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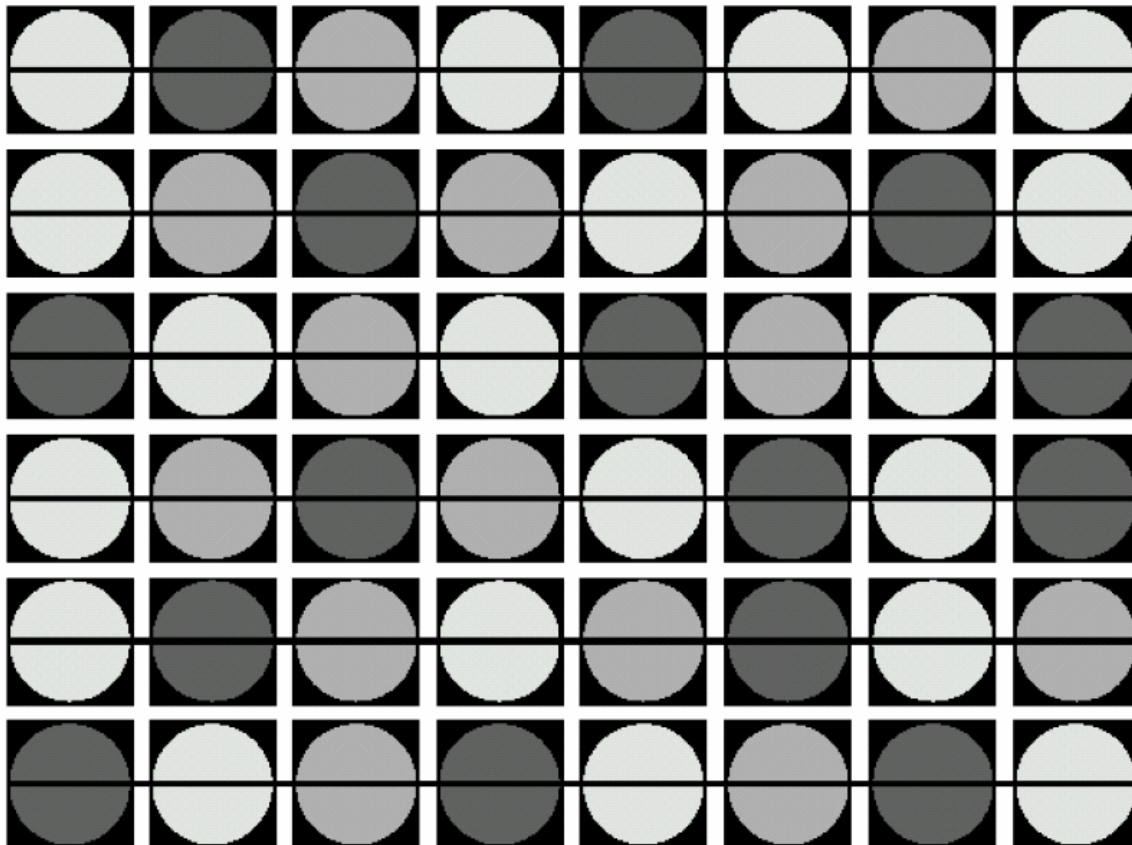
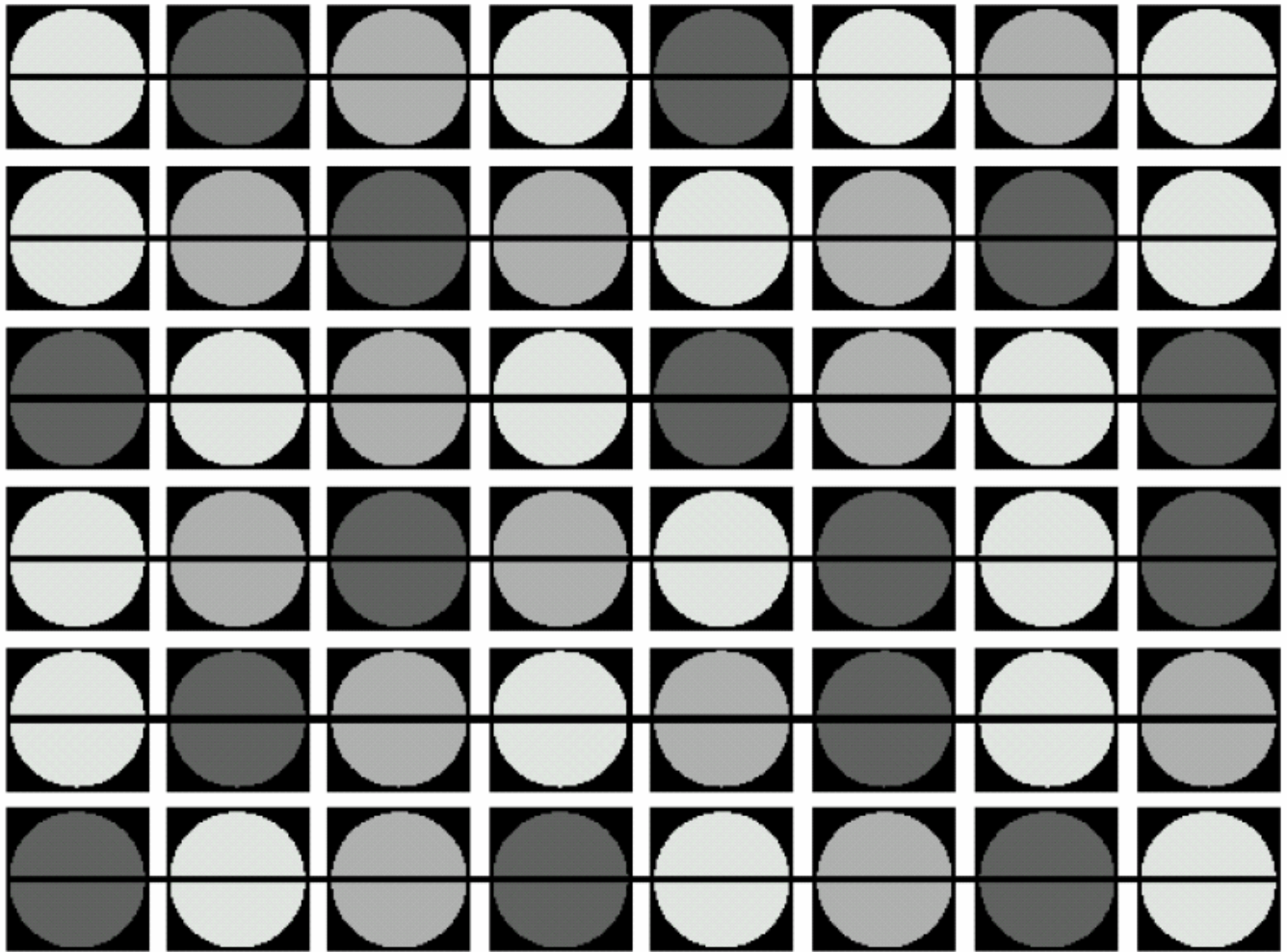# Instruction Manual
Part 20

ICD-10 Cause-of-Death Querying, 2007

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Health Statistics

Instruction Manual
Part 20

ICD-10 Cause-of-Death Querying, 2006

Acknowledgments

Major Revisions from Previous Manual

1. Added codes J09 and *U04.9 and deleted the redundant A75.1-.9 line in Appendix C.

Contents

Cause-of-death Querying

I. Introduction

Cause-of-death querying is a process by which the State health department contacts the medical certifier who completed the cause-of-death statement and asks for clarification or further information so that resulting mortality statistics may be as complete and accurate as possible. The purpose of querying is two-fold: 1) to obtain information needed to properly code and classify the cause of death and 2) to educate the certifier about the proper method of completing medical certifications of death. Querying is one of the most important ways to improve the quality of cause-of-death data. It must therefore, be viewed as an integral part of any State's vital statistics activity.

This manual has been revised for use with the 2003 U.S. Standard Certificate of Death and to accommodate some updates to the *International Classification of Diseases (ICD-10)*. The general principles and procedures outlined in this manual are the same as in the previous manual for the Tenth Revision of the ICD. While there are new items on the certificate related to tobacco, pregnancy, and transportation injuries that relate to cause, the suggested queries in this manual are built around the cause-of-death codes. Suggestions intended to minimize item non-response for the tobacco, pregnancy, and transportation items are described in the Edit Specifications for the Death Certificate posted at http://www.cdc.gov/nchs/vital_certs_rev.htm.

Querying is an essential part of the vital registration process (1-2), so both local registrars and registration personnel in the State health department should be thoroughly knowledgeable of the laws, procedures, and other requirements for death registration, querying, and death certificate amendment. This manual is for those who have the responsibility for the acceptance and

registration of death certificates, primarily at the State level, and any key staff who have been

designated as responsible for communicating with medical certifiers about the accuracy and

completeness of the cause-of-death statement. The manual is restricted to the medical

certification portion of the record. Querying procedures for the demographic items on the death

certificate are addressed in a companion manual entitled "Guidelines for Implementing Field and

Query Programs for Registration of Births and Deaths" (Part 18).

Several levels of querying (levels 1 through 6) are offered in this manual; a minimal level of

querying (Priority Level 1) is necessary to produce cause-of-death statistics. It is estimated that

Level 1 querying would involve about five percent of a State's death records. However, higher

levels of querying are desirable to ensure specificity and completeness in the physicians'

statements of cause of death. Not every State will be able to devote the same amount of effort to

querying; however, it is hoped that each registration area will elect to query at the maximum

level consistent with their resources and that all registration areas will query at least at Priority

Level 1. We believe that previous versions of this manual were of assistance to the States in

developing their own query programs, and we hope that this will as well.

In developing query procedures, consideration must also be given to the various uses of the death

certificate. Cause-of-death data are important for statistical uses in the following ways:

surveillance, research, design of public health and medical interventions, and funding decisions

for research and development. Cause-of-death data also have legal and administrative uses. For

example, in the case of accidents, the additional information requested such as the time and place

and the manner in which the injury occurred can be important in court cases, insurance claims,

etc. The Priority Levels in this manual focus on improving the usefulness of the data for

statistical purposes. States may wish to query other items that are legally or administratively important in the particular State.

Normally, cause-of-death queries are directed to the certifier (attending physician, medical examiner, coroner) who originally provided the information in the medical section of the death certificate. However, if the death occurred in a hospital, it is also possible to obtain additional information from the hospital files to further clarify the cause of death. For legal reasons, no changes or additions should be made on the face of the original record without the approval of the legally designated certifier. If the cause-of-death statement is substantially changed, the certifying physician should be encouraged to file an amended certificate. The procedures for filing amended certificates vary by State.

While querying has an immediate goal of clarifying the cause of death for individual records, it has a broader goal of educating physicians on how to complete a medical certification. The following section addresses some basics on medical certification.

Basics of medical certification

The medical certification section of the U.S. Standard Certificate of Death (Figure 1) is designed to collect an underlying cause of death; that is, 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 certification section of the death certificate follows the format recommended by the World Health Organization in the *International Classification of Diseases* to facilitate reporting of the underlying cause of death by listing the immediate cause of death on the top line of Part I followed by antecedent causes in proper sequence, with the reported underlying cause being the last entry in Part I (Figure 2). Part II (Other Significant Conditions)

Figure 1.   **U.S. STANDARD CERTIFICATE OF DEATH**

LOCAL FILE NO.   STATE FILE NO.

NAME OF DECEDENT
For use by physician or institution

| To Be Completed/ Verified By: FUNERAL DIRECTOR: | |

1. DECEDENT'S LEGAL NAME (Include AKA's if any) (First, Middle, Last)   2. SEX   3. SOCIAL SECURITY NUMBER

4a. AGE-Last Birthday (Years) | 4b. UNDER 1 YEAR | | 4c. UNDER 1 DAY | | 5. DATE OF BIRTH (Mo/Day/Yr) | 6. BIRTHPLACE (City and State or Foreign Country)
  | Months | Days | Hours | Minutes | |

7a. RESIDENCE-STATE   7b. COUNTY   7c. CITY OR TOWN

7d. STREET AND NUMBER   7e. APT. NO.   7f. ZIP CODE   7g. INSIDE CITY LIMITS? ☐ Yes ☐ No

8. EVER IN US ARMED FORCES? ☐ Yes ☐ No   9. MARITAL STATUS AT TIME OF DEATH ☐ Married ☐ Married, but separated ☐ Widowed ☐ Divorced ☐ Never Married ☐ Unknown   10. SURVIVING SPOUSE'S NAME (If wife, give name prior to first marriage)

11. FATHER'S NAME (First, Middle, Last)   12. MOTHER'S NAME PRIOR TO FIRST MARRIAGE (First, Middle, Last)

13a. INFORMANT'S NAME   13b. RELATIONSHIP TO DECEDENT   13c. MAILING ADDRESS (Street and Number, City, State, Zip Code)

14. PLACE OF DEATH (Check only one: see instructions)

IF DEATH OCCURRED IN A HOSPITAL: ☐ Inpatient ☐ Emergency Room/Outpatient ☐ Dead on Arrival   IF DEATH OCCURRED SOMEWHERE OTHER THAN A HOSPITAL: ☐ Hospice facility ☐ Nursing home/Long term care facility ☐ Decedent's home ☐ Other (Specify):

15. FACILITY NAME (If not institution, give street & number)   16. CITY OR TOWN , STATE, AND ZIP CODE   17. COUNTY OF DEATH

18. METHOD OF DISPOSITION: ☐ Burial ☐ Cremation ☐ Donation ☐ Entombment ☐ Removal from State ☐ Other (Specify):_____   19. PLACE OF DISPOSITION (Name of cemetery, crematory, other place)

20. LOCATION-CITY, TOWN, AND STATE   21. NAME AND COMPLETE ADDRESS OF FUNERAL FACILITY

22. SIGNATURE OF FUNERAL SERVICE LICENSEE OR OTHER AGENT   23. LICENSE NUMBER (Of Licensee)

ITEMS 24-28 MUST BE COMPLETED BY PERSON WHO PRONOUNCES OR CERTIFIES DEATH   24. DATE PRONOUNCED DEAD (Mo/Day/Yr)   25. TIME PRONOUNCED DEAD

26. SIGNATURE OF PERSON PRONOUNCING DEATH (Only when applicable)   27. LICENSE NUMBER   28. DATE SIGNED (Mo/Day/Yr)

29. ACTUAL OR PRESUMED DATE OF DEATH (Mo/Day/Yr) (Spell Month)   30. ACTUAL OR PRESUMED TIME OF DEATH   31. WAS MEDICAL EXAMINER OR CORONER CONTACTED? ☐ Yes ☐ No

| To Be Completed By: MEDICAL CERTIFIER | |

CAUSE OF DEATH (See instructions and examples)

Approximate interval: Onset to death

32. **PART I.** Enter the chain of events--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.

