery to release the hernia and resect the intestine, with an end-to-end anastomosis. Two days after the surgery she developed signs of peritonitis and she died 2 days later. In this example, the underlying cause of death is strangulated femoral hernia. Hypertension, which is not in the sequence of events leading to death but would have contributed to the death, should be entered in Part II of the death certificate, as shown in Figure 6.

INTERNATIONAL FORM OF MEDICAL CERTIFICATE OF CAUSE OF DEATH

Cause of death		Approximate interval between onset and death
I Disease or condition directly leading to death*	(a) Peritonitis	2 days
	due to (or as a consequence of)	
Antecedent causes Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last	(b) Strangulated femoral hernia with bowel perforation due to (or as a consequence of)	2 weeks
	(c)	
	due to (or as a consequence of)	
	(d)	
II Other significant conditions contributing to the death, but not related to the disease or condition causing it	Hypertension	unknown

* This does not mean the mode of dying, e.g. heart failure, respiratory failure. It means the disease, injury or complication that caused death.

Figure 6

Approximate interval between onset and death

The column on the right-hand side of Part I and Part II of the death certificate is for recording the approximate time interval between the onset of the condition and the date of death. The time interval should be entered for all conditions reported on the death certificate, especially for the conditions reported in Part I. These intervals are usually established by the doctor on the basis of available information. In some cases, the interval will have to be estimated. Time periods, such as minutes, hours, days, weeks, months or years can be used. If the time of onset is unknown or cannot be determined, write

'Unknown'.

This information is useful for coding certain diseases and provides a check on the accuracy of the reported sequence of conditions. Therefore, it is important to fill in these lines.

Case study 8

A 58-year-old man presented at a clinic with a long history of haemoptysis and weight loss. The diagnosis was advanced pulmonary tuberculosis, reactivation type with cavitations, perhaps of 8 years duration. The patient also suffered from generalised arteriosclerosis, probably of long duration. Immediately after the admission, the patient had an acute and massive pulmonary haemorrhage and died about 10 hours later. The patient's death certificate is shown in Figure 7.

INTERNATIONAL FORM OF MEDICAL CERTIFICATE OF CAUSE OF DEATH

	Cause of death	Approximate interval between onset and death
I Disease or condition directly leading to death*	(a) Pulmonary haemorrhage due to (or as a consequence of)	10 hours
Antecedent causes Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last	(b) Advanced pulmonary tuberculosis due to (or as a consequence of) (c) _____ due to (or as a consequence of) (d) _____	8 years
II Other significant conditions contributing to the death, but not related to the disease or condition causing it	Generalised arteriosclerosis	Unknown

* This does not mean the mode of dying, e.g. heart failure, respiratory failure. It means the disease, injury or complication that caused death.

Figure 7

General guidelines for doctors completing death certificates

• Complete each item in order following any specific instructions given in your country.

• The entry must be legible. Use black ink.

• Do not make alterations or erasures. If you want to delete an entry, draw a single line across it. Do not use correction fluid.

• Verify the accuracy of identification data, including the correct spelling of the name of the deceased, with the family of the deceased.

• Do not use abbreviations.

• Enter only one disease condition or event per line.

Poisoning by drugs, medicaments and biological substances

When combinations of medicinal agents classified differently are involved, proceed as follows:

A) Selection of the underlying cause of death

i) If one component of the combination is specified as the cause of death, code to that component.

Example

(a) Poisoning by OPC

Code to accidental poisoning by amphetamine (X41). By placing amphetamine poisoning alone in Part I and reporting the other substances as contributing causes of death in Part II, the certifier has identified amphetamine as the most important substance in bringing about the death.

The codes for external causes (V01–Y89) should be used as the primary codes for single-condition coding and tabulation of mortality involving injury, poisoning and certain other consequences of external causes.

It is recommended that a code from Chapter XIX (S00–T98) should be used in addition in order to identify the nature of the injury and permit relevant tabulations. The following notes refer to such coding.

Where more than one kind of injury to a single body region in S00–S99, T08–T35, T66–T79 is mentioned and there is no clear indication as to which caused death, the General Principle and the Selection Rules should be applied in the normal way.

Example 1: I
(a) Haemorrhagic shock
(b) Peritoneal haemorrhage
(c) Rupture of liver
(d) Road traffic accident

Select rupture of liver (S36.1), since this is the starting point of the sequence terminating in the condition first entered on the certificate.

Example 2: I
(a) Fat embolism
(b) Fracture of femur
(c) Laceration of thigh
(d) Road traffic accident

Select fracture of femur (S72.9), since this is the starting point of the sequence terminating in the condition first entered on the certificate. It is "highly improbable" that laceration of the thigh would give rise to all the conditions mentioned above it.

Example 3: I

(a) Peritonitis

(b) Rupture of stomach and transverse colon

(c) Road traffic accident

Select rupture of stomach (S36.3), since this is the starting point of the first-mentioned sequence (in accordance with Rule l).

Suicide

Suicide (X60–X84) should not be accepted as "due to" any other cause. The above list does not cover all sequences that should be rejected, but in other cases the General Principle should be followed unless otherwise indicated.

I Disease or condition directly leading to death*	(a)...**Suicide by gunshot wound to head** due to or as a consequence of	Duration between onset and death ...**instant**
Antecedent causes Morbid conditions giving rise to the above cause, stating the underlying condition last	(b)...**Severe depression** due to or as a consequence of (c)... .... due to or as a consequence of (d)...........................	...**Years**... ....
II Other significant conditions contributing to the death, but not related to the disease or condition causing it **This does not mean the mode of dying e.g. heart failure, respiratory failure. It means the disease, injury or complication that caused death.*	....	....

