PHYSICIANS' MANUAL ON MEDICAL CERTIFICATION OF CAUSE OF DEATH

VITAL STATISTICS DIVISION
OFFICE OF THE REGISTRAR GENERAL , INDIA
MINISTRY OF HOME AFFAIRS
NEW DELHI

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(Second Edition)

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PREFACE TO THE SECOND EDITION

Even before a year is complete, there has been overwhelming response for bulk supply of the manual from almost every State. The manual has thus been found to be timely for use by Physicians and Medical Officers of Government hospitals and those attached to medical colleges, where the scheme of medical certification of cause of death is being implemented, to star with. The bulk demand has come from States which have already entered the phase of the scheme, covering specialised hospitals, district and sub-divisional hospitals and primary health centres. Hence this second edition.

The manual has been, in this edition, provided with a new sub-section under the heading "Incorrect filling and correct filling of the medical part of the certificate" in section 3 on "examples of certification". The examples have been provided by Shri T.D. Dhamija, Officer incharge, Medical Record Unit, Safdarjung Hospital, New Delhi, based on case-histories of the hospital to whom our thanks are due. The edition, we hope, would contribute to the improvement in the working of the scheme of medical certification of cause of death.

NEW DELHI
25th April, 1984

V.S. VERMA
Registrar General, India

PREFACE TO THE FIRST EDITION

The importance of statistics on cause of death is well recognised and these data are in demand by health planners, administrators and medical professionals. The scheme on medical certification of cause of death formulated by the office of the Registrar General, India is a big step forward towards establishment of a system in the country for data on cause of death. The scheme envisages the gradual introduction of medical certification of cause of death in a phased manner and, to begin with, in medical and teaching hospitals where operational procedures for recording the vital events are streamlined to some extent. In the second phase, the scheme would be extended to specialised hospitals, district and sub-divisional hospitals and primary health centres would be covered. Finally, the scheme is expected to cover private physicians also, so that formal enforcement of the Registration of Births and Deaths Act, 1969 would be facilitated.

The scheme on medical certification of cause of death has been functioning in different phases in different states Its success largely depends upon the active involvement and cooperation of the physicians and for this purpose, it is felt that they should have the benefit of a manual on medical certification. This manual is designed to serve this purpose. It defines the physicians' responsibilities and provides detailed instructions for completion of the medical certificates on cause of death.

The initial draft of this manual was widely circulated among the State Medical and Health Directorates and was discussed in a number of training camps. The publications of the W.H.O. on the subject were extensively used in finalising the manual and the benefit derived from these publications is gladly acknowledged. Further, the cooperation received from Chief Registrars of Births and Deaths of States and Union Territories and Directorate General of Health Services, New Delhi in finalising this manual is gratefully acknowledged. In particular my thanks are due to Dr. H.N. Ranganathan, Deputy Director, Directorate of Health Services Pune, and Shri T.D. Dhamija, Officer incharge, Medical Record Unit, Safdarjung Hospital for providing us some examples of case histories for inclusion in this manual. I must also thank the Vital Statistics Division of this office which has done commendable work in compiling this manual.

In particular I am happy to record appreciation of the efforts put in by Dr. M. Holla, Joint Registrar General, India and his colleagues Shri K.N. Shrinivasan, Assistant Registrar General, Shri K.S. Krishnan, Senior Research Officer, Shri M.K. Ahuja, Dy. Director of Census Operations and Shri J.S. Rastogi, Assistant Director of Census Operations in bringing out this manual.

Our task would have been more than fulfilled if this manual contributes towards the successful implementation of the scheme on medical certification of cause of death in the country.

NEW DELHI
13 January, 1983

P. PADMANABHA
Registrar General, India

1

INTRODUCTION

Mortality statistics form an integral part of the vital statistics system. They are one of the basic components of population growth. Further, the cause specific mortality rates are key indicators of the health trends in the population and are provided on scientific basis by the system of medical certification of cause of death.

The data on cause of death contained in the certificate serve many purposes : they help in assessing the effectiveness of public health programmes and provide a feed-back for future policy and implementation. They are essential for better health planning and management and for deciding priorities of health and medical research programmes.

1.1 Legal provisions

It is because of this importance that a provision has been made in the Registration of Births and Deaths Act (RBD), 1969 for certification by a medical practitioner who has attended the deceased during the latter's last illness. There is also an enabling provision in the Act which empowers the State Government to introduce the system of medical certification of cause of death in specified areas taking into consideration the facilities available and other related factors. The relevant sections of the Act are :

SECTION 10 (2)

In any area, the State Government having regard to the facilities available therein in this behalf, may require that a certificate as to the cause of death shall be obtained by the Registrar from such person and in such form as may be prescribed.