IMMEDIATE CAUSE (Final disease or condition --------> resulting in death)   a._____
Due to (or as a consequence of): _____

Sequentially list conditions, if any, leading to the cause listed on line a. Enter the **UNDERLYING CAUSE** (disease or injury that initiated the events resulting in death) **LAST**   b._____
Due to (or as a consequence of): _____
c._____
Due to (or as a consequence of): _____
d._____

PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I   33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No

34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ☐ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ☐ Probably ☐ No ☐ Unknown   36. IF FEMALE: ☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year   37. MANNER OF DEATH ☐ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

38. DATE OF INJURY (Mo/Day/Yr) (Spell Month)   39. TIME OF INJURY   40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area)   41. INJURY AT WORK? ☐ Yes ☐ No

42. LOCATION OF INJURY: State: _____   City or Town: _____

Street & Number: _____   Apartment No.: _____   Zip Code: _____

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43. DESCRIBE HOW INJURY OCCURRED:	44. IF TRANSPORTATION INJURY, SPECIFY: ☐ Driver/Operator ☐ Passenger ☐ Pedestrian ☐ Other (Specify)

45. CERTIFIER (Check only one):
    ☐ Certifying physician-To the best of my knowledge, death occurred due to the cause(s) and manner stated.
    ☐ Pronouncing & Certifying physician-To the best of my knowledge, death occurred at the time, date, and place, and due to the cause(s) and manner stated.
    ☐ Medical Examiner/Coroner-On the basis of examination, and/or investigation, in my opinion, death occurred at the time, date, and place, and due to the cause(s) and manner stated.

Signature of certifier:_____

46. NAME, ADDRESS, AND ZIP CODE OF PERSON COMPLETING CAUSE OF DEATH (Item 32)

47. TITLE OF CERTIFIER	48. LICENSE NUMBER	49. DATE CERTIFIED (Mo/Day/Yr)	50. **FOR REGISTRAR ONLY**- DATE FILED (Mo/Day/Yr)

To Be Completed By: FUNERAL DIRECTOR

51. DECENDENT'S EDUCATION-Check the box that best describes the highest degree or level of school completed at the time of death.	52. DECEDENT OF HISPANIC ORIGIN? Check the box that best describes whether the decedent is Spanish/Hispanic/Latino. Check the "No" box if decedent is not Spanish/Hispanic/Latino.	53. DECEDENT'S RACE (Check one or more races to indicate what the decedent considered himself or herself to be)
☐ 8th grade or less ☐ 9th - 12th grade; no diploma ☐ High school graduate or GED completed ☐ Some college credit, but no degree ☐ Associate degree (e.g., AA, AS) ☐ Bachelor's degree (e.g., BA, AB, BS) ☐ Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA) ☐ Doctorate (e.g., PhD, EdD) or Professional degree (e.g., MD, DDS, DVM, LLB, JD)	☐ No, not Spanish/Hispanic/Latino ☐ Yes, Mexican, Mexican American, Chicano ☐ Yes, Puerto Rican ☐ Yes, Cuban ☐ Yes, other Spanish/Hispanic/Latino (Specify) _____	☐ White ☐ Black or African American ☐ American Indian or Alaska Native (Name of the enrolled or principal tribe) _____ ☐ Asian Indian ☐ Chinese ☐ Filipino ☐ Japanese ☐ Korean ☐ Vietnamese ☐ Other Asian (Specify)_____ ☐ Native Hawaiian ☐ Guamanian or Chamorro ☐ Samoan ☐ Other Pacific Islander (Specify)_____ ☐ Other (Specify)_____

54. DECEDENT'S USUAL OCCUPATION (Indicate type of work done during most of working life. DO NOT USE RETIRED).

55. KIND OF BUSINESS/INDUSTRY

allows the physician to list any other medically important disease or condition that was present at the time of death and which may have contributed to death but was not a direct link in the chain of events directly leading to death. Multiple causes of death include each of the causes reported on the death certificate in Parts I or II.

Underlying cause is the item most commonly used in tabulation and analysis. As stated earlier, underlying cause data are important for surveillance, research, design of public health and medical interventions, and funding decisions for research and development. Multiple cause data are an important supplement to underlying cause data and can provide additional analytical information.

It is very important that all physicians, medical examiners, or coroners who may be certifying deaths be properly oriented to the principles of medical certification, the manner in which the statements are to be entered, and the importance of completeness, accuracy, and specificity in

Figure 2.

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	
IMMEDIATE CAUSE (Final disease or condition --------> resulting in death) a. <u>Immediate cause of death</u> _____ Due to (or as a consequence of):	<u>Time interval</u>
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the b. <u>Intermediate cause</u> _____ Due to (or as a consequence of):	<u>Time interval</u>
UNDERLYING CAUSE (disease or injury that initiated the events resulting c. <u>Intermediate cause</u> _____ Due to (or as a consequence of):	<u>Time interval</u>
in death) **LAST** d. <u>Underlying cause</u> _____	<u>Time interval</u>

PART II. Enter other <u>significant conditions</u> contributing to death but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No
Contributory cause(s), if any	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ☐ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH?	36. IF FEMALE:	37. MANNER OF DEATH
☐ Yes ☐ Probably ☐ No ☐ Unknown	☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	☐ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	
IMMEDIATE CAUSE (Final disease or condition --------> resulting in death) a. <u>Rupture of myocardium</u> _____ Due to (or as a consequence of):	<u>Minutes</u>_____
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the b. <u>Acute myocardial infarction</u> _____ Due to (or as a consequence of):	<u>6 days</u>_____
UNDERLYING CAUSE (disease or injury that initiated the events resulting c. <u>Coronary artery thrombosis</u> _____ Due to (or as a consequence of):	<u>6 days</u>_____
in death) **LAST** d. <u>Atherosclerotic coronary artery disease</u> _____	<u>7 years</u>_____

PART II. Enter other <u>significant conditions</u> contributing to death but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ■Yes ☐ No
Diabetes, Chronic obstructive pulmonary disease, smoking	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ■ Yes ☐ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH?	36. IF FEMALE:	37. MANNER OF DEATH
■ Yes ☐ Probably ☐ No ☐ Unknown	■ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	■ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

listing the causes of death. Even the most conscientious physician sometimes has a difficult time

in distinguishing between those conditions that should be included in the causal chain versus

those conditions not in the chain but medically important and relevant. The cause-of-death

Figure 3. Completing a cause-of-death statement: Basic concepts

1) Deaths known or suspected of having been caused by injury or poisoning should be reported to the medical examiner or coroner, and you will complete the death certificate if the medical examiner or coroner doesn't accept the case.

2) The cause-of-death information should be your best medical opinion.

3) Only one condition should be listed per line in Part I. Additional lines may be added if necessary.

4) Each condition in Part I should cause the one above it.

5) Abbreviations and parentheses should be avoided in reporting causes.

6) Provide the best estimate of the interval between the presumed onset of each condition and death. The terms "approximately" or "unknown" may be used. Do not leave the interval blank; if unknown, indicate that it is unknown.

7) If additional medical information or autopsy findings become available that would change the cause of death originally reported, the original death certificate should be amended by the certifying physician by following the procedures in place in your State.

8) Report each disease, abnormality, injury, or poisoning that you believe adversely affected the decedent. A condition can be listed as "probable" even if it has not been definitively diagnosed.

9) A complete sequence should be reported in Part I that explains why the patient died. The sequence may be an etiological or pathological sequence as well as a sequence in which an earlier condition is believed to have prepared the way for a subsequent cause by damage to tissues or impairment of function.

10) No entry is necessary on lines (b), (c), and (d) if a single cause of death reported on line (a) describes completely the train of events resulting in death.

11) If two or more possible sequences resulted in death, report in Part I the one that, in your opinion, most directly caused death. Report in Part II the other conditions or diseases.

12) A specific cause of death should be reported in the last entry in Part I so there is no ambiguity about the etiology of this cause.

13) Conditions or diseases in Part II should contribute to death but not result in the last entry in Part I.

14) Mechanistic terminal events such as respiratory arrest, asystole, cardiac arrest, cardio-respiratory arrest, ventricular fibrillation, and electromechanical dissociation should not be the only condition included in the cause-of-death statement and are unlikely to be the underlying cause.

15) Always report an etiology for organ system failure such as congestive heart failure, hepatic failure, renal failure, or respiratory failure on the lines beneath it.

16) If, in your opinion, the use of alcohol, tobacco, other substance by the decedent, or a recent pregnancy or injury caused or contributed to death, then this condition should be reported.

17) A primary site and/or histological type should be specified for neoplasms or specify that site and type are unknown.

18) For deaths resulting from injuries, always report the fatal injury event, the trauma, and the impairment of function.

19) Injury items (38-43 in Figure 1) should have some sort of entry if the manner has been reported as accident, homicide, or suicide.

certification constitutes a medical-legal opinion, not necessarily an absolute fact, since it is not always possible to make a precise determination of interacting diseases or conditions. Thus, "to the best of my knowledge" is included in the certification statement, since the certifier is considered to be in a better position than anyone else to make a judgment as to the chain of events leading to death, but he/she cannot always be presumed to have a clear cut "absolute answer".

In certifying causes of death, several kinds of errors or oversights are frequently made, often due to the physicians not understanding how to complete the certification of death. One of the most common errors is the listing of causes in incorrect or illogical order, or the listing of more than one disease or condition on the same line. Another frequent error is omitting the interval between onset and death, the hour of death, and whether an autopsy was performed.

Completing a cause-of-death statement

Figure 3 shows some basic guidelines to certifying physicians on how to complete a cause-of-death statement.

Additional Aids

On occasion, it may be beneficial for the certifier physician to discuss medical certification of death with a member of the State health department staff before certifying a cause of death. It is helpful to provide a telephone number and the name of an individual who can provide answers to the certifier's questions. Needless to say, the person to whom such calls are referred must have a familiarity with medical terminology and of the pathology and etiology of morbid conditions.

Additional instructional material on writing cause-of-death statements is available; widespread knowledge and use of these materials by physicians could reduce many reporting problems and

the need for extensive querying. The sample letters include a very short reference to the resources, but maximum benefit would probably be gained by providing the certifying physician a packet of instructional material including, at least, items 2, 3, and 4 below:

> 1. Applicable State resources
> 2. Instructions for completing the cause-of-death section of the death certificate (laminated plastic card or pocket size folder available from NCHS, also at http://www.cdc.gov/nchs/data/dvs/blue_form.pdf)
> 3. Instructions for completing the cause-of-death section of the death certificate for injury and poisoning (laminated plastic card or pocket size folder available from NCHS, also at http://www.cdc.gov/nchs/data/dvs/red_form.pdf)
> 4. Physicians' Handbook on Medical Certification of Death (available from NCHS, also at http://www.cdc.gov/nchs/data/misc/hb_cod.pdf)
> 5. Medical examiners' and coroners' handbook on death registration and fetal death reporting (available from NCHS, also at http://www.cdc.gov/nchs/data/misc/hb_me.pdf)
> 6. Possible solutions to common problems in death certification (http://www.cdc.gov/nchs/about/major/dvs/handbk.htm)
> 7. Tutorial from the National Association of Medical Examiners (http://www.thename.org/CauseDeath/COD_main_page.htm)
> 8. *The Medical Cause of Death Manual* (3) edited by Randy Hanzlick: can be ordered from the College of American Pathologists (800-323-4040 ext. 7531 for information and credit card orders). The product code number is B260.
> 9. *Cause-of-Death Statements and Certification of Natural and Unnatural Deaths* edited by Randy Hanzlick: can be ordered from the College of American Pathologists (800-323-4040 ext. 7531 for information and credit card orders). The product code number is BK7261.

Enlisting the cooperation of the State and local medical societies to conduct some instructional/educational sessions on completing death certificates should be considered, especially if a local region makes a disproportionate number of errors. Local medical schools should also be approached about the possibility of including training on death certification as part of their curriculum.

Training physicians in the proper completion of a death certificate will work best when the physicians feel that they have a vested interest in the death certification process. One way of improving the sense of being vested is to explain how the data is used for health programs and medical research. Training non-physicians in the proper completion of a death certificate may be more challenging since they do not have the medical background that physicians do.

II. Who Carries Out the Query

States must decide who can best carry out querying. Historically, nosologists have done the querying, but with the advent of automated processing, fewer States have nosologists. These States must develop different mechanisms for querying, perhaps by training other staff to query. The person who queries records needs to be someone who understands the content and purpose of the querying manual, which in turn implies an understanding of coding rules and medical causality. That person could be an experienced nosologist or a trained statistician or a medical officer with an understanding of how death certificates should be completed. Consideration might be given to identifying a physician on staff in the State health department or under contract who could provide assistance with the querying process. It is critical that the person doing the querying have good communication skills as well as an understanding of why the certificate is being queried (e.g., to obtain more information or to correct obvious inadequacies).

An area for future development is to develop automated procedures for querying. NCHS is incorporating Priority Level 1 queries into the automated mortality medical software, specifically SuperMICAR. Initially, the system will identify the certificate number, the query level, and the recommended letter. The State staff can then pull the record and review the record to determine if a query is needed. Eventually, the automated system will produce a letter that may be used to query the record.

III. Use of Querying

If employed correctly, the query procedure can be a very effective method of acquainting physicians with the proper methods for certifying a cause of death. Unfortunately, most physicians do not receive training on completing death certificates during their formal education; therefore, querying can help provide them with information to enable them to certify a death correctly. Many common errors or omissions can be avoided by consistent querying, if sufficient explanation is furnished to the certifier to help them modify their approach with future medical certifications.

The design and wording of form letters used in querying is very important, not only for obtaining the necessary information for the death being queried, but to convey to the certifier enough information so that he/she can correctly certify future cases of the same or similar types. Questions in query letters need to be specific enough to indicate what is missing or incorrect and what information is being requested. The more explicit the letter, the better the response that can be expected. Examples illustrating the correct certification of specific causes are shown on the back of the sample form letters in Appendix B; these examples may serve as guides to the certifier.

IV. How Much to Query

Querying is a critical part of maintaining and improving data quality. The official responsible for vital registration and vital statistics should make a careful appraisal of the type and extent of querying that has taken place on the cause-of-death statements in his/her own registration area. Then, a better decision can be made about possible revisions in current query procedures and practices. Such decisions should take into account:

> 1) The importance of querying in improving physicians' practices in completing cause-of-death statements
>
> 2) The importance of querying in improving the particular death record under review
>
> 3) The extent to which staff resources can be devoted to querying versus other office activities
>
> 4) The query method that will be most effective in accomplishing 1) and 2) above.

Some records with questionable conditions or situations are easily identified as good candidates for querying or further investigation. Situations that need clarification are described in general terms in the description of the query levels and in specific terms in the four tables of Appendix A. The query manual provides general guidelines to what should be queried but informed judgment must be applied on a case-by-case basis before sending out a query to a physician.

V. Levels of Querying

Recognizing that the availability of staff and resources to be utilized for querying varies from State to State, the following levels of querying have been designed to aid decision makers in developing the query program for the specific State vital statistics program. The categories are in priority order ranging from "1" indicating cases that should always be queried, to "6" which is an optional category. To facilitate referencing, Priority Level 1 is subdivided into categories a-g. Those categories requiring no querying are indicated by "0".   For systematic data improvement, the manager should elect to query up to the highest Priority Level commensurate with the registration area's needs and resources. Intervening levels should not be skipped. NCHS recommends that every registration area conduct, as a minimum, the Priority Level 1 queries.