X60-X80 Intentional self harm, are incidents determined as being suicide or self-inflicted injuries.

I		
Disease or condition directly leading to death*	(a)...**Hanging**.................... due to or as a consequence of	....
Antecedent causes Morbid conditions giving rise to the above cause, stating the underlying condition last	(b)..**Successful suicide**... due to or as a consequence of (c)... due to or as a consequence of (d).....................................	....
II Other significant conditions contributing to the death, but not related to the disease or condition causing it	....	....

*This does not mean the mode of dying e.g. heart failure, respiratory failure. It means the disease, injury or complication that caused death.

Perinatal deaths

The principles governing the concept of the perinatal period are that:

a. the fetus is potentially viable

b. both fetal and maternal causes need to be considered

c. at a given period after gestation, the pattern of causes will be similar in both live births and stillbirths.

A perinatal death can be either a live birth or a stillbirth according to the World Health Organization definition and formally covers the period from 28 completed weeks of gestation up to (but not including) 7 days after birth. The decision regarding the lower limit of the perinatal period depends on the facilities in the country for a preterm neonate to survive. In some countries, the perinatal period may start at 22 completed weeks. The death certificate does not ask for an underlying cause of death. Instead, it asks for the main cause in the fetus (stillbirth) or infant (live birth), and the main cause in the mother. It asks for other causes and for other relevant circumstances.

The wording of the perinatal death certificate is:

a. Main disease or condition in fetus or infant
b. Other diseases or 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
e. Other relevant circumstances.

CERTIFICATE OF CAUSE OF PERINATAL DEATH

To be completed for stillbirths and liveborn infants dying within 168 hours (1 week) from birth

Identifying particulars

☐ This child was born live on   at   hours
            and died on   at   hours

☐ This child was stillborn on   at   hours
            and died before labour ☐   during labour ☐   not known ☐

Mother	Child
Date of birth [| |] 1st day of last or, if unknown, age (years) [ ] menstrual period [| |] or, if unknown, estimated duration **Number of previous** of pregnancy [ ] **pregnancies:** (completed weeks) Live births [ ] Stillbirths [ ] Abortions [ ] Antenatal care, two or more visits: ☐ Yes ☐ No Outcome of last previous ☐ Not known pregnancy: ☐ Live birth ☐ Stillbirth Delivery: ☐ Abortion ☐ Normal spontaneous vertex Date [| |] Other (specify)	Birthweight: . . . . grams Sex: ☐ Boy ☐ Girl ☐ Indeterminate ☐ Single birth ☐ First twin ☐ Second twin ☐ Other multiple **Attendant at birth** ☐ Physician ☐ Trained midwife Other trained person (specify) . . . . Other (specify) . . . .

Causes of death

a. Main disease or condition in fetus or infant

b. Other diseases or 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

e. Other relevant circumstances

☐ The certified cause of death has been confirmed by autopsy ☐ Autopsy information may be available later ☐ Autopsy not being held	I certify . . . . Signature and qualification

Figure 8

The perinatal death certificate recommended by the World Health Organization is shown in Figure 8.

Case study 9

A 37-year-old grand multipara with gestational diabetes mellitus was admitted to hospital at 32 weeks of gestation. She was diagnosed with premature rupture of the membranes and put on antibiotics. Two days later, she delivered a baby boy weighing 1.9 kilograms. The delivery was performed by the house officer. On examination, the baby was found to be premature and was short of breath. He was diagnosed with respiratordistress syndrome of neonates. The baby was sent to the premature bab unit for incubator care. Despite treatment, the baby died 14 hours after birth. Autopsy information may be available later. Completion of the perinatal death certificate for this infant would be as follows (see Figure 9):

a. Main disease or condition in fetus or infant: Neonatal respiratory distress syndrome
b. Other diseases or conditions in fetus or infant: Prematurity or low birth weight
c. Main maternal disease or condition affecting fetus or infant: Premature rupture of membranes
d. Other maternal diseases or conditions affecting fetus or infant: Preterm labour, gestational diabetes mellitus and grand multipara
e. Other relevant circumstances: None.

CERTIFICATE OF CAUSE OF PERINATAL DEATH

To be completed for stillbirths and liveborn infants dying within 168 hours (1 week) from birth

Identifying particulars

☒ This child was born live on 2 / 2 / 2012 at 0630 hours
and died on 2 / 2 / 2012 at 2030 hours

☐ This child was stillborn on .... at .... hours
and died before labour ☐   during labour ☐   not known ☐

Mother	Child
Date of birth 12 06 74 or, if unknown, age (years) [ ]	Birthweight: 1900 grams
1st day of last menstrual period [, ,] or, if unknown, estimated duration of pregnancy 32 (completed weeks)	Sex: ☒ Boy ☐ Girl ☐ Indeterminate
Number of previous pregnancies: Live births 04 Stillbirths 01 Abortions 00	☒ Single birth ☐ First twin ☐ Second twin ☐ Other multiple
Antenatal care, two or more visits: ☒ Yes ☐ No ☐ Not known	**Attendant at birth** ☒ Physician ☐ Trained midwife Other trained person (specify) ....
Outcome of last previous pregnancy: ☒ Live birth ☐ Stillbirth ☐ Abortion Date 05 05 10	Delivery: ☒ Normal spontaneous vertex Other (specify)	Other (specify) ....