SECTION 10 (3)

Where the State Government has required under sub-section (2) that a certificate as to the cause of death shall be obtained, in the event of the death of any person who, during his last illness was attended by a medical practitioner, the medical practitioner shall, after the death of that person, forthwith, issue without charging any

fee, to the person required under this Act to give information concerning the death, a certificate in the prescribed form stating to the best of his knowledge and belief the cause of death ; and the certificate shall be received and delivered by such person to the Registrar at the time of giving information concerning the death as required by this Act.

The rules framed by the State Governments on the subject further describe the procedure involved in the final disposal of the certificates as :

The certificate as to the cause of death required under sub-section (3) of section 10 shall be issued in Form No. 8/8A and the Registrar shall, after making necessary entries in the register of births and deaths, forward all such certificates to the Chief Registrar or the officer specified by him in this behalf by the 10th of the month immediately following the month to which the certificates relate.

The Act also incorporates a clause on confidentiality of the information on cause of death available on the registration records. The relevant section of the Act reads as under :—

SECTION 17 (1) (b)

Subject to any rules made in this behalf by the State Government, including rules relating to the payment of fees and postal charges, any person may obtain an extract from such register relating to any birth or death:

Provided that no extract relating to any death, issued to any person, shall disclose the particulars regarding the cause of death as entered in the register.

1.2 Cause of death

A cause of death is a disease, abnormality, injury or poisoning that contributed directly or indirectly to death. A death often results from the combined effect of two or more conditions. These conditions may be completely unrelated, arising independently of each other ; or they may be causally related to each other, that is, one condition may lead to another, which in turn leads to a third condition and so on. Where there is a sequence, the underlying cause, i.e., the disease or injury which initiated the sequence of events will get selected for the purpose of tabulation.

The underlying cause of death is :

(a) the disease or injury which initiated the train of events leading directly to death ;

or

(b) the circumstances of the accident or violence which produced the fatal injury.

All these morbid conditions or injuries consequent to the underlying cause relating to death are termed as antecedent and immediate causes.

1.3 Form of medical certificate

The standard format of the certificate is incorporated in the rules made by the State Government. The format of the certificate proper (medical part) conforms to the standard prescribed by the World Health Organisation (WHO) and has the following features :

CAUSE OF DEATH		*Interval between onset & death approx.*
I. *Immediate cause*: State the disease, injury or complication which caused death, not the mode of dying such as heart failure, asthenia, etc.	(a)	..... due to (or as a consequence of)
Antecedent cause: Morbid conditions, if any, giving rise to the above cause, stating the underlying conditions last.	(b)	..... due to (or as a consequence of)
	(c)	.....
II. Other significant conditions contributing to the death, but not related to the diseases or condition causing it.		.....

Besides the medical part, the form also includes some minimum demographic and identification particulars about the deceased. The forms have a detachable portion separated by perforation mark containing information on fact of death. Separate forms have been provided for hospital and non-hospital events which are given in the annexures.

1.4 Physicians' responsibility

The physicians' primary responsibility is to complete the medical part of the certificate regarding all diseases, morbid conditions or injuries which either resulted in or contributed to death. Causes of death are classified, coded and grouped according to the current revision (IX at the moment) of the International Classification of Diseases (ICD) recommended by WHO. When deaths result from a single condition, such as an acute infectious disease, certification and classification present no difficulty. However, this is not the case always and the problem arises of which one of multiple causes to select as the cause of death. Some of them may be causally related to each other in a sequence. If untimely deaths are to be prevented the chain of events has to be cut, or cure instituted at some intermediate point. The most effective public health objective is to prevent the precipitating cause from operating and hence the relevance of the underlying cause. Responsibility is placed on the certifying physician for indicating specifically all the several conditions and the chain of events if a sequence can be identified. The certifier (Physician) should record the diseases/conditions in an order leading back to the underlying cause if a sequence can be found and put any other conditions contributing to death separately if not directly forming part of the fatal sequence. The medical part of the certificate should normally be the responsibility of the attending physician and based on his individual assessment. In cases of violent deaths and other medico-legal cases usually brought to the notice of a medical examiner at the post-mortem stage, the certificate may be filled by the medical examiner on the basis of evidence noticed by him. The fact of death in such cases should, however, be communicated to the local registrar in the prescribed format pending the final filling up and transmission of the medical certificate to the registrar concerned. The information on cause of death is kept confidential and is not indicated on death certificate that may later be issued by the Registrar of Births and Deaths. This safeguard is intended to enable the doctors to bestow sufficient care and attention in writing the certificate so that mortality statistics will reflect the best medical opinion, concerning causes of death.

The various particulars, other than those of the medical part on cause of death, are also required for reporting the death by the hospital to the registration authority in the prescribed format. The certifier will ensure that all the necessary particulars are given, besides his own statement regarding the chain of events pinpointing the underlying cause of death and then sign the certificate. The detachable portion of the form containing only the fact of death without disclosing the cause of death may either be signed by the certifier or the medical officer of the hospital and handed over to the relatives of the deceased. The form of medical certificate of cause of death is to be sent to the local Registrar of Births and Deaths alongwith the death report in the prescribed format within the prescribed time limit.