Appendix A presents an operationalization of the recommended Priority Levels. Table 1 shows specific ICD-10 categories along with a querying Priority Level and a reference to a sample query letter to use in querying (Appendix B contains the sample query letters). Table 2 presents specific improbable sequences that should always be queried. Table 3 lists recommendations for situations in which the duration for a specified cause is not clear. Table 4 presents selected situations in which the certifier has reported causes in a way that conflict with the format of the medical certification section along with a recommended query level and a reference to a sample query letter.   The following examples illustrate how Appendix A may be used.

> I (a) Pain in joints
> (b)
> (c)

> The ICD code for this condition is M25.5. Referring to this category in table 1 of
> Appendix A, it specifies that a query should be initiated under Priority Level 1c for

conditions coded to M15-M25. Also, it shows that Query Letter No. 8 on page 107 can be used.

I (a) Pharyngeal cancer
 (b)
 (c)

This condition would be coded C14.0. Referring to Appendix A, the Priority Level is shown as 5 and Query Letter No. 2 on page 71 could be used. If, however, the State queries only through Priority Level 4, no letter would be initiated in this case.

Appendix A provides guidelines for querying. Automatic or manual screening may be used to identify certificates for possible querying. However, the State should review the certificate more carefully to determine if the record really should be queried. For example, querying is not necessary when terms such as "probable," "unknown etiology," and "unknown site" are stated. In the case of SIDS or SUDI, querying is also not necessary when a complete investigation has been conducted (www.cdc.gov/reproductivehealth/SIDS/deathscene.htm) and the National Institute of Child Health and Human Development criteria have been met for diagnosing SIDS. In these cases, it is clear that the physician made an effort to provide a clear and complete etiological sequence.

While the form letters shown in Appendix B are adequate to cover most situations, there may be times when an original letter should be written, or additional statements or questions should be included. When two or more different query levels are applicable for the same record, the attachments for each query level may be used. It may be clearer to keep the questions on separate attachments rather than combining questions from multiple attachments.

<u>Priority Level 1</u>
Priority Level 1 contains the minimum level of querying that all State vital statistics programs

should use to promote basic integrity of State and national mortality data. This category is

designed to reduce the frequency with which assumptions must be made to properly assign

multiple cause or underlying cause-of-death codes because of missing or incorrect information.

Level 1a: Always query if an infrequent or rare cause appears anywhere in the medical certification section.

> Appendix C contains a list of infrequent and rare causes of death in the United States. These causes of death occur rarely and/or present threats to public health in the United States. As a result, each case should be verified to make sure there was no error in certification. When NCHS requests confirmation of a rare cause of death, the VSCP project director should work with staff to verify that the cause-of-death coding is correct and obtain corroboration from the State Health Officer before signing the confirmation letter. A notation of confirmation should also be recorded on the copy of the certificate sent to NCHS. In the absence of this notation, the disease will be coded as stated; the VSCP project officer will be contacted to confirm the accuracy of the certification.

> Examples: "Cholera", "plague", "acute poliomyelitis"

> See sample query letter number 1.

Level 1b: Always query neoplasm for a primary site and to determine if benign or malignant. When a malignant neoplasm is stated to be the underlying cause of death, it is important to determine the primary site.

> Example: I (a) Carcinomatosis
>   (b)
>   (c)

> Query to determine primary site.

> Example: I (a) Breast tumor
>   (b)
>   (c)

> Query to determine if benign or malignant.

> See sample query letter number 2.

Level 1c: Always query when the following are reported alone or as the underlying cause on the death certificate:
- **conditions that would rarely cause death by themselves (e.g., trivial conditions)**
- **symptoms and signs**
- **ill-defined conditions**
- **mechanisms of death**

Example: I (a) Myopia
     (b)
     (c)

Example I (a) Senility
     (b)
     (c)

See sample query letter numbers 4, 6, 8, 9, and 10.

Level 1d: Always query for the reason for the "surgery or medical care" when the underlying disease or condition is not reported anywhere on the death record.

Example: I (a) Hemorrhage
     (b) Surgery
     (c)

In the above example, the disease or condition requiring the surgery should be queried, and also the specific type of surgery performed.

See sample query letter numbers 5 and 10.

Level 1e: Always query for an external cause when only nature of injuries, that is, codes classifiable to S00-T98, are reported alone on the death certificate.

Example: I (a) Internal injuries
     (b)
     (c)

See sample query letter number 10.

Level 1f: Query when the sequence arrangement of the reported entries is questionable. Improbable sequences in part I of the death certificate are shown in tables 2-4 of Appendix A, pages 56-66, and in the instructions on "highly improbable" sequences in section III of the NCHS Instruction manual part 2A.

Example: I (a) Pneumonia
      (b) Hypertension
      (c) Cardiac hypertrophy due to above

In this example, it is difficult to determine the intent of the certifier; therefore, more information is needed.

See sample query letter number 11.

Level 1g: When any of the selected conditions in Appendix D is reported, whether in part I or part II on the death certificate, and there is no mention of HIV (Human immunodeficiency virus) infection, query for HIV.

See sample query letter number 3.

Priority Level 2
Priority Level 2 includes conditions not usually considered as the underlying cause for which querying will help classify the underlying cause of death more specifically.

Example: I (a) Peritonitis
      (b)
      (c)

In this example, it is necessary to determine what led to or caused the peritonitis- - was it a ruptured appendix, ruptured peptic ulcer, so-called "spontaneous peritonitis", other?

See sample query letter numbers 4 and 8.

Priority Level 3
Priority Level 3 provides more detailed information that would enable the cause of death to be classified more accurately and to a more detailed ICD category.

Example: I (a) Chronic liver disease
      (b)
      (c)

In this case, the specific type of disease is needed (alcoholic cirrhosis, biliary cirrhosis, chronic (or recurrent) hepatitis, etc.)

See sample query letter numbers 4, 7, 8, 9, and 10.

Priority Level 4
Priority Level 4 includes:
- **those cases in which the certifier may already provide a logical chain of events leading to death but determining the site or location of stated diseases or conditions will lead to a more precise code (see example below).**
- **entries which are unclear and need further explanation (e.g., situations related to placement and numbering of conditions). For a list of examples, refer to table 4, Appendix A, beginning on page 64.**

Example: I (a) Embolism
      (b)
      (c)

A specific site is needed (e.g., brain, lung, coronary arteries), as is the source, if known.

See sample query letter numbers 4 and 11.

Priority Level 5
Priority Level 5 contains queries which would enable the cause of death to be coded to a more precise subcategory within the three-digit category. This level of detail is frequently required for specified special studies or research projects within a defined reporting area, but may not be necessary for general querying.

Example: I (a) Carcinomatosis
      (b) Cancer of pancreas
      (c)

In this case, a query for a more specific site of the pancreas would be in order (e.g., body, head, duct, etc.), as well as a query for the histologic type of tumor, such as "Adenocarcinoma".

See sample query letter numbers 4 and 10.

<u>Priority Level 6</u>
Priority Level 6 reflects the most thorough recommended level of querying. The conditions in this category are queried for the purpose of obtaining even more explicit statements, thus eliminating the necessity of using the assumptions which are allowed under ICD rules.

Example: I (a) Tuberculosis
      (b)
      (c)

Tuberculosis of the lung is assumed if not otherwise specified.

Example: I (a) Lupus
      (b)
      (c)

Systemic lupus is assumed if not otherwise specified.

See sample query letter numbers 4 and 11.

<u>Fetal death</u>

The principles and procedures described in this manual are applicable to fetal deaths. Since many of the same causes may be stated on the fetal death report, the querying priorities in Appendix A may be followed. The cause P95 is invalid for mortality records but is valid for fetal deaths. This cause, P95, is shown in Appendix A for those wanting to use this manual to query fetal deaths. While the causes of many fetal deaths are unknown, it is important to capture results from pathological or histological examinations completed after the fetal death report or certificate was filed and to remind physicians that casual reporting of "unknown" as a cause of fetal death is not acceptable.

Sample letters

Guide to Sample Query Letters Shown in Appendix B		
Letter number	Query level	General reason for querying
1	1a	Rare causes
2	1b	Cancer
3	1g	HIV (also see Appendix D)
4	1c,2,3,4,5,6	Etiology, for specific site, and type of disease
5	1d	Reason for treatment (medical, surgical, therapy, medicaments)
6	1c	Mental disorders
7	3	Type of drug or exposure
8	1c,2,3	Signs, symptoms, non-specific conditions, trivial conditions, fetal death code P95, mechanism of death, etc.
9	1c,3	Pregnancy-related conditions
10	1c,1d,1e,3,5	Manner of death and external causes
11	1f,4,6	Improbable sequence, duration, placement and numbering of conditions

VI. Evaluation of the Query Program

To assure that the desired results are being obtained, a periodic evaluation of the query program should be made. By keeping records of all queries sent out and returned, it is possible to measure the overall effectiveness of the program, and also to pinpoint areas in need of a more concentrated effort.

A rough measure of the improvement in certification may be obtained by comparing the percent of records requiring a query at the beginning of the program with the percent required afer the program has been in effect for several months. Ideally there should be a gradual decline in the proportion of queries needed as the certifiers become educated as to the requirements. However, there will always be a need for education since new physicians will start practicing in the State and physicians who rarely complete a certificate may need assistance. The rate of response to the queries and the time lag involved will also make it possible to determine how much follow-up is needed, either by mail or by telephone.

A more detailed measure of the effectiveness of the program is made possible by keeping a record of the types of questions asked. This information can reveal which types of situations require the most querying, and also indicates which physicians may require special attention such as a personal visit. This type of information can be very valuable when used in conjunction with a field or training program, especially with the cooperation of the State and/or local medical society In addition, it is helpful to ascertain the impact of querying by measuring the difference in the records over time.

The following are illustrations of the types of information that can be recorded and tabulated periodically for purposes of evaluating the query program:

A.   Number and percent of queries sent, showing:

1. Adequate response
   A. Changed the underlying cause
   B. Did not change the underlying cause
   C. Did not change the underlying cause, but resulted in additional cause-of-death information
2. Inadequate response (e.g., response doesn't address question)
3. No response

A. Number and percent of follow-up queries, by type of follow up and result.
B. Number and percent of queries sent, by ICD category and Priority Level.
C. Number and percent of queries sent, by individual physician, type of certifier, and type of letter.
D. Number and percent of inadequate or non-responses by type of letter used.
E. Number and rate of ICD code changes made as a result of queries, by Priority Level.

In Oregon and Washington, systematic evaluation of the State query program has confirmed the value of an overall program, identified effectiveness of querying specific causes, and helped refine specific wording that works best in query letters (4-5).

References

1. Rosenberg, HM. 1989. Improving cause-of-death statistics. *American Journal of Public Health*. 79(5): 563-4.

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4. Hopkins, DD, Grant-Worley, JA, and Bollinger, TL. 1989. Survey of cause-of-death query criteria used by State vital statistics programs in the U.S. and the efficacy of the criteria used by the Oregon vital statistics program. *American Journal of Public Health.* 79(5): 570-574.

5. Hoyert, DL, and Lima A. 2005. Querying of death certificates in the United States. *Public Health Reports.* 120: 1-9.

Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
A00-A01	1a								1		67
A02-A04							0				
A05 (.1)	1a								1		67
A05 (.0, .2-.8)							0				
A05 (.9)					5				4	4/5	83
A06							0				
A07 (.0-.1)	1a								1		67
A07 (.2)	1a 1g								1 3		67 77
A07 (.3)	1g								3		77
A07 (.8-.9)	1a								1		67
A08-A09							0				
A16 (.2-.8)	1g								3		77
A16 (.9)	1g					6			3		77
A17	1g								3		77
A18 (.0-.3, .5-.8)	1g								3		77
A18 (.4)	1g		3					Query Lupus, NOS (for query level 3)	3 4	4/5	77 83
A19	1g								3		77
A20-A25	1a								1		67
A26							0				
A27	1a								1		67
A28							0				
A30	1a								1		67
A31 (.0, .8-.9)	1g								3		77
A31 (.1)	1c 1g								8 3	1	107 77
A32							0				
A33-A37	1a								1		67

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Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
A38-A39							0				
A40 (.0-.8)							0				
A40 (.9)					5				4	5	83
A41 (.0-.8)							0				
A41 (.9)					5				4	4	83
A42-A43	1g								3		77
A44	1a								1		67
A46, A48(.0-.2, .4-.8)							0				
A49				4					4	2	83
A50							0				
A51	1c								8	2	107
A52-A55							0				
A56-A64	1c								8	1,2	107
A65-A70	1a								1		67
A71-A74	1c										
A75	1a								1		67
A77 (.0)							0				
A77 (.1-.9)	1a								1		67
A78-A80	1a								1		67
A81 (.0-.1, .8-.9)	1a								1		67
A81 (.2)	1a 1g								1 3		67 77
A82	1a								1		67
A83							0				
A84	1a								1		67
A85 (.0-.1, .8)							0				
A85 (.2)	1a								1		67

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Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
A86-A89							0				
A90-A99	1a								1		67
B00 (.0, .3-.4, .7, .9)	1g								3		77
B00 (.1-.2, .5,.8)	1c 1g								8 3	1,2	107 77
B01	1a								1		67
B02							0				
B03-B06	1a								1		67
B07	1c								8	1	107
B08 (.0)	1a								1		67
B08 (.1-.8)	1c								8	1	107
B09	1c								8	1	107
B15-B19							0				
B20-24							0				
B25	1g								3		77
B26	1a								1		67
B27							0				
B30	1c								1		67
B33 (.0)	1a								1		67
B33 (.1-.8)							0				
B34							0				
B35-B36	1c								8	1,2	107
B37-B39	1g								3		77
B40-B43							0				
B44-B45	1g								3		77
B46-B47							0				
B48 (.0-.4, .8)							0				

APPENDIX A
Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
B48 (.7)	1c								8	1	107
B49							0				
B50-B57	1a								1		67
B58-B59	1g								3		77
B60-B64							0				
B65-B74	1a								1		67
B75-B83							0				
B85-B86	1c								8	1,2	107
B87-B94							0				
B99							0				
C00 (.0-.4, .6-.8)							0				
C00 (.5, .9)					5				2		71
C01-C05							0				
C06 (.0-.8)							0				
C06 (.9)				4					2		71
C07-C09							0				
C10 (.0-.8)							0				
C10 (.9)					5				2		71
C11 (.0-.8)							0				
C11 (.9)					5				2		71
C12							0				
C13 (.0-.8)							0				
C13 (.9)					5				2		71
C14 (.0)					5				2		71
C14 (.2-.8)							0				
C15-C23							0				
C24 (.0-.8)							0				