Causes of death

a. Main disease or condition in fetus or infant

   Neonatal respiratory distress syndrome

b. Other diseases or conditions in fetus or infant

   Prematurity or low birth weight

c. Main maternal disease or condition affecting fetus or infant

   Premature rupture of membranes

d. Other maternal diseases or conditions affecting fetus or infant

   Preterm labour, gestational diabetes mellitus, grand multipara

e. Other relevant circumstances

☐ The certified cause of death has been confirmed by autopsy
☒ Autopsy information may be available later
☐ Autopsy not being held

I certify ....
....
....
Signature and qualification

Figure 9

Further guidelines for certification and rules for coding Certification of perinatal deaths

Whenever possible, a separate certificate of cause of perinatal death should be completed, in which the causes are set out as follows:
(a) main disease or condition in fetus or infant
(b) other diseases or 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

(e) other relevant circumstances.

Each condition entered in sections (a), (b), (c) and (d) should be coded separately. Maternal conditions affecting the infant or fetus, entered in sections (c) and (d), should be coded to categories P00–P04 and these codes should not be used for sections (a) and (b).

The certificate should include identifying particulars with relevant dates and times, a statement as to whether the baby was born alive or dead, and details of the autopsy. For a thorough analysis of perinatal mortality, the following data on both mother and child are needed, in addition to information about the causes of death, not only in the case of perinatal death, but also for all live births.

Example 2. A primigravida aged 26 years with a history of regular menstrual cycles received routine antenatal care starting at the 10th week of pregnancy. At 30–32 weeks, fetal growth retardation was noted clinically, and confirmed at 34 weeks.

There was no evident cause apart from symptomless bacteriuria. A caesarean section was performed and a liveborn boy weighing 1600 g was delivered. The placenta weighed 300 g and was described as infarcted. Respiratory distress syndrome developed which was responding to treatment. The baby died suddenly on the third day. Autopsy revealed extensive pulmonary hyaline membrane and massive intraventricular haemorrhage.

Causes of perinatal death:

(a) Intraventricular haemorrhage

(b) Respiratory distress syndrome

Retarded fetal growth

(c) Placental insufficiency

(d) Bacteriuria in pregnancy

Example 4. A 30-year-old mother of a healthy four-year-old boy had a normal pregnancy apart from hydramnios. X-ray at 36 weeks suggested anencephaly. Labour was induced. A stillborn anencephalic fetus weighing 1500 g was delivered.

Causes of perinatal death:

(a) Anencephaly

(b) —

(c) Hydramnios

(d) —

(e) —

Brought dead

Brought dead is a common phenomenon in most of the hospitals of Bangladesh. The "Brought dead" means that the death occurred before coming to the hospital and the doctor examining the individual found dead.

As per ICD 10 the term "Brought dead" refers to death in circumstances where the body of the deceased was found and no cause could be discovered. As per ICD 10 the, the brought dead is titled as "Unattended death" and the code is **R 98**, Chapter XVIII, Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified, (R00-R99).

Guidelines for morbidity coding

Morbidity usually relates to a single episode of health care. An episode of health care may be defined as:

- A period of inpatient care; or
- A contact (or series of contacts in a specific time period) with a health care practitioner in relation to the same condition or its immediate consequences.

Central concepts for morbidity coding

- At the end of an episode of care, the clinician should record all conditions which affected the patient in that period.
- Practice may vary from health authority to health authority - in some places, one diagnosis will be singled out for coding (single-condition coding) while in other places, all diagnoses will be coded for each episode of care (multi-condition coding). Coders need to be aware of the policy of their establishments in this regard.

When to write the coding

- At the end of establishing a diagnosis the attending clinician will write the code.
- If coding is not done earlier, the doctor writing the discharge certificate/ death certificate will write the code (if needed he or she may consult with the supervisor about the final coding).

Why single-condition coding?

- The **main condition** is the diagnosis established at the end of the episode of health care
- The condition primarily responsible for the patient receiving treatment or being investigated i.e. that condition which is determined as being mainly responsible for the episode of health care.

What then are other conditions (OC) which might be coded?

- **Other conditions** are defined as those that coexist or develop during the episode of health care and affect the management of the patient.

- **Maximum five other condition can be coded in the morbidity/mortality form.**

For coding purposes, other conditions (also known as additional diagnoses) should be interpreted as conditions that affect patient management in terms of requiring any of the following:

- therapeutic treatment
- diagnostic procedures
- increased nursing care and/or monitoring

One or more of the above factors will generally result in an extended length of hospital stay.

Rules for reselection of main condition

In some instances, the Main Condition recorded by the clinician may not be consistent with the WHO definition. Alternatively, no Main Condition may have been specified. WHO has developed a set of rules that can be used to ensure that the Main Condition selected and coded reflects the condition mainly responsible for the **episode of care**. Coders need to be familiar with these rules and be able to apply them. More information and examples of the rules is available in volume 2 of ICD-10.

MB1. Minor condition recorded as main condition, more significant condition recorded as other condition.