2

SPECIFIC INSTRUCTIONS

2.1 Name of deceased

To be given in full. Do not use initials. Also give name of father (or husband in case of married female) after the name of the deceased, using appellation s/o or d/o or w/o. In case of infants not yet named, write son (or daughter) of, followed by names of mother and father.

2.2 Age

If more than a year old, give age in years last birthday (completed number of years). If under one year, give age in months and days. If under 24 hours, give in hours and minutes.

2.3 Date of birth

This may be given, if possible. However, age of the deceased should be stated whether exact date of birth is known or not. Date of birth is important particularly in case of infants.

2.4 Marital status

State whether Single (S), Married (M), Widowed (W) or Divorced (D).

2.5 Method of certification of cause of death

2.5.1 The medical part of the certificate is designed by the WHO to facilitate reporting the underlying cause of death and to obtain information on the causal and pathological sequence of events leading to death. It consists of two parts, the first relating to the sequence of events leading to death, and the second to other significant conditions that contributed to the death.

2.5 2 This part should be written by the attending physician or a physician having personal knowledge of the case history. The names of the diseases should be written in full and legibly to avoid the risk of their being misread. Abbreviations and short form of disease condition may not be used. He should avoid

indefinite or inadequate terms. Inadequate descriptions may put the statistical office in difficulty at the time of classification of the data. Mention of treminal events or mode of dying as the only entry in the statement leaves the certificate incomplete. Simillary, symptomatic remarks will not suffice. A properly completed certificate will show the underlying cause on the lowest used line of part I and the conditions if any, as a consequence thereof will have been entered above it in ascending causal order of sequence.

2.5.3 Part I of the cause of death statement

Only one cause is to be entered on each line of Part I. The underlying cause of death should be entered on the lowest line used in this part. The underlying cause of death is the condition that started the sequence of events between normal health and the (direct) immediate cause of death.

Line (a) : Immediate cause

The direct or immediate cause of death is reported on line (a). This is the disease, injury or complication that directly preceded death. It can be the sole entry in the statement if only one condition was present at death. There must always be an entry on line (a).

The mode of dying (e.g., heart failure, respiratory failure) should not be stated at all since it is no more than a symptom of the fact that death occurred and provides no useful information.

In the case of a violent death, enter the result of the external cause (e.g., fracture of vault of skull, crushed chest).

Line (b) : Due to (or as a consequence of)

If the condition on line (a) was the consequence of another condition, record that in line (b). This condition must be antecedent to the immediate cause of death, both with respect to time and etilogical or pathological relationship. In case of injury, the form of external violence or circumstances of accident is antecedent to an injury entered on line (a) and should be entered on line (b), although the two events are almost simultaneous (e.g., automobile accident, fall from tree).

An antecedent condition might have just prepared the way for the immediate cause of death, by damage to tissues or impairment of function, even after a long interval.

Line (c):

The condition, if any which gave rise to the antecedent condition on line (b) is to be reported here. The remarks given for line (b) apply here also. If the condition on line (b) is the underliyng cause, nothing more be entered on this line. However, if the sequence of events comprise more than three stages, extra line (and entries) may be made in Part I.

However many conditions are involved, write the full sequence, one condition per line, with the most recent condition (immediate cause) at the top, and the earliest (the condition that started the sequence of events between normal health and death) last.

Normally the condition or circumstance on the lowest line used in Part I will be taken as the basis for underlying cause statistics, though classification of it may be modified to take account of complications or other conditions entered by special provisions of the ICD.

2.5.4 PART II: OTHER SIGNIFICANT CONDITIONS

Enter, in order of significance, all other diseases or conditions believed to have unfavourably influenced the course of the morbid process and thus contributed to the total outcome but which were not related to the disease or condition directly causing death.

There will be cases where it will be difficult to decide whether a condition relevant to death should be recorded as part of the fatal sequence in Part I or as a contributory condition in Part II. Conditions in Part I should represent a distinct sequence so that each condition may be regarded as being the consequence of the condition entered immediately below it. Where a condition does not seem to fit into such a sequence, consider whether it belongs in Part II.

2.5.5 INTERVAL BETWEEN ONSET AND DEATH

Space is provided, against each condition recorded on the certificate, for the interval between the presumed onset of morbid condition and the date of death. Exact period should be written when it is known; in other cases approximate periods like "from birth", "several years" or "unknown" should be indicated. This provides a useful check on the sequence of causes as well as useful information about the duration of illness in certain diseases.

2.6 Accidents

If suicide or homicide is ruled out, how the fatal injury occurred should be explained indicating briefly the circumstances or cause of the accident. In case of medico-legal cases, the certificate has to be given by the police authorities. However, the Registrar should be informed of such cases, by the hospital.