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Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
C24 (.9)					5				2		71
C25 (.0-.8)							0				
C25 (.9)					5				2		71
C26 (.0-.8)							0				
C26 (.9)				4					2		71
C30							0				
C31 (.0-.8)							0				
C31 (.9)					5				2		71
C32 (.0-.8)							0				
C32 (.9)					5				2		71
C33							0				
C34 (.0-.8)							0				
C34 (.9)					5				2		71
C37							0				
C38 (.0-.2, .4-.8)							0				
C38 (.3)					5				2		71
C39				4					2		71
C40							0				
C41 (.0-.8)							0				
C41 (.9)					5				2		71
C43 (.0-.8)							0				
C43 (.9)					5				2		71
C44 (.0-.8)							0				
C44 (.9)					5				2		71
C45 (.0-.7)							0				
C45 (.9)					5				2		71
C46 (.0-.8)	1g								3		77

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Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
C46 (.9)	1g				5				3 2		77 71
C47 (.0-.8)							0				
C47 (.9)					5				2		71
C48 (.0-.1, .8)							0				
C48 (.2)					5				2		71
C49 (.0-.8)							0				
C49 (.9)					5				2		71
C50-C56							0				
C57 (.0-.8)							0				
C57 (.9)				4					2		71
C58-C62							0				
C63 (.0-.8)							0				
C63 (.9)				4					2		71
C64-C67							0				
C68 (.0-.8)							0				
C68 (.9)				4					2		71
C69 (.0-.8)							0				
C69 (.9)					5				2		71
C70							0				
C71 (.0-.8)							0				
C71 (.9)					5				2		71
C72 (.0-.8)							0				
C72 (.9)					5				2		71
C73-C74							0				
C75 (.0-.8)							0				
C75 (.9)					5				2		71
C76			3						2		71

<u>APPENDIX A</u>
Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
C77-C80	1b								2		71
C81-C82							0				
C83	1g								3		77
C84							0				
C85	1g								3		77
C88-C94							0				
C95			3						2		71
C96							0				
C97	1b								2		71
D00-D07							0				
D09 (.0-.7)							0				
D09 (.9)				4					2		71
D10-D12							0				
D13 (.0-.7)							0				
D13 (.9)					5				2		71
D14 (.0-.3)							0				
D14 (.4)					5				2		71
D15 (.0-.7)							0				
D15 (.9)					5				2		71
D16 (.0-.8)							0				
D16 (.9)					5				2		71
D17 (.0-.7)							0				
D17 (.9)					5				2		71
D18							0				
D19 (.0-.7)							0				
D19 (.9)					5				2		71
D20							0				

APPENDIX A
Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
D21 (.0-.6)							0				
D21 (.9)					5				2		71
D22 (.0-.7)							0				
D22 (.9)					5				2		71
D23 (.0-.7)							0				
D23 (.9)					5				2		71
D24-D27							0				
D28 (.0-.7)							0				
D28 (.9)					5				2		71
D29 (.0-.7)							0				
D29 (.9)					5				2		71
D30 (.0-.7)							0				
D30 (.9)					5				2		71
D31 (.0-.6)							0				
D31 (.9)					5				2		71
D32							0				
D33 (.0-.7)							0				
D33 (.9)					5				2		71
D34							0				
D35 (.0-.8)							0				
D35 (.9)					5				2		71
D36 (.0-.7)							0				
D36 (.9)					5				2		71
D37 (.0-.7)							0				
D37 (.9)					5				2		71
D38 (.0-.5)							0				
D38 (.6)					5				2		71

<p style="text-align:center">APPENDIX A</p>
<p style="text-align:center">Table 1. Priority Levels for Querying by ICD-10 Category</p>

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
D39 (.0-.7)							0				
D39 (.9)					5				2		71
D40 (.0-.7)							0				
D40 (.9)					5				2		71
D41 (.0-.7)							0				
D41 (.9)					5				2		71
D42							0				
D43 (.0-.1, .3-.7)							0				
D43 (.2, .9)					5				2		71
D44 (.0-.8)							0				
D44 (.9)					5				2		71
D45-D46							0				
D47 (.0-.7)							0				
D47 (.9)					5				2		71
D48 (.0-.7)							0				
D48 (.9)	1b								2		71
D50-D58							0				
D59 (.0,.2,.4,.6)			3						7		101
D59 (.1,.3,.5, .8-.9)							0				
D60							0				
D61 (.0,.3-.8)							0				
D61 (.1-.2)			3						7		101
D62							0				
D64 (.0,.3-.8)							0				
D64 (.1)		2							4	1	83
D64 (.2)			3						7		101

APPENDIX A
Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
D64 (.9)			3						4	4	83
D65-D67							0				
D68 (.0-.2, .4-.9)							0				
D68 (.3)			3						7		101
D69 (.0-.4, .6-.8)							0				
D69 (.5)			3						4	1	83
D69 (.9)			3								
D70-D73							0				
D74 (.0,.9)							0				
D74 (.8)			3						4	4	83
D75-D84							0				
D86 (.0-.8)							0				
D86 (.9)					5				4	2	83
D89							0				
E00-E02							0				
E03 (.0-.1, .5-.9)							0				
E03 (.2-.4)			3						7		101
E04-E05							0				
E06 (.0-.3, .5-.9)							0				
E06 (.4)			3						7		101
E07							0				
E10-E14							0				
E15			3						7		101
E16 (.0)			3						7		101
E16 (.1, .3-.9)							0				

Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
E16 (.2)	1c								8	1	107
E20-E22							0				
E23 (.0,.2-.7)							0				
E23 (.1)			3						7		101
E24 (.0-.1, .3-.9)							0				
E24 (.2)			3						7		101
E25-E26							0				
E27 (.0-.2, .4-.9)							0				
E27 (.3)			3						7		101
E28-E32							0				
E34 (.0-.8)							0				
E34 (.9)	1c								4	3	83
E40-E46							0				
E50-E64							0				
E65	1c								8	2	107
E66 (.0, .2-.9)							0				
E66 (.1)			3						7		101
E67-E88							0				
E89	1d								5	1	89
F01-F09	1c								6		95
F10-F19							0				
F20-F48	1c								6		95
F50 (.0-.3, .5-.9)							0				
F50 (.4)	1c								6		95
F51-F53	1c								6		95
F54-F55							0				

APPENDIX A
Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
F59-F99	1c								6		95
G00							0				
G03 (.0-.8)							0				
G03 (.9)			3						4	4	83
G04 (.0-.8)							0				
G04 (.9)	1g		3						3 / 4	4	77 / 83
G06-G41							0				
G43-G45	1c								8	2	107
G47 (.0-.2, .4, .9)	1c								8	2	107
G47 (.3, .8)							0				
G50-G51	1c								8	2	107
G52 (.0)	1c								8	2	107
G52 (.1-.8)							0				
G52 (.9)			3						4	3	83
G54	1c								8	1,2	107
G56-G58	1c								8	1,2	107
G60-G72							0				
G80							0				
G81-G83		2							8	1,2	107
G90-G92							0				
G93 (.0, .7-.8)							0				
G93 (.4)	1g	2							3 / 4	1	77 / 83
G93 (.1-.3, .5-.6)		2							4	1	83
G93 (.9)			3						4	3	83
G95 (.0-.8)							0				

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Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
G95 (.9)	1g								3		77
G96 (.0-.8)							0				
G96 (.9)			3						4	3	83
G97	1d								5	1	89
G98							0				
H00-H02	1c								8	2,3	107
H04-H05							0				
H10-H57	1c								8	2	107
H59	1d								5	1	89
H60-H61	1c								8	2,3	107
H65-H74							0				
H80-H83	1c								8	2,3	107
H90-H93	1c								8	2	107
H95	1d								5	1	89
I00-I22.9							0				
I24.1 - I25 (.0-.1, .3-.9)							0				
I26-I42							0				
I44-I45		2							4	3	83
I46	1c								8	1	107
I47-I50		2							4	3	83
I51 (.0, .5-.7)							0				
I51 (.1-.4, .8-.9)			3						4	1	83
I60-I64							0				
I67 (.0-.8)							0				
I67 (.9)			3						4	3	83
I69-I71							0				

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Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
I72 (.0-.8)							0				
I72 (.9)				4					4	2	83
I73							0				
I74 (.0-.8)							0				
I74 (.9)				4					4	2	83
I77-I78							0				
I80 (.0-.8)							0				
I80 (.9)					5				4	2	83
I81							0				
I82 (.0-.8)							0				
I82 (.9)				4					4	2	83
I83							0				
I84 (.0-.1, .3-.5, .7-.8)							0				
I84 (.2,.6,.9)	1c								8	2	107
I85 (.0)		2							8	1	107
I85 (.9)	1c								8	1,2	107
I86-I89							0				
I95		2							8	1	107
I97	1d								5		89
I99							0				
J00	1c								8	1,2	107
J01-J05							0				
J06	1c								8	1,2	107
J10-J22							0				
J30	1c								8	1,2	107
J31-J32							0				
J33	1c								8	2	107

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Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
J34 (.0-.1, .3-.8)							0				
J34 (.2)	1c								8	1	107
J35	1c								8	2	107
J36-J38							0				
J39 (.0-.8)							0				
J39 (.9)			3						4	3	83
J40-J63							0				
J64			3						4	3	83
J65-J69							0				
J70			3						7	1,2	101
J80							0				
J81		2							4	1	83
J82-J94							0				
J95	1d								5	1	89
J96	1c								8	1	107
J98 (.0, .2-.8)							0				
J98 (.1)		2							8	1	107
J98 (.9)			3						4	3	83
K00-K01	1c								8	1,2	107
K02							0				
K03	1c								8	1,2	107
K04-K05							0				
K06-K14	1c								8	1,2	107
K20-K30							0				
K31 (.0-.8)							0				
K31 (.9)			3						4	3	83
K35-K51							0				

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Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
K52 (.0-.8)							0				
K52 (.9)						6			4	4	83
K55-K61							0				
K62 (.0-.4)	1c								8	2	107
K62 (.5-.8)							0				
K62 (.9)			3						4	4	83
K63 (.0-.3, .5, .8)							0				
K63 (.4)	1c								8	2	107
K63 (.9)			3						4	4	83
K65		2							4	1	83
K66-K71							0				
K72	1c								4	1	83
K73			3						4	1	83
K74-K75							0				
K76 (.0)	1c								8	2	107
K76 (.1-.8)							0				
K76 (.9)			3						4	4	83
K80-K81							0				
K82 (.0-.8)							0				
K82 (.9)			3						4	3	83
K83-K85							0				
K86 (.0-.8)							0				
K86 (.9)				4					4	3	83
K90 (.0-.8)							0				
K90 (.9)			3						4	3	83
K91	1d								5		89
K92 (.0-.2)		2							4	1	83

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Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
K92 (.8)							0				
K92 (.9)			3						4	3	83
L00							0				
L01-L02	1c								8	2	107
L03-L04							0				
L05-L08	1c								8	2	107
L10-L13							0				
L20-L25	1c								8	2	107
L26							0				
L27-L30	1c								8	2	107
L40-L41							0				
L42-L44	1c								8	2	107
L50	1c								8	2	107
L51-L53							0				
L55 (.0, .8-.9)	1c								8	2	107
L55 (.1, .2)							0				
L56-L87	1c								8	2	107
L88-L89							0				
L90-L95	1c								8	2	107
L97							0				
L98 (.0-.1, .5-.9)	1c								8	2	107
L98 (.2-.4)							0				
M00-M13							0				
M15-M25	1c								8	1,2	107
M30-M34							0				
M35 (.0-.2, .4-.6, .8-.9)							0				

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Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
M35 (.3, .7)	1c								8	1,2	107
M40-M45	1c								8	2	107
M46 (.0-.1, .4, .8-.9)	1c								8	2	107
M46 (.2-.3, .5)							0				
M47-M54	1c								8	2	107
M60 (.0)			3						7		101
M60 (.1-.9)	1c								8	2	107
M61							0				
M62 (.0-.1, .4-.9)	1c								8	2	107
M62 (.2-.3)							0				
M65-M79	1c								8	2	107
M80 (.0, .2, .5-.9)							0				
M80 (.1, .3)			3						5	1	89
M80 (.4)			3						7		101
M81	1c								8	2	107
M83 (.0-.4, .8-.9)							0				
M83 (.5)			3						7		101
M84	1c								8	2	107
M85-M88							0				
M89	1c								8	2	107
M91-M94							0				
M95	1c								8	2	107
M96	1d								5	1	89
M99	1c								8	2	107
N00-N07							0				

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Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
N10-N13							0				
N14			3						7		101
N15							0				
N17 (.0-.8)							0				
N17 (.9)		2							4	2	83
N18 (.0-.8)							0				
N18 (.9)		2							4	3	83
N19		2							4	3	83
N20-N23							0				
N25-N27							0				
N28 (.0-.8)							0				
N28 (.9)			3						4	3	83
N30							0				
N31	1c								8	1,2	107
N32 (.0-.8)							0				
N32 (.9)			3						4	3	83
N34							0				
N35		2							8	2	107
N36							0				
N39 (.0, .8)							0				
N39 (.1-.4)	1c								8	2	107
N39 (.9)			3						4	3	83
N40-N45							0				
N46-N47	1c								8	2	107
N48-N50							0				
N60	1c								8	2	107
N61							0				

Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
N62-N64	1c								8	2	107
N70-N76							0				
N80-N83							0				
N84-N91	1c								8	2	107
N92 (.0-.2, .4)		2							8	1	107
N92 (.3, .5-.6)	1c								8	2	107
N93-N97	1c								8	2	107
N98							0				
N99	1d								5		89
O00-O02							0				
003-O05 (.0-.8)							0				
003-O05 (.9)	1c								9	1	113
O06 (.0-.8)			3						9	1	113
O06 (.9)	1c								9	1,2	113
O07 (.0-.8)							0				
O07 (.9)	1c								9	1,2	113
O08	1c								9	1,3	113
O10-O21							0				
O22 (.0-.1, .4)	1c								9	1	113
O22 (.2-.3, .5-.9)							0				
O23-O26							0				
O28	1c								8	2	107
O29-O43							0				
O44 (.0)	1c								9	1	113
O44 (.1)							0				

Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
O45-O46							0				
O47-O48	1c								9	1	113
O60-O69							0				
O70 (.0)	1c								9	1	113
O70 (.1-.9)							0				
O71-O74							0				
O75 (.0-.4, .8-.9)							0				
O75 (.5-.7)	1c								9	1	113
O85-O86							0				
O87 (.0-.1, .3-.9)							0				
O87 (.2)	1c								8	2	107
O88-O91							0				
O92	1c								8	2	107
O95-O99							0				
P00-P15							0				
P20-P29							0				
P35 (.0)	1a								1		67
P35 (.1-.9)							0				
P36-P38							0				
P39 (.0-.8)							0				
P39 (.9)			3						4	4	83
P50-P53							0				
P54 (.0-.8)							0				
P54 (.9)	1c								4	4	83
P55-P61							0				

Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
P70-P74							0				
P76-P78							0				
P80-P81							0				
P83 (.0-.3, .8)							0				
P83 (.4-.6, .9)	1c								8	1,2	107
P90-P92	1c								8	1	107
P93			3						7		101
P94							0				
P95[1]	1c								4	4	83
P96 (.0-.8)							0				
P96 (.9)	1c								4	3	83
Q00-Q07							0				
Q10-Q18	1c								8	2	107
Q20-Q28							0				
Q30-Q34							0				
Q35-Q37	1c								8	2	107
Q38 (.0-.3)	1c								8	2	107
Q38 (.4-.8)							0				
Q39-Q45							0				
Q50-Q54	1c								8	2	107
Q55-Q56							0				
Q60-Q64							0				
Q65-Q84	1c								8	2	107
Q85 (.0)	1c								8	2	107
Q85 (.1, .8)							0				

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[1]P95: this code is valid only for fetal deaths

Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
Q85 (.9)			3						4	3	83
Q86-Q87							0				
Q89 (.0-.8)							0				
Q89 (.9)			3						4	3	83
Q90-Q99							0				
R00-R63	1c								8	1	107
R64	1c 1g								8 3	1	107 77
R68-R99	1c								8	1	107
S00	1c 1e							1e if external cause is not stated on the record	8 10	1 1:A,B	107 119
S01-S03 S04 (.0-.8)	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
S04 (.9)	1e			4				1e if external cause is not stated on the record	10 4	1:A,B 3	119 83
S05 (.0-.1)	1c 1e							1e if external cause is not stated on the record	8 10	1 1:A,B	107 119
S05 (.2-.9) S06-S09	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
S10	1c 1e							1e if external cause is not stated on the record	8 10	1 1:A,B	107 119
S11-S19	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
S20	1c 1e							1e if external cause is not stated on the record	8 10	1 1:A,B	107 119
S21-S29	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
S30	1c 1e							1e if external cause is not stated on the record	8 10	1 1:A,B	107 119
S31-S39	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
S40	1c 1e							1e if external cause is not stated on the record	8 10	1 1:A,B	107 119
S41-S49	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
S50	1c 1e							1e if external cause is not stated on the record	8 10	1 1:A,B	107 119

Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
S51-S59	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
S60	1c 1e							1e if external cause is not stated on the record	8 10	2 1:A,B	107 119
S61-S69	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
S70	1c 1e							1e if external cause is not stated on the record	8 10	2 1:A,B	107 119
S71-S79	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
S80	1c 1e							1e if external cause is not stated on the record	8 10	2 1:A,B	107 119
S81-S89	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
S90	1c 1e							1e if external cause is not stated on the record	8 10	2 1:A,B	107 119
S91-S99	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
T00	1c 1e							1e if external cause is not stated on the record	8 10	2 1:A,B	107 119
T01-T05 (.0-.8)	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
T01-T05 (.9)	1e			4				1e if external cause is not stated on the record	10 4	1:A,B 3	119 83
T06	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
T07	1e		3					1e if external cause is not stated on the record	10 4	1:A,B 2,3	119 83
T08	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
T09 (.0)	1c 1e							1e if external cause is not stated on the record	8 10	2 1:A,B	107 119
T09 (.1-.9)	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
T10	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
T11 (.0)	1c 1e							1e if external cause is not stated on the record	8 10	2 1:A,B	107 119
T11 (.1-.9)	1e						0	1e if external cause is not stated on the record	10	1:A,B	119

Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr#	Ques#	Pg#
T12	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
T13 (.0)	1c 1e							1e if external cause is not stated on the record	8 10	2 1:A,B	107 119
T13 (.1-.9)	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
T14 (.0)	1c 1e							1e if external cause is not stated on the record	8 10	2 1:A,B	107 119
T14 (.1-.9)	1e			4				1e if external cause is not stated on the record	10 4	1:A,B 2	119 83
T15-T19	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
T20-T25(.0,.2-.7)	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
T20-T25 (.1)	1c 1e							1e if external cause is not stated on the record	8 10	2 1:A,B	107 119
T26-T35	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
T36-T37 (.0-.8)	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
T36-T37 (.9)	1e				5			1e if external cause is not stated on the record	10 10	1:A,B 1:D	119
T50-T75	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
T78 (.0-.8)	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
T78 (.9)	1e		3					1e if external cause is not stated on the record	10 10	1:A,B 1:C	119
T79	1e						0	1e if external cause is not stated on the record	10	1:A,B	119
T80-T88	1d or 1e						0	1d or 1e if reason for treatment, or external cause is not stated on the record respectively	10 or 10	1:C or 1:A,B	119
T90-T97 T98 (.0-.2)	1e						0	1e if external cause is not stated on the record	10	1:A,B	119

Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr #	Ques#	Pg#
T98 (.3)	1d or 1e						0	1d or 1e if reason for treatment, or external cause is not stated on the record respectively	10 or 10	1:C or 1:A,B	119
V01-V06 (.0-.1)							0				
V01-V06 (.9)			3						10	4:B	119
V09			3						10	4:B/C	119
V10-V18 (.0-.1, .3-.5)							0				
V10-V18 (.2,.9)			3						10	4:D)3)a	119
V19			3						10	4:C 4:D)3)a	119
V20-V28 (.0-.1, .3-.5)							0				
V20-V28 (.2,.9)			3						10	4:D)3)a	119
V29			3						10	4:C 4:D)3)a	119
V30-V38 (.0-.2, .4-.7)							0				
V30-V38 (.3,.9)			3						10	4:D)3)a	119
V39			3						10	4:C 4:D)3)a	119
V40-V48 (.0-.2, .4-.7)							0				
V40-V48 (.3,.9)			3						10	4:D)3)a	119
V49			3						10	4:C 4:D)3)a	119
V50-V58 (.0-.2, .4-.7)							0				
V50-V58 (.3,.9)			3						10	4:D)3)a	119
V59			3						10	4:C 4:D)3)a	119
V60-V68 (.0-.2, .4-.7)							0				

Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr #	Ques#	Pg#
V60-V68 (.3,.9)			3						10	4:D)3)a	119
V69			3						10	4:C 4:D)3)a	119
V70-V78 (.0-.2, .4-.7)							0				
V70-V78 (.3,.9)			3						10	4:D)3)a	119
V79			3						10	4:C 4:D)3)a	119
V80 (.0-.8)							0				
V80 (.9)			3						10	4:C 4:D:2,3a	119
V81 (.0-.8)							0				
V81 (.9)			3						10	4:C 4:D:1,2	119
V82 (.0-.8)							0				
V82 (.9)			3						10	4:C 4:D:2,3	119
V83-V86 (.0-.2, .4-.7)							0				
V83-V86 (.3,.9)			3						10	4:D:2,3, 4	119
V87-V88			3						10	4:D)3	119
V89			3						10	4:A,C,D	119
V90-V93 (.0-.8)							0				
V90-V93 (.9)					5				10	4:A	119
V94			3						10	4:A,D	119
V95-V96 (.0-.8)							0				
V95-V96 (.9)					5				10	4:A	119
V97-V98							0				
V99	1e								10	4	119

Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr #	Ques#	Pg#
W00-W18(.0-.8)²							0				
W00-W18 (.9)²					5				10		119
W19 ²			3						10	3	119
W20-W46(.0-.8)²							0				
W20-W46 (.9)²					5				10		119
W49 ²			3						10		119
W50-W60(.0-.8)²							0				
W50-W60 (.9)²					5				10		119
W64 ²					5				10		119
W65-W73(.0-.8)²							0				
W65-W73 (.9)²					5				10		119
W74 ²					5				10		119
W75-W83(.0-.8)²							0				
W75-W83 (.9)²					5				10		119
W84 ²									10		119
W85-W86(.0-.8)²							0				
W85-W86 (.9)²					5				10		119
W87 ²					5				10		119
W88-W90(.0-.8)²	1a								1		67
W88-W90 (.9)²	1a				5				1 10		67 119

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² W00-Y34, except Y06._, and Y07._: The 4th digits for these codes are designated for place of occurrence. The "place-of-occurrence" codes are to be treated as separate codes that have their own data tape field. They are not part of the ICD-10 cause-of-death codes.

Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr #	Ques#	Pg#
W91 [2]	1a				5				1 10		67 119
W93-W94(.0-.8)[2]							0				
W93-W94 (.9)[2]					5				10		119
W99 [2]			3						10		119
X00-X08(.0-.8)[2]							0				
X00-X08 (.9)[2]					5				10		119
X09 [2]			3						10	2	119
X10-X18(.0-.8)[2]							0				
X10-X18 (.9)[2]					5				10		119
X19 [2]					5				10		119
X20-X28(.0-.8)[2]							0				
X20-X28 (.9)[2]					5				10		119
X29 [2]					5				10		119
X30-X38(.0-.8)[2]							0				
X30-X38 (.9)[2]					5				10		119
X39 [2]			3						10		119
X40-X48(.0-.8)[2]							0				
X40-X48 (.9)[2]					5				10		119
X49 [2]					5				10	1D	119
X50-X58(.0-.8)[2]							0				
X50-X58 (.9)[2]					5				10		119
X59 [2]			3						10	1D	119

[2] W00-Y34, except Y06._, and Y07._: The 4th digits for these codes are designated for place of occurrence. The "place-of-occurrence" codes are to be treated as separate codes that have their own data tape field. They are not part of the ICD-10 cause-of-death codes.

Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr #	Ques#	Pg#
X60-X73(.0-.8)[2]							0				
X60-X73 (.9)[2]					5				10		119
X74 [2]					5				10	3	119
X75-X83(.0-.8)[2]							0				
X75-X83 (.9)[2]					5				10		119
X84 [2]	1e								10	3	119
X85-X89(.0-.8)[2]							0				
X85-X89 (.9)[2]					5				10		119
X90 [2]					5				10	1D	119
X91-X94(.0-.8)[2]							0				
X91-X94 (.9)[2]					5				10		119
X95 [2]					5				10	3	119
X96-Y05(.0-.8)[2]							0				
X96-Y05 (.9)[2]					5				10		119
Y06-Y07 (.0-.8)							0				
Y06-Y07 (.9)					5				10		119
Y08 (.0-.8)[2]							0				
Y08 (.9)[2]					5				10		119
Y09 [2]			3						10	2	119
Y10-Y18(.0-.8)[2]			3					Y10-Y34: Query for mannner of death (accident,homicide, suicide,natural)	10	1A	119
Y10-Y18 (.9)[2]			3						10	1A	119
Y19 [2]			3						10	1:A,D	119

[2] W00-Y34, except Y06._, and Y07._: The 4th digits for these codes are designated for place of occurrence. The "place-of-occurrence" codes are to be treated as separate codes that have their own data tape field. They are not part of the ICD-10 cause-of-death codes.

Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr #	Ques#	Pg#
Y20-Y33(.0-.8)[2]			3						10	1A	119
Y20-Y33 (.9)[2]			3						10	1A	119
Y34 [2]	1e								10	1:A,B	119
Y35							0				
Y36(.0-.4,.6-.8)							0				
Y36 (.5)	1a								1		67
Y36 (.9)					5				10		119
Y40-Y43 (.0-.8)	1d						0	1d if reason for medical care not stated on record	10	1C	119
Y40-Y43 (.9)	1d				5			1d if reason for medical care not stated on record	10	1:C,D	119
Y44 (.0-.7)	1d						0	1d if reason for medical care not stated on record	10	1C	119
Y44 (.9)	1d				5			1d if reason for medical care not stated on record	10	1:C,D	119
Y45 (.0-.7)	1d						0	1d if reason for medical care not stated on record	10	1C	119
Y45 (.9)	1d				5			1d if reason for medical care not stated on record	10	1:C,D	119
Y46(.0-.5,.7-.8)	1d						0	1d if reason for medical care not stated on record	10	1C	119
Y46 (.6)	1d				5			1d if reason for medical care not stated on record	10	1:C,D	119
Y47 (.0-.8)	1d						0	1d if reason for medical care not stated on record	10	1C	119
Y47 (.9)	1d				5			1d if reason for medical care not stated on record	10	1:C,D	119
Y48	1d						0	1d if reason for medical care not stated on record	10	1C	119
Y49-Y53 (.0-.8)	1d						0	1d if reason for medical care not stated on record	10	1C	119
Y49-Y53 (.9)	1d				5			1d if reason for medical care not stated on record	10	1:C,D	119
Y54	1d						0	1d if reason for medical care not stated on record	10	1C	119

[2] W00-Y34, except Y06._, and Y07._: The 4th digits for these codes are designated for place of occurrence. The "place-of-occurrence" codes are to be treated as separate codes that have their own data tape field. They are not part of the ICD-10 cause-of-death codes.

Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr #	Ques#	Pg#
Y55 (.0-.6)	1d						0	1d if reason for medical care not stated on record	10	1C	119
Y55 (.7)	1d				5			1d if reason for medical care not stated on record	10	1:C,D	119
Y56-Y57 (.0-.8)	1d						0	1d if reason for medical care not stated on record	10	1C	119
Y56-Y57 (.9)	1d				5			1d if reason for medical care not stated on record	10	1:C,D	119
Y58 (.0-.8)	1a 1d							1d if reason for medical care not stated on record	10	1C	119
Y58 (.9)	1a 1d						5	1d if reason for medical care not stated on record	10	1:C,D	119
Y59 (.0-.3)	1a 1d							1d if reason for medical care not stated on record	10	1C	119
Y59 (.8)	1d						0	1d if reason for medical care not stated on record	10	1C	119
Y59 (.9)	1d				5			1d if reason for medical care not stated on record	10	1:C,D	119
Y60-Y62 (.0-.8)	1d						0	1d if reason for medical care not stated on record	10	1C	119
Y60-Y62 (.9)	1d				5			1d if reason for medical care not stated on record	10	1:C,D	119
Y63(.0-.1,.4-.9)	1d						0	1d if reason for medical care not stated on record	10	1C	119
Y63 (.2-.3)	1a 1d							1d if reason for medical care not stated on record	1 10	1C	67 119
Y64 (.0-.8)	1d						0	1d if reason for medical care not stated on record	10	1C	119
Y64 (.9)	1d				5			1d if reason for medical care not stated on record	10	1C,9	119
Y65-Y66	1d						0	1d if reason for medical care not stated on record	10	1C	119
Y69	1d		3					1d if reason for medical care not stated on record	10	1C,9	119
Y70-Y81	1d						0	1d if reason for medical care not stated on record	10	1C	119
Y82	1d				5			1d if reason for medical care not stated on record	10	1:C,D	119
Y83 (.0-.8)	1d						0	1d if reason for medical care not stated on record	10	1:C,D	119

Table 1. Priority Levels for Querying by ICD-10 Category

ICD Category	Priority Levels							Comments	Query Form		
	1	2	3	4	5	6	0		Ltr #	Ques#	Pg#
Y83 (.9)	1d				5			1d if reason for medical care not stated on record	10	1:C,D	119
Y84 (.0-.1, .3-.8)	1d						0	1d if reason for medical care not stated on record	10	1C	119
Y84 (.2)	1a 1d							1d if reason for medical care not stated on record	1 10	1C	67 119
Y84 (.9)	1d				5			1d if reason for medical care not stated on record	10	1:C,D	119
Y85-Y86	1e						0	1e if nature of external cause not stated on record	10	2 and/or 4	119
Y87 (.0)	1e						0	1e if nature of external cause not stated on record	10		119
Y87 (.1)	1e						0	1e if nature of external cause not stated on record	10		119
Y87 (.2)	1e						0	1e if nature of external cause not stated on record	10		119
Y88 (.0)	1e						0	1e if nature of external cause not stated on record	10	4 and/or 1D	119
Y88 (.1)	1e						0	1e if nature of external cause not stated on record	10	4 and/or 1C	119
Y88 (.2)	1e						0	1e if nature of external cause not stated on record	10	4 and/or 1D	119
Y88 (.3)	1e						0	1e if nature of external cause not stated on record	10	4 and/or 1C	119
Y89 (.0-.9)	1e						0	1e if nature of external cause not stated on record	10		119

Appendix A
Table 2. Priority Levels for Improbable Sequences in Part I of the Death Certificate
(Order of Entry of Causes of Death)

For an interpretation of the 'highly improbable' rule, refer to Instruction manual part 2A, section III. Items 14 and 15 below exclude a few additional codes according to NCHS coding procedures (see Instruction Manual part 2a).