Where a minor or longstanding condition, or an incidental problem, is recorded as the main condition, and a more significant condition, relevant to the treatment given and/or the specialty that cares for the patient, is recorded as an other condition, reselect the latter as the main condition.

```
Exercise 1:
MC      Gastritis
        OC      Carcinoma of the intestine
        Proc    Colectomy
        LOS     5 weeks
MC =                                    ICD-10 code =
```

```
Exercise 2:
MC      Impacted wisdom tooth
OC      Hypertensive heart disease
        Neuralgia
        Halitosis
        Proc    Dental extraction
        Spec    Dentistry
        LOS     2 days
MC =                                    ICD-10 code  =
```

See answer at the end of this chapter

MB2. Several conditions recorded as main condition

If several conditions that cannot be coded together are recorded as the main condition, and other details on the record point to one of them as the main condition for which the patient received care, select that condition. Otherwise select the condition first mentioned.

```
Exercise 3:
MC      Bilateral bunions
        Secondary lesion, lymph node
        Cancer of breast
Proc    Mastectomy

MC =                            ICD-10 code =
```

```
Exercise 4:
MC      Premature rupture of membranes
        Breech presentation
        Anaemia of pregnancy
Proc    Spontaneous Vaginal Delivery

MC =                            ICD-10 code =
```

MB3. Condition recorded as main condition is presenting symptom of diagnosed, treated condition

If a symptom or sign (usually classifiable to Chapter XVIII), or a problem classifiable to Chapter XXI, is recorded as the main condition and this is obviously the presenting sign, symptom or problem of a diagnosed condition recorded elsewhere and care was given for the latter, reselect the diagnosed condition as the main condition.

```
Exercise 5:
MC      Abdominal pain
OC      Acute appendicitis
Proc    Appendicectomy

MC =                            ICD-10 code =
```

```
Exercise 6:
MC      Faecal incontinence
OC      Angina
        Crohn's Disease, large intestine
Proc    Partial excision, colon

MC =                            ICD-10 code =
```

MB4. Specificity

Where the diagnosis recorded as the main condition describes a condition in general terms, and a term that provides more precise information about the site or nature of the condition is recorded elsewhere, reselect the latter as the main condition.

```
Exercise 7:
MC     Congenital heart disease
OC     Ventricular septal defect

MC =                              ICD-10 code =
```

MB5. Alternative main diagnoses

Where a symptom or sign is recorded as the main condition with an indication that it may be due to either one condition or another, select the symptom as the main condition. Where two or more conditions are recorded as diagnostic options for the main condition, select **the first condition recorded**.

```
Exercise 8:
MC Nausea and vomiting due to food poisoning or appendicitis
OC -

MC =                              ICD-10 code =
```

```
Exercise 9:
MC Abdominal pain due to acute cholecystitis or acute pancreatitis
OC -

MC =                              ICD-10 code =
```

```
Exercise 10:
MC Gastroenteritis due to Salmonella or gastroenteritis due to Yersinia
OC -

MC =                              ICD-10 code =
```

Answers :

Overview of morbidity coding

Exercise 1			
MC	*Carcinoma of Intestine*	**ICD-10 code**	*C26.0*
Exercise 2			
MC	*Impacted Wisdom tooth*	**ICD-10 code**	*K01.1*
Exercise 3			
MC	*Cancer of Breast*	**ICD-10 code**	*C50.9*
Exercise 4			
MC	*Premature Rupture of Membranes*	**ICD-10 code**	*O42.9*
Exercise 5			
MC	*Acute Appendicitis*	**ICD-10 code**	*K35.9*

Exercise 5
MC   *Acute Appendicitis*   **ICD-10 code**   *K35.9*

Exercise 6
MC   *Crohn's disease, large intestine*   **ICD-10 code**   *K50.1*

Exercise 7
MC   *Ventricular Septal Defect*   **ICD-10 code**   *Q21.0*

Exercise 8
MC   *Nausea and Vomiting*   **ICD-10 code**   *R11*

Exercise 9
MC   *Acute cholecystitis*   **ICD-10 code**   *K81.0*

Exercise 10
MC   *Gastroenteritis due to Salmonella*   **ICD-10 code**   *A02.0*

Guidelines for coding of the main condition and other conditions

· Selection of the main condition should be done by the clinician caring for the patient or may, if necessary, be identified at the time of coding, by application of the rules for reselection.

· Once the main condition has been selected correctly, you may then code the case, following normal procedures.

· The sequence to follow for morbidity coding is as follows:

All cases Selection of MC	→	Single-condition coding Multi-condition coding Code MC	→	Multi-condition coding Code other conditions
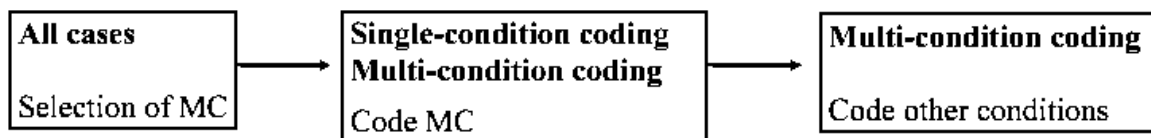
Where practicable, other conditions should be recorded, even when single-cause coding is to be performed. This provides the coder with a fuller picture of the case, thus making it easier to assign a more specific ICD code for the main condition or to verify the main diagnosis using the rules.