2.7 Female death

Information on pregnancy and delivery is needed in case of death of women in the child-bearing age (15 to 49 years) even though the pregnancy may have had nothing to do with the death.

2.8 Ensuring completeness of information

2.8.1 While giving the causal chain of events in the statement of cause of death, a complete case history is not required but, if information is available, enough details may be given to enable proper classification of the underlying cause. The certifier cannot always be certain as to what details are required and therefore, a list giving examples of incomplete descriptions and what additional information are required is included in the annexure for guidance. The terms included in the annexure are those employed usually and are of the following types :—

(i) A symptom that may arise from different group of diseases.

(ii) A morbid condition that could result from several types of infection, known or unknown.

(iii) With connotation of any of several morbid conditions having distinctive categories in the classification list like acute, sub-acute, chronic, simple, etc.

(iv) Mention of a disease which is generally localised, without indicating the organ or part of the body affected.

(v) A morbid condition that requires for its classification, a knowledge of the circumstances in which it arose.

2.8.2 As a general rule, record diagnoses as precisely as the information permits, incorporating relevant details from histological or autopsy reports. Where an important detail is unknown the fact should be stated.

2.8.3 The following gives the pertinent details required to be spelt out in the medical part of the certificate corresponding to the major cause group of mortality.

1. *Infections* : Acute, sub-acute or chronic, name of the disease and/or infecting organism; the site, if localised; mode of transmission, where relevant.

2. *Neoplasms* : The morphological type if known; malignant, benign etc., site of orgin of primary growth, and sites of secondary growths.

3. *Endocrine disorders* : Nature of disease process or disturbance of function : For thyroid diseases, whether toxic; for diabetes, nature of complication or manifestation in particular site.

4. *Nutritional disorders* : Type of deficiency, etc., and severity.

5. *Blood disorders* : Nature of disease process; type and nature of any deficiency for anaemias; whether hereditary (where relevant).

6. *Nervous system disorders* : Disease process; infecting organism (where relevant), whether hereditary (where relevant).

7. *Circulatory diseases* : Nature of disease process, site, if localised; acute or chronic where relevant; specify rheumatic or other etiology for valvular heart conditions; any complications.

8. *Respiratory diseases* : Nature of disease process; acute or chronic; infecting organism, any external cause.

9. *Digestive diseases* : Nature of diseas e process; site of ulcers, hernias, diverticula, etc. acute or chronic where relevant, nature of any complication for ulcers, appendicitis, hernias.

10. *Genitourinary disorders* : Acute or chronic, clinical syndrome and pathological lesions; site of calculi, infecting organism and site of infections; nature of complications.

11. *Maternal deaths* : Nature of complication; whether obstruction occurred during labour; timing of death in relation to delivery; for abortions, whether spontaneous or induced, legal or illegal, if induced.

12. *Musculoskeletal disorders* : Nature of disease process, infecting organism, underlying systemic diseases (where relevant); site; complication, whether congenital or acquired for deformities.

13. *Congenital anomalies* : Site and type, complications.

14. *Perinatal deaths* : Condition in foetus or infant; conditions in mother or of placenta, cord or membranes, if believed to have affected the foetus or infant; for deaths associated with immaturity, state length of gestation and/or birth weight; type of birth trauma; and complications, etc.

15. *Injuries* : Type, site, complications.

16. *Poisoning* : Substance involved; whether accidental (if suicide or homicide is ruled out).

17. *Adverse effects of drugs in therapeutic use* : State this fact and name or drug, nature of adverse effect, complications; condition treated.

18. *External cause of accidents* : For transport accidents, state vehicle involved; whether deceased was driver, passenger, etc. description of accident, place of occurrence; for other accidents, specify circumstances and place of occurrence.

19. *Old age or senility* : This should not be given if a more specific cause is known. If old age was a contributory factor it should be entered in Part II only.

3

EXAMPLES OF CERTIFICATION

Some examples of situations drawn mainly from Indian experience utilising case histories provided by the Safdarjung Hospital, New Delhi and the Directorate of Health Services, Pune are categorised into simple and complicated situations and explained below.

3.1 Simple situations

3.1.1

I. (a)	Peritonitis	2 days
(b)	Perforation of Duodenum	3 days
(c)	Duodenal ulcer	6 months
II.	Carcinoma of bronchus	

3.1.2

I. (a)	Abscess of hand	
(b)	Incision of hand	10 days
(c)	Tetanus	
II.	.....	

3.1.3

I. (a)	Toxaemia	
(b)	Severe anaemia of pregnancy	
(c)	.....	
II.	Tuberculosis	

3.1.4

I. (a)	Asphyxia	
(b)	Drowning	
(c)	.....	
II.	.....	

3.1.5

I. (a) Fracture of vault of skull ... ... 15 min
(b) Collision between car he was driving and heavy truck on road
(c) .....