Improbable Sequence	Priority Levels							Query Form		
	1	2	3	4	5	6	0	Ltr#	Ques#	Pg#
1. Hemophilia classifiable to D66, D67, D68.0-D68.2 reported due to any other disease. Example: I (a) Hemophilia B (b) ASHD	1f							11		145
2. Influenza classifiable to J10-J11 reported due to any other disease. Example: I (a) Influenza (b) Acute pancreatitis	1f							11		145

3. Rheumatic fever (I00-I02) or rheumatic heart disease (I05-I09) reported due to any disease other than scarlet fever (A38), streptococcal septicemia (A40.-), streptococcal sore throat (J02.0) and acute tonsillitis (J03.-).
 	
Example:
I (a) Heart failure
  (b) Rheumatic fever
  (c) Cancer of the lung
	1f							11		145

4. Any cerebrovascular disease (I60-I69) reported due to a disease of the digestive system (K00-K92).
 	
Example:
I (a) Respiratory failure
  (b) Cerebrovascular insufficiency
  (c) Acute appendicitis
	1f							11		145

Table 2. Priority Levels for Improbable Sequences in Part I of the Death Certificate
(Order of Entry of Causes of Death)

Improbable Sequence	Priority Levels							Query Form		
	1	2	3	4	5	6	0	Ltr#	Ques#	Pg#
5. Cerebral infarction due to: thrombosis of precerebral arteries (I63.0); unspecified occlusion of precerebral arteries (I63.2); thrombosis of cerebral arteries (I63.5); unspecified occlusion of cerebral arteries (I63.5); cerebral venous thrombosis, nonpyogenic (I63.6); other cerebral infarction (I63.8); cerebral infarction, unspecified (I63.9); stroke, not specified as hemorrhage or infarction (I64); other cerebrovascular disease (I67); sequela of stroke, not specified as hemorrhage or infarction (I69.4); sequela of other and unspecified cerebrovascular diseases (I69.8) reported as "due to" endocarditis (I05-I08, I09.1, I33-I38).	1f							11		145
6. Occlusion and stenosis of precerebral arteries, not resulting in cerebral infarction (I65), *except* embolism occlusion and stenosis of cerebral arteries, not resulting in cerebral infarction (I66) *except* embolism sequela of cerebral infarction (I69.3), *except* embolism reported as "due to" endocarditis (I05-I08, I09.1, I33-I38).	1f							11		145

Table 2. Priority Levels for Improbable Sequences in Part I of the Death Certificate
(Order of Entry of Causes of Death)

Improbable Sequence	Priority Levels							Query Form		
	1	2	3	4	5	6	0	Ltr#	Ques#	Pg#

7. Chronic ischemic heart disease (I20, I25) reported due to any neoplasm (C00-D48).
 	
Example:
I (a) Coronary artery disease
  (b) Carcinomatosis
  (c) Carcinoma of the face
	1f							11		145

8. Any condition described as arteriosclerotic [atherosclerotic] reported due to any neoplasm (C00-D48). Example: I (a) ASHD (b) Acute myeloid leukemia.	1f							11		145
9. Any hypertensive disease reported due to any neoplasm (C00-D48) except carcinoid tumors or endocrine and renal neoplasms. Example: I (a) Hypertension (b) Malignant neoplasm of the throat	1f							11		145

Table 2. Priority Levels for Improbable Sequences in Part I of the Death Certificate
(Order of Entry of Causes of Death)

Improbable Sequence	Priority Levels							Query Form		
	1	2	3	4	5	6	0	Ltr#	Ques#	Pg#
10. An infectious or parasitic disease (A00-B99) reported due to any disease outside this chapter, except situations I, II, III, and IV: I. The following may be accepted as due to any other disease. * diarrhea and gastroenteritis of presumed infectious origin (A09, B94.8) * septicemia (A40-A41, B94.8) * erysipelas (A46, B94.8) * gas gangrene (A48.0, B94.8) * Vincent's angina (A69.1, B94.8) * mycoses (B35-B49, B94.8) II. Any infectious disease, except A81.1, may be accepted as "due to" immunosuppression by chemicals (chemotherapy) and radiation; and infectious diseases classified to A00-B19 or B25-B64 reported as due to malignant neoplasms. III. Any infectious disease due to disorders of immune mechanism such as HIV or AIDS. IV. Varicella and zoster infections (B01-B02) may be accepted as "due to" diabetes, tuberculosis and lymphoproliferative neoplasms. Example: I (a) Cholera (b) Myocarditis	1f							11		145

Table 2. Priority Levels for Improbable Sequences in Part I of the Death Certificate
(Order of Entry of Causes of Death)

Improbable Sequence	Priority Levels							Query Form		
	1	2	3	4	5	6	0	Ltr#	Ques#	Pg#
11. A malignant neoplasm classifiable to C00-C97 reported due to any disease, except HIV Example: I.(a) Multiple myeloma (b) Emphysema	1f							11		145

12. Diabetes (E10-E14) reported due to any disease except hemochromatosis (E83.1), diseases of pancreas (K85-K86), pancreatic neoplasms (C25.-, D13.6, D13.7, D37.7), and malnutrition (E40-E46).
 	
Example:
I.(a) Heart failure
  (b) Diabetes with coma
  (c) Gastric ulcer
	1f							11		145

13. Congenital malformations (Q00-Q99) reported due to any other disease, including immaturity, except chromosome abnormality or congenital malformation syndrome; pulmonary hypoplasia due to congenital anomaly. Example: I.(a) Spina bifida (b) Pneumonia	1f							11		145
14. An injury classifiable to Chapter 19 (S00-T98) except T17.2-T17.9 (foreign body in respiratory tract), reported due to a disease condition (A00-R99). Example: I.(a) Fracture of the neck (b) Influenza	1f							11		145

Table 2. Priority Levels for Improbable Sequences in Part I of the Death Certificate
(Order of Entry of Causes of Death)

Improbable Sequence	Priority Levels							Query Form		
	1	2	3	4	5	6	0	Ltr#	Ques#	Pg#
15. Accidents (V01-X59) is reported due to any cause outside this chapter except: a) any accident (V01-X59) reported as due to epilepsy (G40-G41), b) Fall (W00-W19) due to a disorder of bone density (M80-M85), c) Fall (W00-W19) due to a (pathological) fracture caused by a disorder of bone density, d) Asphyxia reported as due to aspiration of mucus, blood (W80) or vomitus (W78) as a result of disease conditions, e) Aspiration of food (liquid or solid) of any kind (W79) reported as due to a disease which affects the ability to swallow. Example: I.(a) Heat stroke (b) Myocardial infarction	1f							11		145
16. An injury is reported due to a disease condition AND an external cause that could result in the injury is reported elswhere on record. Example: I.(a) Subdural hematoma (b) Hypertension II. Fell and struck head	1f							11		145
17. Suicide (X60-X84) due to any cause	1f							11		145

Appendix A
Table 3. Priority Levels for Durations
(Order of Entry of Causes of Death)

If resource permits, we recommend querying the following types of cause-of-death statements. When querying is not feasible, refer to the coding instructions for these situations in Instruction Manual part 2B.

Problem With Duration	Priority Levels							Query Form		
	1	2	3	4	5	6	0	Ltr#	Ques#	Pg#
1. When a congenital malformation classifiable to Q00-Q99 is reported with a duration less than the age of the decedent. Example: Age - 50 years I(a) Heart failure (b) Polycystic kidney disease 5 yr (c) II						6		11		145
2. When more than one condition is entered on a single line in Part I with only one duration. Examples: I(a) ASHD with M.I. 2 yrs. (b) (c) I(a) Coma (b) Gen. A.S. with CVA 5 yrs.						6		11		145
3. When the duration of an entity in a due to position is shorter than that of an entity reported on a line above it. Examples: I(a) Pneumonia days (b) CVA 2 yrs. (C) ASHD 1 yr. I(a) Arteriosclerosis 5 yrs. (b) Cerebral arterio 3 yrs. (c) Hypertension 2 yrs.						6		11		145

Appendix A
Table 3. Priority Levels for Durations
(Order of Entry of Causes of Death)

Problem With Duration	Priority Levels							Query Form		
	1	2	3	4	5	6	0	Ltr#	Ques#	Pg#
4. When the certifier enters conflicting durations for a single condition on a line in Part I. Example:　　　　　Duration I(a) Coronary occlusion weeks|6 mos. 　(b) 　(c)						6		11		145

Appendix A
Table 4. Priority Levels for Placement and Numbering of Conditions
(Order of Entry of Causes of Death)

If resource permits, we recommend querying the following types of cause-of-death statements. When querying is not feasible, refer to the coding instructions for these situations in Instruction Manual part 2B.

Problem with Placement and Numbering of Conditions	Priority Levels							Query Form		
	1	2	3	4	5	6	0	Ltr#	Ques #	Pg#
1. When a condition is reported on the certificate above line (a). Example: Cardiac arrest I(a) ASHD (b) A.S. (c) Hypertension						6		11		145
2. When conditions are reported between lines I(a) and I(b) or I(b) and I(c). Example: I(a) Cardiac arrest (b) Pulmonary edema, Pneumonia CHF (c) Hypertension				4				11		145
3. When the certifier has entered conditions on lines (a), (b), and (c) and has made a statement that (c) was "due to above". Example: I(a) Pneumonia (b) Hypertension (c) Cardiac hypertrophy due to above				4				11		145
4. When the certifier has reported that a condition in Part II was "caused by above". Example: I(a) Hypotension (b) Arteriosclerosis (c) II Mesenteric thrombosis caused by Above				4				11		145

Table 4. Priority Levels for Placement and Numbering of Conditions
(Order of Entry of Causes of Death)

Problem with Placement and Numbering of Conditions	Priority Levels							Query Form		
	1	2	3	4	5	6	0	Ltr#	Ques #	Pg#

5. When the certifier has marked through lines (a), (b), and (c) or the printed "due to or as a consequence of" which is interpreted to mean that none of the conditions in Part I are causally related.
 	
Examples:
I(a) Gastrointestinal hemorrhage
 (b) Gastric ulcer
 (c)
II   Arteriosclerosis
 	
I(a) Congestive heart failure
 (b) ASHD
 (c)
II Pneumonia
 	
I(a) Malnutrition
    due to or as a consequence of
 (b) Carcinoma of liver
    due to or as a consequence of
 (c) Carcinoma of pancreas
						6		11		145

6. When the certifier has marked through the printed "Part II". Example: I(a) Pulmonary embolism (b) Heart disease (c) II Hypertension						6		11		145
7. When the certifier has numbered all causes on lines in Part I (i.e., 1, 2, 3, etc.). Example: I(a) 1.Pneumonia 2.C.H.F. (b) 3.Pulmonary edema (c) 4.Myocarditis			4					11		145

Table 4. Priority Levels for Placement and Numbering of Conditions
(Order of Entry of Causes of Death)

Problem with Placement and Numbering of Conditions	Priority Levels							Query Form		
	1	2	3	4	5	6	0	Ltr#	Ques #	Pg#
8. When the certifier has numbered part of the causes in Part I. Example: I(a) 1.Acidosis (b) 2.Coma (c) Cerebral arteriosclerosis				4				11		145
9. When the causes in Part I are numbered and one of the numbered causes is stated or implied as due to another cause. Example: I(a) 1.Uremia due to nephritis (b) 2.Hypertension (c) 3.Arteriosclerosis				4				11		145
10. When the certifier has used arrows to indicate moving conditions from Part I to Part II and more than one condition is entered on the line. Examples: I(a) ASHD (b) Gen. Art. (c) Parkinson dis. Encephalopathy II └────▶ I(a) Cardiorespiratory failure (b) CVA (c) G.I. hemorrhage gastric ulcer II ◀────┘				4				11		145

(Letterhead)

Dear Doctor _____

We are writing this letter to obtain additional information about the cause of death that you certified for _____, who died _____. Please answer the questions shown in the attachment.

Accurate cause-of-death information is essential, not only to the family of the decedent, but also for medical research, funding, and resource allocation in our State and at the national level.

In this particular death, we wish to ensure that the cause of death is correct. The reported cause is one of the causes that we always try to verify, either because the cause is rarely reported on a death certificate or may present threats to public health in the United States. We appreciate your help in verifying the condition on this death certificate and look forward to your prompt reply.

If you have any questions, please contact _____.

Sincerely,

State Registrar/Vital Statistics Cooperative Program

Attachment

Rare Cause Query

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the chain of events--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	

IMMEDIATE CAUSE (Final disease or condition --------> resulting in death) a. _____
Due to (or as a consequence of):   _____

Sequentially list conditions, if any, leading to the cause listed on line a. Enter the   b. _____
Due to (or as a consequence of):   _____

UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) **LAST**   c. _____
Due to (or as a consequence of):   _____

d. _____   _____

PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ☐ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ☐ Probably ☐ No ☐ Unknown	36. IF FEMALE: ☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	37. MANNER OF DEATH ☐ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

1. Is the stated cause of death, _____, correctly reported?
Yes_____ No_____

2. If yes, please state how the stated disease was confirmed: _____
_____
(laboratory test, history, clinical evidence, and/or others. If applicable, please state name of laboratory test, and/or source of evidence)

3. If no, please state the correct cause of death:
_____

4. Was this condition active or current?   Yes_____ No_____

5. Was the condition cured, old, or healed? Yes_____ No_____

_____, M.D.
(Signature of Certifying Physician)

Please provide your office phone:_____ fax:_____

_____

Available Resources to Assist With Medical Certification of Causes of Death

Your State vital statistics office should be able to assist with questions related to writing cause-of-death statements. Additional instructional material on writing cause-of-death statements including handbooks, summary instructions, and tutorials are available online at www.thename.org or www.cdc.gov/nchswww/about/major/dvs/handbk.htm, or by request from NCHS, Room 7318, 3311 Toledo Road, Hyattsville, Maryland 20782-2003 (301-458-4333).