Optional additional codes

Before continuing further, you should read Section 4.4.2 of Volume 2. The ICD-10 classification itself sometimes indicates when a "main condition" can be made more specific by the addition of another code.

```
Example:
Acute pulmonary oedema due to exposure to sulphur dioxide fumes

MC = Acute pulmonary oedema                    ICD-10 code = J68.1
OC = Accidental poisoning by and exposure to
     other gases and vapours                   ICD-10 code = X47.9

Instruction under J68 states "use additional external cause code (Chapter XX), if desired, to
identify cause.
```

- **Coding of conditions to which the dagger and asterisk system applies (dual system)**

```
Example:
MC = Post chickenpox encephalitis             ICD-10 code = B01.1†
                                                             G05.1*
```

The dagger and asterisk codes should be used together, wherever possible, because they describe different aspects of the condition. The dagger (†) code is the preferred main condition. The asterisk (✱) means the additional conditions.

External causes of morbidity and injuries

Injuries may be classified by their nature (Chapter XIX) and by the external cause that led to the injury (Chapter XX). Both codes should be used but the nature of the injury code is the preferred main condition for morbidity coding.

```
Example:
Fracture of skull - motorcycle passenger in head-on collision with pick-up truck.
MC = Fractured skull                 ICD-10 code = S02.9
OC = Circumstances of accident       ICD-10 code = V23.5
```

Sequelae (late effects) of certain conditions

A number of categories entitled " sequelae of ….."(B90-B94, E64.-,G09, I69.-, 097, T90-T98, Y85=Y89) are available which enable the coding of a past condition which is itself no longer

present, but which is the cause of a present problem. In such a case, the current condition is the preferred main condition.

However, where a past condition is responsible for the presence of multiple current conditions and not one of the current conditions can be identified as predominant, then the sequela code (for past condition) may be used as the preferred main condition and followed by codes for each of the current conditions.

```
Example:

Entropion due to old inactive trachoma

MC =  Entropion                           ICD-10 code = H02.0
OC =  Sequela of trachoma                 ICD-10 code = B94.0
```

Coding of suspected conditions, unexplained symptoms and abnormal findings and non- illness situations

Codes from Chapters XVIII and XXI should only be used if the clinician is unable to describe the case more specifically. If the final diagnosis is "suspected" or "questionable" or if it is documented with a question mark (?), it should be coded as if it is a certain diagnosis.

```
Example:

Suspected intracranial space-occupying lesion (abnormal Skull X-Ray) - not yet diagnosed

MC =   Abnormal findings on diagnostic imaging
       of central nervous system - intracranial
       space-occupying lesion              ICD-10 code = R90.0
```

Multiple conditions

Categories exist which allow indication of multiple conditions within one code (this mainly applies mainly to conditions associated with HIV). Where appropriate, a multiple code can be used as main condition, and additional codes may appear to describe each of the conditions specifically. This is only an issue if no one single condition is indicated by the clinician as the MC or if none can be stated as the predominant focus of treatment.

```
Example:
Pneumocystis carinii pneumonia,
Tuberculosis,                        ⎤    due to HIV
 Dementia                            ⎦

Single condition coding –
MC= HIV resulting in multiple disease classified
     elsewhere
                                               ICD-10 code = B22.7
Multiple condition coding –

MC = HIV resulting in multiple disease classified
     elsewhere
                                               ICD-10 code = B22.7
OC = Pneumocystis carinii pneumonia due to HIV ICD-10 code = B20.6
      Tuberculosis resulting from HIV          ICD-10 code = B20.0
       Dementia (non-organic) resulting from HIV ICD-10 code = B22.0
```

Acute (or subacute) on chronic conditions

Where the patient is suffering an acute exacerbation of a chronic illness and there is no combination category available, the acute aspect of the condition should be assigned as the preferred main condition, with the chronic aspect as an optional additional code.

Example:

Acute on chronic appendicitis

MC = acute appendicitis   ICD-code = K35.9

OC = chronic appendicitis   ICD-code = K36

ICD-10 (PCS) Procedure Coding Online

The ICD-10 Procedure Coding System (ICD-10-PCS) is a system of medical classification used for procedural codes. The National Center for Health Statistics (NCHS) received permission from the World Health Organization (WHO), the body responsible for publishing the International Classification of Diseases to create the ICD-10-PCS as a successor to Volume 3 of ICD-9-CM and a clinical modification of the original ICD-10. The final draft was completed in 2000, but the system still has not been implemented, as the WHO has not yet set any anticipated implementation date at which to phase out ICD-9-CM.

The new procedure coding system uses 7 alpha or numeric digits while the ICD-9-CM coding system uses 3 or 4 numeric digits. The current system, International Classification of Diseases, 9th Edition, Clinical Modification (ICD-9-CM), does not provide the necessary detail on either patients' medical conditions or on procedures performed on hospitalized patients. ICD-9-CM is 30 years old, has outdated and obsolete terminology, uses outdated codes that produce inaccurate and limited data, and is inconsistent with current medical practice. It cannot accurately describe the diagnoses and inpatient procedures of care delivered in the 21st century.

How to find a code online

Type the following address in the address bar of your browser.

http://apps.who.int/classifications/icd10/browse/2010/en

Please type any disease name or any code in the search button and press enter to find any code.

The website can be found if you search "ICD 10 online" in the google search.

Steps to find a code in a book

Step 1: Find the appropriate chapter. If the chapter is not identified properly it is not possible to find the right code. (See page 2 of the Blue color ICD guideline)

Step 2: Go to the block and find the sub-block. If you find the specific block then it is easy to find the code. (See page 11 of the Blue color ICD guideline)

Step 3: Search the disease in the tabular list of disease (Page 19 of the Blue color ICD guideline)

If disease code not found then find the appropriate chapter again and follow the steps 2 & 3.