II. .....

3.1.6

I. (a) Uraemia
(b) Chronic nephritis
(c) .....

II. .....

3.2C omplicated situations

As an aid to write the statement properly, somc cases from hospital records arh abstracted here to indicate typieal problems.

3.2.1 Case History

On 3-1-1977, a 60 year old female was admitted with a "Strangulated Femoral Hernia" which had started 4 day earlier. She came complaining of abdominal pain and fecal vomits. Apparently, the small intestines were perforated even before. On 4th January, she underwent a release of hernia and the recession of the Intestines, with an end to end "Anastomosis". On 5th January, she started developing signs of "Peritonitis', and following that died on 14-1-1977.

Statement

I. (a) Peritonitis, acute
(b) Perforation of small intestines 12 days
(c) Strangulated Femoral Hernia. 15 days

II. .....

Explanat:on : Clearly, acute peritonitis led directly to death and therefore appears on line (a). Performation of small intestines gave rise to the immediate cause shown in line (a) and therefore appears next in line (b). Strangulated Femoral Hernia was the cause of intestinal perforation anq was the cause which initiated the chain of events leading to death and this is the underlying cause which is written on line (c).

3.2.2. Case History

On 14-1-1976 and old man slipped on same level and fell down, resulting in fractures. After being admitted for care, froctures of the left Ischium and Ilium were reduced. The patient then suffered from Azotemia, genral arteriosclerosis, artericlctic heart disease and pulmonary emphysema. He developed "Bronchopneumonia" on 15th February and died 6 days later. Autopsy reuealed also fractured hip and pelvis. cardiac hypertophy. chronic fibrous myocarditis and coronary sclerosis.

Statement

I. (a) Bronchopnemonia 6 days
(b) Fracture of left Ischium & Ilium 7 day
(c) .....
II. Arteriosclerotic heart with coronary sclerosis,

Explanation : Bronchopneumonia is ccrtinly the immediate cause of death. The fracture of left Ischium and Ilium gave Arteriosclerotic Heart Disease with coronary Sclcrosis were, no doubt, significant conditions contributing to death and are therefore given in Part II.

3.2.3 Case History

On 25-8-1964 a 53 year old male was admitted in hospital. X-ray showed. "Adenocarcinoma of the rectum" but no evidence Syphiiis was also noticed and treated. He was discharged from nospital in November 1964, as improved.

On 3-3-1966, he got X-rayed which showed pelvis apparently normal; however, there was an unusual shadow to the left of the sacrum. On 19-6-1966, he was re-admitted with recurrenr carcinoma of the rectum with invasion of the urinary bladder. He was discharged, unimproved on 27-7-1966.

On 4-1-1967 he was again admitted for the same ailment. Examination showed recurrent carcinoma of the rectum wtih invasion of the urinary bladder and "Metastasis" througout the abdomen, syphilis and decubitus ulcers. Bronchopneumonia developed on 9-1-1967 and the patient died 3 days later.

Statement

I. (a) Bronchopneumonia 3 days
(b) Metastatic cancer of bladder and abdomen
(c) Aden carcinoma of rectum
II. Syphilis

Explanation : Since the metastatic lesions were the result of the Adeno carcinoma of the rectum, the primary site is recorded as the underlying cause of death.

3.2.4 Case History

On February 1st, a 58 year old men presented at a clinic complaining of long duration 'hemoptisis" and loss of weight. On examination he was found actually anaemic and therefore admitted in hospital. The diagnosis was advanced pulmonary TB, reactivation type with cavitation, perhaps of 8 year duration. The patient also suffered from generalised arteriosclerosis, probably of long duration. He also had moderate varicose veins of the lower extermity. On admission, the patient had acute and massive pulmonary haemorrhage he died that eveniug.

Statement

I. (a) Pulmonary haemorrhage 10 hours
(b) Advanced pulmonary TB 8 years
(c) .....
II. Generalised arterioscelerosis and varicose veins of lower extremity.

3.2.5 Case History

A man of 63 years had been treated for some years for malignant hypertension and developed hypertensive heart disease and chronic renal failure While seriously ill with the heart condition,, he developed acute appendicitis, and the appendix ruptured, Appendicectomy was carried out successfully but the heart condition deteriorated further and he died 2 weeks later.

Statement

I. (a) Congestive heart failure
(b) Cardiac hypertrophy 2 weeks
(c) Malignant hypertension some years

ILLUSTRATION :

In this example, the Medical Officer should have maintained the train of events in Part-I and other significant conditions in Part-II, as mentioned in the correct certificate.

		Incorrect Certificate	*Correct Certificate*
4.	Part-I	(a) Nephrectomy	(a) Edema Face, Foot
		(b) Edema Face, Foot	(b) Embroyoma of Kidney
		(c)	(c) .....
	Part-II	Embryoma of Kidney	.....