Query Letter 2
(Neoplasms)

(Letterhead)

Dear Doctor _____

We are writing this letter to obtain additional information about the cause of death that you certified for

_____, who died _____.

Accurate cause-of-death information is essential, not only to the family of the decedent, but also for medical research, funding, and resource allocation in our State and at the national level.

In this particular cancer death, we wish to ensure that sufficient information is available on the nature of the neoplasm. In order to classify this death properly in our statistics, would you please supply the information on the attachment? We want to assure you that the information you provide us is confidential and will be handled accordingly.

If you have any question or would like to know more about various methods for certifying a cause-of-death statement, please contact _____. Instructions and an example of a properly completed death certificate are provided with the attached material.

We appreciate your attention and prompt reply.

Sincerely,

State Registrar/Vital Statistics Cooperative Program

Attachment

Neoplasm query

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	

IMMEDIATE CAUSE (Final disease or condition --------> resulting in death) a. _____ Due to (or as a consequence of):   _____

Sequentially list conditions, if any, leading to the cause listed on line a. Enter the b. _____ Due to (or as a consequence of):   _____

UNDERLYING CAUSE (disease or injury that initiated the events resulting c. _____ Due to (or as a consequence of):   _____

in death) **LAST** d. _____   _____

PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ☐ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ☐ Probably ☐ No ☐ Unknown	36. IF FEMALE: ☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	37. MANNER OF DEATH ☐ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

Was the neoplasm, _____

1. Malignant___, Benign___, Undetermined___

2. Primary site _____

3. More detailed site or part of organ _____

4. Histologic type, if known_____

5.Other _____

_____, M.D.

(Signature of Certifying Physician)

Please provide your office phone:_____ fax:_____

(Please see other side)

Instructions on Medical Certification of Causes of Death

Example of properly completed medical certification

<table>
<tr>
<td colspan="2">CAUSE OF DEATH (See instructions and examples)</td>
<td>Approximate interval:
Onset to death</td>
</tr>
<tr>
<td colspan="3">32. PART I. Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.</td>
</tr>
<tr>
<td>IMMEDIATE CAUSE (Final disease or condition --------> resulting in death)</td>
<td>a. <u>Pneumonia</u>
   Due to (or as a consequence of):</td>
<td>25 hours</td>
</tr>
<tr>
<td rowspan="3">Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST</td>
<td>b. <u>Metastatic carcinoma to the liver</u>
   Due to (or as a consequence of):</td>
<td>3 months</td>
</tr>
<tr>
<td>c. <u>Adenocarcinoma of the head of the pancreas</u>
   Due to (or as a consequence of):</td>
<td>7 months</td>
</tr>
<tr>
<td>d. _____</td>
<td>_____</td>
</tr>
<tr>
<td colspan="2">PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I</td>
<td>33. WAS AN AUTOPSY PERFORMED?
☐ Yes   ■ No
34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ■ No</td>
</tr>
<tr>
<td>35.   DID TOBACCO USE CONTRIBUTE TO DEATH?

☐ Yes ☐ Probably

■ No   ☐ Unknown</td>
<td>36. IF FEMALE:
■ Not pregnant within past year
☐ Pregnant at time of death
☐ Not pregnant, but pregnant within 42 days of death
☐ Not pregnant, but pregnant 43 days to 1 year before death
☐ Unknown if pregnant within the past year</td>
<td>37. MANNER OF DEATH

■ Natural   ☐ Homicide
☐ Accident ☐ Pending Investigation
☐ Suicide   ☐ Could not be determined</td>
</tr>
</table>

ITEM 32 – CAUSE OF DEATH (See example above)

Accurate cause of death information is important
•to the public health community in evaluating and improving the health of all citizens, and
•often to the family, now and in the future, and to the person settling the decedent's estate.

The cause-of-death section consists of two parts. **Part I** is for reporting a chain of events leading directly to death, with the **immediate cause** of death (the final disease, injury, or complication directly causing death) on line a and the **underlying cause** of death (the disease or injury that initiated the chain of events that led directly and inevitably to death) on the lowest used line. **Part II** is for reporting all other significant diseases, conditions, or injuries that contributed to death but which did not result in the underlying cause of death given in **Part I**. **The cause-of-death information should be YOUR best medical OPINION.** A condition can be listed as "probable" even if it has not been definitively diagnosed.

Take care to make the entry legible. Use a computer printer with high resolution, typewriter with good black ribbon and clean keys, or print legibly using permanent **black** ink in completing the CAUSE OF DEATH Section. **Do not abbreviate** conditions entered in section.

Part I (Chain of events leading directly to death)

•Only **one** cause should be entered on each line. <u>Line (a)</u> **MUST ALWAYS** have an entry. **DO NOT** leave blank. Additional lines may be added if necessary.
•If the condition on <u>Line (a)</u> resulted from an underlying condition, put the underlying condition on <u>Line (b)</u>, and so on, until the full sequence is reported. **ALWAYS** enter the **underlying cause of death** on the <u>lowest used line</u> in Part I.
 •For each cause indicate the best estimate of the interval between the presumed onset and the date of death. The terms "unknown" or "approximately" may be used. General terms, such as minutes, hours, or days, are acceptable, if necessary. **DO NOT** leave blank.
 •The terminal event (for example, cardiac arrest or respiratory arrest) should not be used. If a mechanism of death seems most appropriate to you for line (a), then you must always list its cause(s) on the line(s) below it (for example, cardiac arrest **due to** coronary artery atherosclerosis *or* cardiac arrest **due to** blunt impact to chest).
• If an organ system failure such as congestive heart failure, hepatic failure, renal failure, or respiratory failure is listed as a cause of death, always report its etiology on the line(s) beneath it (for example, renal failure **due to** Type I diabetes mellitus).
•When indicating neoplasms as a cause of death, include the following: 1) primary site *or* that the primary site is unknown, 2) benign or malignant, 3) cell type *or* that the cell type is unknown, 4) grade of neoplasm, and 5) part or lobe of organ affected. (For example, a primary well-differentiated squamous cell carcinoma, lung, left upper lobe.)
•Always report the fatal injury (for example, stab wound of chest), the trauma (for example, transection of subclavian vein), and impairment of function (for example, air embolism).

Part II (Other significant conditions)

•Enter all diseases or conditions contributing to death that were not reported in the chain of events in Part I and that did not result in the **underlying cause of death**.
•If two or more possible sequences resulted in death, or if two conditions seem to have added together, report in Part I the one that, in your opinion, most directly caused death. Report in Part II the other conditions or diseases.

CHANGES TO CAUSE OF DEATH

Should additional medical information or autopsy findings become available that would change the cause of death originally reported, the original death certificate should be amended by the certifying physician by **immediately** reporting the revised cause of death to the State Vital Records Office.

ITEMS ON WHEN DEATH OCCURRED
Items 24-25 and 29-31 should always be completed. If the facility uses a separate pronouncer or other person to indicate that death has taken place with another person more familiar with the case completing the remainder of the medical portion of the death certificate, the pronouncer completes Items 24-28. If a certifier completes Items 24-25 as well as items 29-49, Items 26-28 may be left blank.

ITEMS 24-25, 29-30 – DATE AND TIME OF DEATH
Spell out the name of the month. If the exact date of death is unknown, enter the **approximate** date. If the date cannot be approximated, enter the date the body is found and identify as **date found**. Date pronounced and actual date may be the same. Enter the exact hour and minutes according to a 24-hour clock; estimates may be provided with "Approx." placed before the time.

ITEMS 33-34 - AUTOPSY
•33 - Enter "Yes" if either a partial or full autopsy was performed. Otherwise enter "No."
•34 - Enter "Yes" if autopsy findings were available to complete the cause of death; otherwise enter "No". Leave item blank if no autopsy was performed.

ITEM 35 - DID TOBACCO USE CONTRIBUTE TO DEATH?
Check "yes" if, in your opinion, the use of tobacco contributed to death. Tobacco use may contribute to deaths due to a wide variety of diseases; for example, tobacco use contributes to many deaths due to emphysema or lung cancer and some heart disease and cancers of the head and neck. Check "no" if, in your clinical judgment, tobacco use did not contribute to this particular death.

ITEM 36 - IF FEMALE, WAS DECEDENT PREGNANT AT TIME OF DEATH OR WITHIN PAST YEAR?
This information is important in determining pregnancy-related mortality.

ITEM 37 - MANNER OF DEATH
•Always check Manner of Death, which is important: 1) in determining accurate causes of death; 2) in processing insurance claims; and 3) in statistical studies of injuries and death.
•Indicate "Pending investigation" if the manner of death cannot be determined whether due to an accident, suicide, or homicide within the statutory time limit for filing the death certificate. This should be changed later to one of the other terms.
•Indicate "Could not be Determined" **ONLY** when it is impossible to determine the manner of death.

ITEMS 38-44 - ACCIDENT OR INJURY – to be filled out in all cases of deaths due to injury or poisoning.
•38 - Enter the exact month, day, and year of injury. Spell out the name of the month. **DO NOT** use a number for the month. (Remember, the date of injury may differ from the date of death.) Estimates may be provided with "Approx." placed before the date.
•39 - Enter the exact hour and minutes of injury or use your best estimate. Use a 24-hour clock.
•40 - Enter the general place (such as restaurant, vacant lot, or home) where the injury occurred. **DO NOT** enter firm or organization names. (For example, enter "factory", **not** "Standard Manufacturing, Inc.")
•41 - Complete if anything other than natural disease is mentioned in Part I or Part II of the medical certification, including homicides, suicides, and accidents. This includes all motor vehicle deaths. The item **must** be completed for decedents ages 14 years or over and may be completed for those less than 14 years of age if warranted. Enter "Yes" if the injury occurred at work. Otherwise enter "No". An injury may occur at work regardless of whether the injury occurred in the course of the decedent's "usual" occupation. Examples of injury at work and injury not at work follow:

Injury at work	Injury not at work
Injury while working or in vocational training on job premises	Injury while engaged in personal recreational activity on job premises
Injury while on break or at lunch or in parking lot on job premises	Injury while a visitor (not on official work business) to job premises
Injury while working for pay or compensation, including at home	Homemaker working at homemaking activities
Injury while working as a volunteer law enforcement official etc.	Student in school
Injury while traveling on business, including to/from business contacts	Working for self for no profit (mowing yard, repairing own roof, hobby)
	Commuting to or from work

•42 - Enter the complete address where the injury occurred including zip code.
•43 - Enter a brief but specific and clear description of how the injury occurred. Explain the circumstances or cause of the injury. Specify **type of gun** or **type of vehicle** (e.g., car, bulldozer, train, etc.) when relevant to circumstances. Indicate if more than one vehicle involved; specify type of vehicle decedent was in.
•44 -Specify role of decedent (e.g. driver, passenger). Driver/operator and passenger should be designated for modes other than motor vehicles such as bicycles. Other applies to watercraft, aircraft, animal, or people attached to outside of vehicles (e.g. surfers).

Rationale: Motor vehicle accidents are a major cause of unintentional deaths; details will help determine effectiveness of current safety features and laws.

Common problems in death certification
The **elderly decedent** should have a clear and distinct etiological sequence for cause of death, if possible. Terms such as senescence, infirmity, old age, and advanced age have little value for public health or medical research. Age is recorded elsewhere on the certificate. When a number of conditions resulted in death, the physician should choose the single sequence that, in his or her opinion, best describes the process leading to death, and place any other pertinent conditions in Part II. If after careful consideration the physician cannot determine a sequence that ends in death, then the medical examiner or coroner should be consulted about conducting an investigation or providing assistance in completing the cause of death.

The **infant decedent** should have a clear and distinct etiological sequence for cause of death, if possible. "Prematurity" should not be entered without explaining the etiology of prematurity. Maternal conditions may have initiated or affected the sequence that resulted in infant death, and such maternal causes should be reported in addition to the infant causes on the infant's death certificate (e.g., Hyaline membrane disease **due to** prematurity, 28 weeks **due to** placental abruption **due to** blunt trauma to mother's abdomen).

When **SIDS** is suspected, a complete investigation should be conducted, typically by a medical examiner or coroner. If the infant is under 1 year of age, no cause of death is determined after scene investigation, clinical history is reviewed, and a complete autopsy is performed, then the death can be reported as Sudden Infant Death Syndrome.

When processes such as the following are reported, additional information about the etiology should be reported:

Abscess	Carcinomatosis	Disseminated intra vascular	Hyponatremia	Pulmonary arrest
Abdominal hemorrhage	Cardiac arrest	coagulopathy	Hypotension	Pulmonary edema
Adhesions	Cardiac dysrhythmia	Dysrhythmia	Immunosuppression	Pulmonary embolism
Adult respiratory distress syndrome	Cardiomyopathy	End-stage liver disease	Increased intra cranial pressure	Pulmonary insufficiency
Acute myocardial infarction	Cardiopulmonary arrest	End-stage renal disease	Intra cranial hemorrhage	Renal failure
Altered mental status	Cellulitis	Epidural hematoma	Malnutrition	Respiratory arrest
Anemia	Cerebral edema	Exsanguination	Metabolic encephalopathy	Seizures
Anoxia	Cerebrovascular accident	Failure to thrive	Multi-organ failure	Sepsis
Anoxic encephalopathy	Cerebellar tonsillar herniation	Fracture	Multi-system organ failure	Septic shock
Arrhythmia	Chronic bedridden state	Gangrene	Myocardial infarction	Shock
Ascites	Cirrhosis	Gastrointestinal hemorrhage	Necrotizing soft-tissue infection	Starvation
Aspiration	Coagulopathy	Heart failure	Old age	Subdural hematoma
Atrial fibrillation	Compression fracture	Hemothorax	Open (or closed) head injury	Subarachnoid hemorrhage
Bacteremia	Congestive heart failure	Hepatic failure	Paralysis	Sudden death
Bedridden	Convulsions	Hepatitis	Pancytopenia	Thrombocytopenia
Biliary obstruction	Decubiti	Hepatorenal syndrome	Perforated gallbladder	Uncal herniation
Bowel obstruction	Dehydration	Hyperglycemia	Peritonitis	Urinary tract infection
Brain injury	Dementia (when not	Hyperkalemia	Pleural effusions	Ventricular fibrillation
Brain stem herniation	otherwise specified)	Hypovolemic shock	Pneumonia	Ventricular tachycardia
Carcinogenesis	Diarrhea			Volume depletion

If the certifier is unable to determine the etiology of a process such as those shown above, the process must be qualified as being of an unknown, undetermined, probable, presumed, or unspecified etiology so it is clear that a distinct etiology was not inadvertently or carelessly omitted.

The following conditions and types of death might seem to be specific or natural but when the medical history is examined further may be found to be complications of an injury or poisoning (possibly occurring long ago). Such cases should be reported to the medical examiner/coroner.