Case 1

A 1 years old boy admitted with a history of runny nose and respiratory distress for two days. On examination, his had fast breathing (56/min), bilateral wheeze on auscultation was present. Chest X-ray showed hyperinflation and hyper lucent lung field. The patient was improved with nebulized Sulbutamol and antibiotics. The patient was cured after 5 days and discharged with advice.

ICD-10 Coding		
	Put tick mark	
	☑ Main Condition	☐ Other Condition
Chapter No	X	
Block No	J00-J99	
3-digit/4-digit Code	**J21.9**	
Disease name	**Acute bronchiolitis, unspecified**	
Name of the Doctor	Dr. Sayem	

Case 2

A 30 year old lady admitted with bilateral loin pain for one year. For last 6 months, she has anorexia, nausea, constipation and general weakness. She was advised X-ray KUB by her local physician. X-ray showed bilateral nephrocalcinosis and was referred to tertiary care hospital. Investigation showed urine R/E- normal, CBC-Normal, S. creatinine – 2 mg%, S. calcium 12.8mg, S. albumin-3 gm/dl, X-ray skull-pepper pot appearance, S. iPTH-1060. USG of thyroid showed presence of single parathyroid adenoma.

Diagnosis:

Primary hyper-parathyroidism

Renal Failure

Nephrocalcinosis

ICD-10 Coding		
	Put tick mark	
	☑ Main Condition	☐ Other Condition
Chapter No	IV	
Block No	E20-E35	
3-digit/4-digit Code	**E21.0**	
Disease name	**Primary hyperparathyroidism**	
Name of the Doctor	Dr. Sayem	

ICD-10 Coding		
	Put tick mark	
	☐ Main Condition	☑ Other Condition
Chapter No	XIV	
Block No	N17-N19	
3-digit/4-digit Code	**N18.9**	
Disease name	**Chronic kidney disease, unspecified**	
Name of the Doctor	Dr. Sayem	

Quality Assurance

The head of the facility will ensure the quality of the ICD codes.

The DHIS 2 software which collect the routine health information system is customized with ICD 10 to ensure the correct code. The 14,400 disease is incorporated with the system.

Monitoring

MIS DGHS is responsible to implement and monitor the ICD code in the government health system.

List of Common Disease with code:

A00 Cholera
A01 Typhoid and paratyphoid fevers
A09 Diarrhoea and gastroenteritis of presumed infectious origin
A15 Respiratory tuberculosis, bacteriologically and histologically confirmed
A87 Viral meningitis
A90 Dengue fever [classical dengue]
A91 Dengue haemorrhagic fever
B17 Other acute viral hepatitis
B18 Chronic viral hepatitis
B24 Unspecified human immunodeficiency virus [HIV] disease
B50 Plasmodium falciparum malaria
B92 Sequelae of leprosy
C16 Malignant neoplasm of stomach
C18 Malignant neoplasm of colon
C20 Malignant neoplasm of rectum
C22 Malignant neoplasm of liver and intrahepatic bile ducts
C23 Malignant neoplasm of gallbladder
C34 Malignant neoplasm of bronchus and lung
C43 Malignant melanoma of skin
C50 Malignant neoplasm of breast
C55 Malignant neoplasm of uterus, part unspecified
C56 Malignant neoplasm of ovary
C61 Malignant neoplasm of prostate
C91 Lymphoid leukaemia
C92 Myeloid leukaemia
D50 Iron deficiency anaemia
D56 Thalassaemia
D61 Other aplastic anaemias
D73 Diseases of spleen
E00 Congenital iodine-deficiency syndrome

E07 Other disorders of thyroid

E10 Insulin-dependent diabetes mellitus

E11 Non-insulin-dependent diabetes mellitus

E13 Other specified diabetes mellitus

==E14 Unspecified diabetes mellitus==

E21 Hyperparathyroidism and other disorders of parathyroid gland

==Malnutrition (E40-E46)==

E40 Kwashiorkor

E41 Nutritional marasmus

E42 Marasmic kwashiorkor

E43 Unspecified severe protein-energy malnutrition

E44 Protein-energy malnutrition of moderate and mild degree

F00 Dementia in Alzheimer's disease

==Mental and behavioural disorders due to psychoactive substance use (F10-F19)==

Schizophrenia, schizotypal and delusional disorders (F20-F29)

F20 Schizophrenia

==Unspecified mental disorder (F99)==

==Diseases of the nervous system (G00-G99)==

G00 Bacterial meningitis, not elsewhere classified

G04 Encephalitis, myelitis and encephalomyelitis

G20 Parkinson's disease

G30 Alzheimer's disease

G40 Epilepsy

G41 Status epilepticus

G81 Hemiplegia

G91 Hydrocephalus

H40 Glaucoma

==Acute rheumatic fever (I00-I02)==

I00 Rheumatic fever without mention of heart involvement

I01 Rheumatic fever with heart involvement

==Chronic rheumatic heart diseases (I05-I09)==

I05 Rheumatic mitral valve diseases

I08 Multiple valve diseases

==Hypertensive diseases (I10-I15)==

I10 Essential (primary) hypertension

I15 Secondary hypertension

==Ischaemic heart diseases (I20-I25)==

I20 Angina pectoris

I21 Acute myocardial infarction

I24 Other acute ischaemic heart diseases

I25 Chronic ischaemic heart disease

Other forms of heart disease (I30-I52)