ILLUSTRATION :

The Medical Officer has recorded operative procedure "Nephrectomy" in Part-I and other condition "Edema Face and Foot" which is due to the disease "Embryoma of Kidney" stated in Part-II, should have been written according to the sequence and operative procedure should have been recorded in the column made for "Operation performed".

		Incorrect Certificate	*Correct Certificate*
5.	Part-I	(a) Polycystic Kidney	(a) Renal Failure
		(b) Renal Failure and Hypertension	(b) Hypertension
		(c) Ischaemic Heart Disease	(c) Polycystic Kidney
	Part-II	.....	Ischaemic Heart Disease

ILLUSTRATION :

The certificate should have been got completed by the Medical Officer as mentioned in the correct certificate because Renal Failure, Antecedent direct cause and terminated by the condition mentioned at (c) of Part-I as the underlying cause of death and unrelated cause "Ischaemic Heart Disease" in Part-II.

		Incorrect Certificate	*Correct Certificate*
6.	Part-I	(a) Intestinal Obstruction	(a) Femoral Hernia with obstruction
		(b) Femoral Hernia	(b) .....
		(c)	(c) .....
	Part-II	.....	.....

ILLUSTRATION :

In this example all the conditions recorded by the Medical Officer are co-related but it should have been mentioned as in the correct certificate because ICD provides a combined code for these conditions.

Keeping in view the above mentioned examples with their illustrations, all the Medical Officers are requested mainly to know the contents, as under, Part-I and Part-II of International Form of Medical Certificate of Cause of Death.

"In Part-I is reported cause leading directly to death at line (a) and also the antecedent conditions at line (b) and (c) which gave rise to the cause reported in line (a), the underlying cause being stated last in the sequence of events. However, no entry is necessary in lines (b) and (c) if the disease or condition directly leading to death, stated in line (a), describes completely the train of events."

"In Part-II is entered any other significant condition which unfavourably influenced the course of the morbid process and thus contributed to the fatal outcome, but which was not related to the disease or condition directly causing death."

3.4 Importance of reporting sequence accurately

The following illustrates the importance of accurately stating the sequence of morbid conditions in order to allow selection of the cause considered "underlying" by the attending physician

A diabetic man who had been under insulin control for many years developed ischaemic heart disease and died suddenly from a myocardial infarction. Most people consider there to be a relationship between diabetes and ischaemic heart disease but its nature is not yet fully understood. Depending on the role, the doctor consider to have been played in the fatal outcome by one or the other conditions, the following certifications are possible.

1. If the doctor considered that the heart condition resulted from the long-standing diabetes, the sequence would be :—

I.	(a) Myocardial infarction	1 hour
	(b) Chronic ischaemic heart disease	5 years
	(c) Diabetes mellitus	12 years

and the statistical office would select diabetes as the underlying cause of death.

2. If the doctor considered that the heart condition developed independently of the diabetes, the certification would be :—

I.	(a) Myocardial infarction	1 hour
	(b) Chronic ischaemic heart disease	5 years
II.	Diabetes mellitus	12 years

and the heart condition would be recorded as the underlying cause.

3. If the man had instead died from some other complication of the diabetes, such as nephropathy, the heart condition playing only a subsidiary part in the death and the doctor being uncertain that it arose from the diabetes at all the certificate should be in the form :—

I.	(a) Acute renal failure	1 week
	(b) Nephropathy	4 years
	(c) Diabetes mellitus	12 years
II.	Chronic ischaemic heart disease	5 years

The underlying cause is "Diabetic nephropathy".

ANNEXURES

EXAMPLES OF INCOMPLETE DESCRIPTIONS OF CAUSE OF DEATH

Term	*Additional information needed for satisfactory coding according to international classification*
Abortion . . .	Spontaneous or induced and reason if induced; period of gestation; whether sepsis or toxaemia
Abscess . . .	Site and cause (e.g. tuberculous)
Anaemia . . .	Variety if primary; cause if secondary
Aneurysm . . .	Aortic (abdominal or thoracic), arterial, arteriovenous, cardiac; arterioscleratic or syphilitic
Angina . . .	Agranulocytic, diphtheritic, faucium streptococcal, Vincent's; pectoris
Apoplexy . . .	Site of lesion; recent or late effects
Appendicitis . . .	Acute, Chronic or perforated
Arteriosclerosis . . .	Whether hypertensive (benign or malignant) nature of cardiac, cerebral and renal manifestations, if any
Arteritis . . .	Arteriosclerotic, syphilitic; cerebral, coronary
Arthritis . . .	Acute, gonococcal, gouty, osteoarthritic, tuberculous, due to rheumatic fever or rheumatoid
Ascites . . .	Cause of the condition
Asphyxia . . .	Cause of the condition
Atheroma . . .	Aorta, artery, valve of heart
Boil . . .	Site
Bright's disease . . .	Acute, sub-acute or chronic
Bronchitis . . .	Acute, chronic; allergic, capillary, emphysematous
Burn . . .	Site(s) and whether by fire, explosion, hot object, liquid, chemical or radiation.
Calculus . . .	Site