I40 Acute myocarditis

II42 Cardiomyopathy

I46 Cardiac arrest

I48 Atrial fibrillation and flutter

I50 Heart failure

Cerebrovascular diseases (I60-I69)

I60 Subarachnoid haemorrhage

I61 Intracerebral haemorrhage

I63 Cerebral infarction

I64 Stroke, not specified as haemorrhage or infarction

I70 Atherosclerosis

I84 Haemorrhoids

I85 Oesophageal varices

I95 Hypotension

J18 Pneumonia, organism unspecified

J21 Acute bronchiolitis

J22 Unspecified acute lower respiratory infection

J42 Unspecified chronic bronchitis

J43 Emphysema

J44 Other chronic obstructive pulmonary disease

J45 Asthma

J80 Adult respiratory distress syndrome

J81 Pulmonary oedema

J85 Abscess of lung and mediastinum

J90 Pleural effusion, not elsewhere classified

J93 Pneumothorax

J96 Respiratory failure, not elsewhere classified

Diseases of oesophagus, stomach and duodenum (K20-K31)

K35 Acute appendicitis

K58 Irritable bowel syndrome

K65 Peritonitis

Diseases of liver (K70-K77)

K72 Hepatic failure, not elsewhere classified

K73 Chronic hepatitis, not elsewhere classified

K74 Fibrosis and cirrhosis of liver

Disorders of gallbladder, biliary tract and pancreas (K80-K87)

K80 Cholelithiasis

K81 Cholecystitis

K85 Acute pancreatitis

K86 Other diseases of pancreas

K87? Disorders of gallbladder, biliary tract and pancreas in diseases classified elsewhere

Diseases of the musculoskeletal system and connective tissue (M00-M99)

Infectious arthropathies (M00-M03)

M05 Seropositive rheumatoid arthritis

Osteopathies and chondropathies (M80-M94)

M80 Osteoporosis with pathological fracture

M81 Osteoporosis without pathological fracture

M86 Osteomyelitis

Diseases of the genitourinary system (N00-N99)

N00 Acute nephritic syndrome

N03 Chronic nephritic syndrome

N04 Nephrotic syndrome

Renal failure (N17-N19)

N17 Acute renal failure

N18 Chronic renal failure

N20 Calculus of kidney and ureter

Other disorders of kidney and ureter (N25-N29)

Other diseases of urinary system (N30-N39)

Diseases of male genital organs (N40-N51)

N40 Hyperplasia of prostate

N43 Hydrocele and spermatocele

N44 Torsion of testis

N63 Unspecified lump in breast

N73 Other female pelvic inflammatory diseases

Pregnancy, childbirth and the puerperium (O00-O99)

Pregnancy with abortive outcome (O00-O08)

O00 Ectopic pregnancy

O01 Hydatidiform mole

O03 Spontaneous abortion

O04 Medical abortion

O05 Other abortion

O06 Unspecified abortion

O08 Complications following abortion and ectopic and molar pregnancy

Oedema, proteinuria and hypertensive disorders in pregnancy, childbirth and the puerperium (O10-O16)

O15 Eclampsia

O16 Unspecified maternal hypertension

Other maternal disorders predominantly related to pregnancy (O20-O29)

O20 Haemorrhage in early pregnancy

O21 Excessive vomiting in pregnancy

O23 Infections of genitourinary tract in pregnancy

O24 Diabetes mellitus in pregnancy

O25 Malnutrition in pregnancy

O46 Antepartum haemorrhage, not elsewhere classified

O47 False labour

O48 Prolonged pregnancy

Complications of labour and delivery (O60-O75)

O60 Preterm delivery

O63 Long labour

O64 Obstructed labour due to malposition and malpresentation of fetus

O65 Obstructed labour due to maternal pelvic abnormality

O66 Other obstructed labour

O72 Postpartum haemorrhage

O73 Retained placenta and membranes, without haemorrhage

Delivery (O80-O84)

O85 Puerperal sepsis

O86 Other puerperal infections

O95 Obstetric death of unspecified cause

O96 Death from any obstetric cause occurring more than 42 days but less than one year after delivery

Perinatal Death period (P00-P96)

P21 Birth asphyxia

P22 Respiratory distress of newborn

P23 Congenital pneumonia

P59 Neonatal jaundice from other and unspecified causes

P90 Convulsions of newborn

P95 Fetal death of unspecified cause

Q03 Congenital hydrocephalus

Q05 Spina bifida

Congenital malformations of genital organs (Q50-Q56)

Other congenital malformations (Q80-Q89)

Q90 Down's syndrome

R17 Unspecified jaundice

R18 Ascites

R31 Unspecified haematuria

R33 Retention of urine

Ill-defined and unknown causes of mortality (R95-R99)

R95 Sudden infant death syndrome

R98 Unattended death (Brought dead)

R99 Other ill-defined and unspecified causes of mortality

Injury, poisoning and certain other consequences of external causes (S00-T98)

Injuries to the head (S00-S09)

Injuries to the neck (S10-S19)

Injuries to the thorax (S20-S29)

Injuries to the abdomen, lower back, lumbar spine and pelvis (S30-S39)

Injuries to the shoulder and upper arm (S40-S49)

Injuries to the elbow and forearm (S50-S59)

Injuries to the wrist and hand (S60-S69)

Injuries to the hip and thigh (S70-S79)

Injuries to the knee and lower leg (S80-S89)

Injuries to the ankle and foot (S90-S99)

Injuries to unspecified part of trunk, limb or body region (T08-T14)

T30 Burn and corrosion, body region unspecified

Poisoning by drugs, medicaments and biological substances (T36-T50)

T39 Poisoning by nonopioid analgesics, antipyretics and antirheumatics

Transport accidents (V01-V99)

Motorcycle rider injured in transport accident (V20-V29)

Occupant of three-wheeled motor vehicle injured in transport accident (V30-V39)

Car occupant injured in transport accident (V40-V49)

Occupant of pick-up truck or van injured in transport accident (V50-V59)

Occupant of heavy transport vehicle injured in transport accident (V60-V69)

Bus occupant injured in transport accident (V70-V79)

Other land transport accidents (V80-V89)

Water transport accidents (V90-V94)

Other and unspecified transport accidents (V98-V99)

Other external causes of accidental injury (W00-X59)

Falls (W00-W19)

Contact with venomous animals and plants (X20-X29)

X20 Contact with venomous snakes and lizards

X33 Victim of lightning

X38 Victim of flood

Accidental poisoning by and exposure to noxious substances (X40-X49)

X48 Accidental poisoning by and exposure to pesticides

Intentional self-harm Suicide (X60-X84)

Assault (X85-Y09)

Y05 Sexual assault by bodily force

Y83 Surgical operation and other surgical procedures complication

Session Plan for training at facility level

Day 1			
Time	**Session**	**Objective**	**Remarks**
10:00 am	Inaugural session		
10:30 am	Pre- assessment		
11:00-11:30 am	Tea break		
11:00 am	Presentation on ICD 10		
12:30 pm	Discussion		
1:00 pm	Lunch		
2:00 pm-5:00 pm	Demonstration & Discussion		
Day 2			
Time	**Session**	**Objective**	**Remarks**
9:00 am	Review of Day 1		
9:30 am	Rules and guidelines for mortality and morbidity coding		
10:30 am	Group work on ICD 10 of common diseases.	Listing of common diseases by the participants	
11:30-11:45 am	Tea Break		
11:45 am	Group presentation and discussion		
01:00 pm	Lunch		
2:00 pm	▪ Coding from diagnosis ▪ Standard form of medical certification of death		
3:30 pm	Post-assessment		
4:00 pm	Closing session		

Annex

বাংলাদেশ ফরম নং ৮০৪

মৃত্যুর প্রমাণ পত্র

নাম..

পিতা/স্বামীর নাম ....

ঠিকানা ....

....

বয়স.................... পুরুষ/মহিলা..................... ধর্ম........................... পেশা..........................

ভর্তির তারিখ... সময়...............................

মৃত্যুর তারিখ... সময়...............................

রোগের নাম/মৃত্যুর কারণ ....

Causes of death		ICD 10 Code
I. Disease or condition directly leading to death*	a) .... (Due to or as a consequence of)	....
Antecedent causes Underlying Cause	b) .... Due to or as a consequence of	....
II. Other significant conditions	....	....

*This does not mean the mode of dying, e.g., heart failure, respiratory failure. It means the disease, injury or complication that caused death

স্বাক্ষর..

হাসপাতাল...

তারিখ...............................

আবাসিক চিকিৎসক/ সহরেজিষ্ট্রার
বিভাগ.......................................

বাংসমুদ্র-২০০২/০৩-১০০৩১এফ—১০.০০.০০০ কপি, ২০০৪ইং।

Example of death certificate

45

CERTIFICATE OF CAUSE OF PERINATAL DEATH

To be completed for stillbirths and liveborn infants dying within 168 hours (1 week) from birth

Identifying particulars

☐ This child was born live on .... at .... hours
and died on .... at .... hours

☐ This child was stillborn on .... at .... hours
and died before labour ☐   during labour ☐   not known ☐

Mother	Child
Date of birth [. . .] or, if unknown, age (years) [.]	Birthweight: .... grams

Mother

Date of birth [. . .]
or, if unknown, age (years) [.]

Number of previous pregnancies:
Live births [.]
Stillbirths [.]
Abortions [.]

Outcome of last previous pregnancy:
☐ Live birth
☐ Stillbirth
☐ Abortion
Date [. . .]

1st day of last menstrual period [. . .]
or, if unknown, estimated duration of pregnancy [.] (completed weeks)

Antenatal care, two or more visits:
☐ Yes
☐ No
☐ Not known

Delivery:
☐ Normal spontaneous vertex
Other (specify)
....

Child

Birthweight: .... grams

Sex:
☐ Boy   ☐ Girl   ☐ Indeterminate

☐ Single birth   ☐ First twin
☐ Second twin   ☐ Other multiple

Attendant at birth

☐ Physician   ☐ Trained midwife
Other trained person (specify)
....
Other (specify)
....

Causes of death

a. Main disease or condition in fetus or infant

b. Other diseases or 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

e. Other relevant circumstances

☐ The certified cause of death has been confirmed by autopsy
☐ Autopsy information may be available later
☐ Autopsy not being held

I certify ....
....
....

Signature and qualification

Perinatal Death Certificate

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4. Handbook for doctors on cause-of-death certification, School of Population Health, University of Queensland. www.uq.edu.au/hishub.

Consultative workshop on formulation of ICD 10 coding manual