Term	*Additional information needed for satisfactory coding according to international classification*
Cancer, Carcinoma	Site of primary, if known, otherwise sites of secondary; part where it originated if of lip, tongue, mouth, throat, intestine, colon, uterus; histological type, if known.
Carbuncle . . .	Site
Cardiac failure . . .	Disease causing the condition
Cardiovascular . . . disease	Whether hypertensive, coronary or renal involvement
Carditis . . .	Endo, myo, or per; acute, rheumatic
Caries . . .	Cause, part affected
Cellulitis . . .	Cause, part affected
Child birth . . .	Complication and whether apparent before delivery
Chorea . . .	Rheumatic, Huntington's gravidarum
Cirrhosis of liver	Cause (e.g. alcoholic)
Convulsion, Croup	Cause
Crushing . . .	Whether fracture, internal injury, external cause
Curvature of spine	Cause, congenital or acquired
Cyst . . .	Site; congenital, multiple, hydatid, dermoid retention
Debility . . .	Disease causing the condition
Dermatitis . . .	Variety
Dementia . . .	Disease causing the condition
Diabetes . . .	Complication or independent disease causing death (particular care should be taken to differentiate between diabetes as the under lying cause and as a contributory condition)
Diarrhoea . . .	Cause
Dysentery . . .	Bacterial, Amoebic or other protozoal
Eclampsia . . .	Cause and whether apparent before delivery
Embolism . . .	Site and cause; associated child-birth or abortion; if following operation; state condition for which operation was performed.
Encephalitis . . .	Acute infectious, late effect of infectious; post vaccinal, post-exenthematous, idiopathic, meningococcal, suppurative or tubercuious.

Term	*Additional information needed for satisfactory coding according to international classification*
Endocarditis . . .	Acute or chronic; arteriosclerotic, hypertensive, rheumatic or other; if rheumatic, whether rheumatic fever was present at death
Endometritis . . .	Whether puerperal infection
Fits . . .	Apoplectic, epileptic, eclampsia or hysteria
Fracture . . .	Bone; part of skull or femur; compound; external cause
Gangrene . . .	Site and cause (diabetic, gas bacillus, senile)
Gastritis . . .	Cause
Glioma . . .	Variety if known; site
Goitre . . .	Simple or toxic; diffuse or nodular
Haematemesis . . .	Disease causing the condition
Haemoptysis . . .	Whether tuberculous
Haemorrhage . . .	Site and cause
Hemiplegia . . .	Cause and duration
Hepatitis . . .	Acute infective, chronic, alcoholic, of new born, of pregnancy, puerperal, post-immunisation, post-transfusion
Hydrocephalus . . .	Congenital, tuberculous or other cause
Hypertension . . .	Benign or malignant, whether associated arteriosclerosis, cerebrovascular, cardiac, or renal manifestation or pregnancy
Immaturity . . .	Cause; gestation period; birth weight; associated abnormality or disease, if any
Influenza . . .	Complications, if any
Injury . . .	Nature of injuries and parts of body injured whether accident, suicide, homicide, war injury; place and circumstances of accident
Insanity . . .	Form of mental disorder; direct cause of death; underlying congenital condition, cerebral disease; arterosclerosis, syphilis
Jaundice . . .	Catarrhal, epidemic, haematogenous, obstructive, toxi; cause of obstruction, or toxaemia if any, and whether occurring during pregnancy or the puerperium of following immunisation or transfusion. Avoid the term "malignant" jaundice
Laryngitis . . .	Acute, chronic or tuberculous
Leukaemia . . .	Lymphatic, myeloid, monocytic; acute or chronic.

Term	*Additional information needed for satisfactory coding according to international classification*
Malaria . . .	Benign, tertian, malignant tertian, quartan, ovale black water fever
Malformation . . .	Congenital or acquired; type and organ involved
Malnutrition . . .	Congenital or due to inadequate diet, disease or lack of care
Marasmus . . .	Cause
Myocarditis . . .	Acute rheumatic, acute non-rheumatic, chronic rheumatic, other chronic (but avoid using chronic "Myocarditis" to describe degeneration of the myocardium)
Neoplasm . . .	Benign or malignant; type and location; if malignant, *see* Cancer
Nephritis . . .	Acute or sub-acute with oedema; chronic; Infective or toxic; cause if known. Associated hypertension, arterscleresis, heart disease or pregnancy
Neuritis . . .	Location; cause (e.g., alcohol, lead, rheumatism)
Paraplegia . . .	Spastic due to birth injury, due to cerebral, lesion; due to spinal lesion
Pneumonia . . .	Broncho; lobar, atypical, chronic interstitial hypostatic, influenzal, neonatal, tuberculous following measles
Pneumothorax . . .	Cause of the condition
Rheumatic fever . . .	Distinguish heart affections with active rheumatic fever at death from old heart lesions left by rheumatic fever
Rickets . . .	Active, late effects (e.g., genuvalgum) foetal, renal or scurvy
Salpingitis . . .	Acute, chronic, gonococcal, tuberculous, post-abortive, puerperal
Septicaemia . . .	Cause and site if localised
Spondylitis . . .	Ankylosing; deformans, sacro-iliac, gonococcal, tuberculous
Suffocation . . .	Cause, e.g., bedclothes; inhaling food, foreign body or smoke, chemical, mechanical, submersion, during birth
Syphilis . . .	Congenital, early or late, organ affected

Term	*Additional information needed for satisfactory coding according to international classification*
Tetanus . . .	Mode of infection if known, e.g. slight injury, major injury, puerperal
Tuberculosis . . .	Organs affected including pleura and parts of respiratory system
Ulcers . . .	Site and cause, whether perforated
Uraemia . . .	Cause, if known—e.g. acute, sub-acute, or chronic nephritis, associated pregnancy or child-birth.

For Hospital Events

FORM NO. 8

MEDICAL CERTIFICATE OF CAUSE OF DEATH

To be sent to Registrar of Births and Deaths along with Form 4 (Death Report)

I, hereby certify that the person whose particulars are given below died in the hospital in Ward No.....on.....

at.....a.m./p.m.

Name of deceased (Type or print).....

Address of normal residence.....

For use by statistical office

Sex	Age in years	Date of birth	Marital status : S, M, W or D	Religion	Occupation	Age at death				Detailed list code
						If under 1 year		If under 24 hours		
						months	days	hours	minutes	

CAUSE OF DEATH

		Interval between onset & death approx.	
I. *Immediate cause* : Disease, injury or complication which caused death, not the mode of dying such as heart failure, asthenia, etc.	(a) ..... due to (or as a consequence of)	.....	.....
Antecedent cause Morbid conditions, if any, giving rise to the above cause, stating underlying condition last.	(b) ..... due to (or as a consequence of)	.....	.....
	(c)	.....	.....
II. Other significant conditions contributing to the death, but not related to the diseases or condition causing it.	.....	.....	.....

Accident/Suicide/Homicide (Specify) : How did injury occur ?

IF DECEASED WAS A FEMALE

Was the death associated with pregnancy ? Yes/No

Was there delivery ? Yes/No

Name or Rubber stamp of Institution	Serial Number of Institution	Date of report

Allopathic/Ayurvedic/Homoeopathic/Unani

Signature and address of Physician/Medical Officer

.....

(To be detached and handed over to the relative of the deceased)

Certified that Shri/Smt./Kum.....S/W/D of Shri.....

Resident of.....was admitted to the hospital on.....

and expired on.....

Doctor

(Medical Suppt.).....

Name of Hospital.....

.....

For Non-Hospital Events

FORM NO. 8A

MEDICAL CERTIFICATE OF CAUSE OF DEATH

To be sent to Registrar of Births and Deaths along with Form 4 (Death Report)

I, hereby certify that the deceased was under my treatment from ..... to .....

before he/she died on ..... at ..... a.m./p.m.

Name of deceased (Type or print) .....

Address of normal residence .....

* For use by statistical office

Sex	Age in years	Date of birth	Marital status S, M, W or D	Religion	Occupation	Age at death				Detailed list code
						If under 1 year		If under 24 hours		
						months'	days	hours	minutes	

CAUSE OF DEATH

		Interval between onset & death approx.	
I. *Immediate cause* : Disease, injury or complication which caused death not the mode of dying such as heart failure, asthenia, etc	(a) ..... due to (or as a consequence of)		
	(b) ..... due to (or as a consequence of)		
Antecedent cause : Morbid conditions if any, giving rise to the above cause, stating underlying condition last.	(c)		
II. Other significant conditions contributing to the death, but not relating to the diseases or condition causing it.	.....		

Accident/Suicide/Homicide (Specify) : How did injury occur ?

IF DECEASED WAS A FEMALE
Was the death associated with pregnancy ? Yes/No
Was there delivery ? Yes/No

Name of Medical Practitioner | Serial Number of Registration | Date of report

Allopathic/Ayurvedic/Homeopathic/Unani

Signature and address of Medical Practitioner

.....

(To be detached and handed over to the relative of the deceased)

Certified that Shri/Smt./Kum. ..... S/W/D of Shri ....

Resident of ..... was under my treatment from ..... to ..... and he/she expired on ..... at ..... a.m./p.m.

Doctor .....
Signature and address
of the Medical Practitioner
with Registration No. .....