Asphyxia	Epidural hematoma	Hip fracture	Pulmonary emboli	Subdural hematoma
Bolus	Exsanguination	Hyperthermia	Seizure disorder	Surgery
Choking	Fall	Hypothermia	Sepsis	Thermal burns/chemical burns
Drug or alcohol overdose/drug or alcohol abuse	Fracture	Open reduction of fracture	Subarachnoid hemorrhage	

Contact your State vital statistics office for questions related to writing cause-of-death statements. Additional instructional material on writing cause-of-death statements including handbooks, summary instructions, and tutorials are available online at www.thename.org or www.cdc.gov/nchswww/about/major/dvs/handbk.htm, or by request from NCHS, Room 7318, 3311 Toledo Road, Hyattsville, Maryland 20782-2003.

QUERY LETTER 3

(Query for HIV)

(Letterhead)

Dear Doctor _____

We are writing this letter to obtain additional information about the cause of death that you certified for

_____, who died _____.

Accurate cause-of-death information is essential, not only to the family of the decedent, but also for medical research,

funding, and resource allocation in our State and at the national level.

In this particular death, we are requesting additional information on HIV status. Certain conditions are frequently

associated with HIV infection. In order to classify this death properly in our statistics, would you please supply the

information on the attachment? We want to assure you that the information you provide us is confidential and will be

handled accordingly.

If you have any question or would like to know more about various methods for certifying a cause-of-death statement,

please contact _____. Instructions and an example of a properly

completed death certificate are provided with the attached material.

We appreciate your attention and prompt reply.

Sincerely,

State Registrar/Vital Statistics Cooperative Program

Attachment

HIV Query

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	

IMMEDIATE CAUSE (Final disease or condition --------> resulting in death)	a. _____ Due to (or as a consequence of):	_____
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the **UNDERLYING CAUSE**	b. _____ Due to (or as a consequence of):	_____
(disease or injury that initiated the events resulting	c. _____ Due to (or as a consequence of):	_____
in death) **LAST**	d. _____	_____

PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ☐ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ☐ Probably ☐ No ☐ Unknown	36. IF FEMALE: ☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	37. MANNER OF DEATH ☐ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

1. Please check all that apply.

   Was there any evidence of HIV infection? Yes___, No___

   Was there any evidence of HIV disease? Yes___, No___

   HIV status is not known. _____

   Provide any other pertinent information _____

2. Other _____

_____, M.D.

(Signature of Certifying Physician)

Please provide your office phone:_____ fax:_____

(Please see other side)

Instructions on Medical Certification of Causes of Death

Example of properly completed medical certification

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	
IMMEDIATE CAUSE (Final disease or condition --------> resulting in death) a. <u>Bilateral pneumothoraces</u> Due to (or as a consequence of):	<u>Minutes</u>
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the b. <u>Pneumocystis carinii pneumonia</u> Due to (or as a consequence of):	<u>weeks</u>
UNDERLYING CAUSE (disease or injury that initiated the events resulting c. <u>Acquired immunodeficiency</u> Due to (or as a consequence of):	2 <u>years</u>
in death) **LAST** d. <u>Human immunodeficiency virus infection</u>	7 <u>years</u>

PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ☐ Yes ■ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ■ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ☐ Probably ■ No ☐ Unknown	36. IF FEMALE: ☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ■ Unknown if pregnant within the past year	37. MANNER OF DEATH ■ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

ITEM 32 – CAUSE OF DEATH (See example above)
Accurate cause of death information is important
•to the public health community in evaluating and improving the health of all citizens, and
•often to the family, now and in the future, and to the person settling the decedent's estate.

The cause-of-death section consists of two parts. **Part I** is for reporting a chain of events leading directly to death, with the **immediate cause** of death (the final disease, injury, or complication directly causing death) on line a and the **underlying cause** of death (the disease or injury that initiated the chain of events that led directly and inevitably to death) on the lowest used line. **Part II** is for reporting all other significant diseases, conditions, or injuries that contributed to death but which did not result in the underlying cause of death given in **Part I**. **The cause-of-death information should be YOUR best medical OPINION.** A condition can be listed as "probable" even if it has not been definitively diagnosed.

Take care to make the entry legible. Use a computer printer with high resolution, typewriter with good black ribbon and clean keys, or print legibly using permanent **black** ink in completing the CAUSE OF DEATH Section. **Do not abbreviate** conditions entered in section.

<u>Part I</u> (Chain of events leading directly to death)
•Only **one** cause should be entered on each line. <u>Line (a)</u> **MUST ALWAYS** have an entry. **DO NOT** leave blank. Additional lines may be added if necessary.
•If the condition on <u>Line (a)</u> resulted from an underlying condition, put the underlying condition on <u>Line (b)</u>, and so on, until the full sequence is reported. **ALWAYS** enter the **underlying cause of death** on the <u>lowest used line</u> in Part I.
 •For each cause indicate the best estimate of the interval between the presumed onset and the date of death. The terms "unknown" or "approximately" may be used. General terms, such as minutes, hours, or days, are acceptable, if necessary. **DO NOT** leave blank.
 •The terminal event (for example, cardiac arrest or respiratory arrest) should not be used. If a mechanism of death seems most appropriate to you for line (a), then you must always list its cause(s) on the line(s) below it (for example, cardiac arrest **due to** coronary artery atherosclerosis *or* cardiac arrest **due to** blunt impact to chest).
• If an organ system failure such as congestive heart failure, hepatic failure, renal failure, or respiratory failure is listed as a cause of death, always report its etiology on the line(s) beneath it (for example, renal failure **due to** Type I diabetes mellitus).
•When indicating neoplasms as a cause of death, include the following: 1) primary site *or* that the primary site is unknown, 2) benign or malignant, 3) cell type *or* that the cell type is unknown, 4) grade of neoplasm, and 5) part or lobe of organ affected. (For example, a primary well-differentiated squamous cell carcinoma, lung, left upper lobe).
•Always report the fatal injury (for example, stab wound of chest), the trauma (for example, transection of subclavian vein), and impairment of function (for example, air embolism).

Part II (Other significant conditions)
•Enter all diseases or conditions contributing to death that were not reported in the chain of events in Part I and that did not result in the **underlying cause of death**.
•If two or more possible sequences resulted in death, or if two conditions seem to have added together, report in Part I the one that, in your opinion, most directly caused death. Report in Part II the other conditions or diseases.

CHANGES TO CAUSE OF DEATH
Should additional medical information or autopsy findings become available that would change the cause of death originally reported, the original death certificate should be amended by the certifying physician by **immediately** reporting the revised cause of death to the State Vital Records Office.

ITEMS ON WHEN DEATH OCCURRED

Items 24-25 and 29-31 should always be completed. If the facility uses a separate pronouncer or other person to indicate that death has taken place with another person more familiar with the case completing the remainder of the medical portion of the death certificate, the pronouncer completes Items 24-28. If a certifier completes Items 24-25 as well as items 29-49, Items 26-28 may be left blank.

ITEMS 24-25, 29-30 – DATE AND TIME OF DEATH

Spell out the name of the month. If the exact date of death is unknown, enter the **approximate** date. If the date cannot be approximated, enter the date the body is found and identify as **date found**. Date pronounced and actual date may be the same. Enter the exact hour and minutes according to a 24-hour clock; estimates may be provided with "Approx." placed before the time.

ITEMS 33-34 - AUTOPSY

•33 - Enter "Yes" if either a partial or full autopsy was performed. Otherwise enter "No."
•34 - Enter "Yes" if autopsy findings were available to complete the cause of death; otherwise enter "No". Leave item blank if no autopsy was performed.

ITEM 35 - DID TOBACCO USE CONTRIBUTE TO DEATH?

Check "yes" if, in your opinion, the use of tobacco contributed to death. Tobacco use may contribute to deaths due to a wide variety of diseases; for example, tobacco use contributes to many deaths due to emphysema or lung cancer and some heart disease and cancers of the head and neck. Check "no" if, in your clinical judgment, tobacco use did not contribute to this particular death.

ITEM 36 - IF FEMALE, WAS DECEDENT PREGNANT AT TIME OF DEATH OR WITHIN PAST YEAR?

This information is important in determining pregnancy-related mortality.

ITEM 37 - MANNER OF DEATH

•Always check Manner of Death, which is important: 1) in determining accurate causes of death; 2) in processing insurance claims; and 3) in statistical studies of injuries and death.
•Indicate "Pending investigation" if the manner of death cannot be determined whether due to an accident, suicide, or homicide within the statutory time limit for filing the death certificate. This should be changed later to one of the other terms.
•Indicate "Could not be Determined" **ONLY** when it is impossible to determine the manner of death.

ITEMS 38-44 - ACCIDENT OR INJURY – to be filled out in all cases of deaths due to injury or poisoning.

•38 - Enter the exact month, day, and year of injury. Spell out the name of the month. **DO NOT** use a number for the month. (Remember, the date of injury may differ from the date of death.) Estimates may be provided with "Approx." placed before the date.
•39 **-** Enter the exact hour and minutes of injury or use your best estimate. Use a 24-hour clock.
•40 - Enter the general place (such as restaurant, vacant lot, or home) where the injury occurred. **DO NOT** enter firm or organization names. (For example, enter "factory", **not** "Standard Manufacturing, Inc.")
•41 - Complete if anything other than natural disease is mentioned in Part I or Part II of the medical certification, including homicides, suicides, and accidents. This includes all motor vehicle deaths. The item **must** be completed for decedents ages 14 years or over and may be completed for those less than 14 years of age if warranted. Enter "Yes" if the injury occurred at work. Otherwise enter "No". An injury may occur at work regardless of whether the injury occurred in the course of the decedent's "usual" occupation. Examples of injury at work and injury not at work follow:

Injury at work	**Injury not at work**
Injury while working or in vocational training on job premises	Injury while engaged in personal recreational activity on job premises
Injury while on break or at lunch or in parking lot on job premises	Injury while a visitor (not on official work business) to job premises
Injury while working for pay or compensation, including at home	Homemaker working at homemaking activities
Injury while working as a volunteer law enforcement official etc.	Student in school
Injury while traveling on business, including to/from business contacts	Working for self for no profit (mowing yard, repairing own roof, hobby)
	Commuting to or from work

•42 - Enter the complete address where the injury occurred including zip code.
•43 - Enter a brief but specific and clear description of how the injury occurred. Explain the circumstances or cause of the injury. Specify **type of gun** or **type of vehicle** (e.g., car, bulldozer, train, etc.) when relevant to circumstances. Indicate if more than one vehicle involved; specify type of vehicle decedent was in.
•44 -Specify role of decedent (e.g. driver, passenger). Driver/operator and passenger should be designated for modes other than motor vehicles such as bicycles. Other applies to watercraft, aircraft, animal, or people attached to outside of vehicles (e.g. surfers).

Rationale: Motor vehicle accidents are a major cause of unintentional deaths; details will help determine effectiveness of current safety features and laws.

Common problems in death certification
The **elderly decedent** should have a clear and distinct etiological sequence for cause of death, if possible. Terms such as senescence, infirmity, old age, and advanced age have little value for public health or medical research. Age is recorded elsewhere on the certificate. When a number of conditions resulted in death, the physician should choose the single sequence that, in his or her opinion, best describes the process leading to death, and place any other pertinent conditions in Part II. If after careful consideration the physician cannot determine a sequence that ends in death, then the medical examiner or coroner should be consulted about conducting an investigation or providing assistance in completing the cause of death.

The **infant decedent** should have a clear and distinct etiological sequence for cause of death, if possible. "Prematurity" should not be entered without explaining the etiology of prematurity. Maternal conditions may have initiated or affected the sequence that resulted in infant death, and such maternal causes should be reported in addition to the infant causes on the infant's death certificate (e.g., Hyaline membrane disease **due to** prematurity, 28 weeks **due to** placental abruption **due to** blunt trauma to mother's abdomen).

When **SIDS** is suspected, a complete investigation should be conducted, typically by a medical examiner or coroner. If the infant is under 1 year of age, no cause of death is determined after scene investigation, clinical history is reviewed, and a complete autopsy is performed, then the death can be reported as Sudden Infant Death Syndrome.

When processes such as the following are reported, additional information about the etiology should be reported:

Abscess	Carcinomatosis	Disseminated intra vascular	Hyponatremia	Pulmonary arrest
Abdominal hemorrhage	Cardiac arrest	coagulopathy	Hypotension	Pulmonary edema
Adhesions	Cardiac dysrhythmia	Dysrhythmia	Immunosuppression	Pulmonary embolism
Adult respiratory distress syndrome	Cardiomyopathy	End-stage liver disease	Increased intra cranial pressure	Pulmonary insufficiency
Acute myocardial infarction	Cardiopulmonary arrest	End-stage renal disease	Intra cranial hemorrhage	Renal failure
Altered mental status	Cellulitis	Epidural hematoma	Malnutrition	Respiratory arrest
Anemia	Cerebral edema	Exsanguination	Metabolic encephalopathy	Seizures
Anoxia	Cerebrovascular accident	Failure to thrive	Multi-organ failure	Sepsis
Anoxic encephalopathy	Cerebellar tonsillar herniation	Fracture	Multi-system organ failure	Septic shock
Arrhythmia	Chronic bedridden state	Gangrene	Myocardial infarction	Shock
Ascites	Cirrhosis	Gastrointestinal hemorrhage	Necrotizing soft-tissue infection	Starvation
Aspiration	Coagulopathy	Heart failure	Old age	Subdural hematoma
Atrial fibrillation	Compression fracture	Hemothorax	Open (or closed) head injury	Subarachnoid hemorrhage
Bacteremia	Congestive heart failure	Hepatic failure	Paralysis	Sudden death
Bedridden	Convulsions	Hepatitis	Pancytopenia	Thrombocytopenia
Biliary obstruction	Decubiti	Hepatorenal syndrome	Perforated gallbladder	Uncal herniation
Bowel obstruction	Dehydration	Hyperglycemia	Peritonitis	Urinary tract infection
Brain injury	Dementia (when not	Hyperkalemia	Pleural effusions	Ventricular fibrillation
Brain stem herniation	otherwise specified)	Hypovolemic shock	Pneumonia	Ventricular tachycardia
Carcinogenesis	Diarrhea			Volume depletion

If the certifier is unable to determine the etiology of a process such as those shown above, the process must be qualified as being of an unknown, undetermined, probable, presumed, or unspecified etiology so it is clear that a distinct etiology was not inadvertently or carelessly omitted.

The following conditions and types of death might seem to be specific or natural but when the medical history is examined further may be found to be complications of an injury or poisoning (possibly occurring long ago). Such cases should be reported to the medical examiner/coroner.

Asphyxia	Epidural hematoma	Hip fracture	Pulmonary emboli	Subdural hematoma
Bolus	Exsanguination	Hyperthermia	Seizure disorder	Surgery
Choking	Fall	Hypothermia	Sepsis	Thermal burns/chemical burns
Drug or alcohol overdose/drug or	Fracture	Open reduction of fracture	Subarachnoid hemorrhage	
alcohol abuse				

Contact your State vital statistics office for questions related to writing cause-of-death statements. Additional instructional material on writing cause-of-death statements including handbooks, summary instructions, and tutorials are available online at www.thename.org or www.cdc.gov/nchswww/about/major/dvs/handbk.htm, or by request from NCHS, Room 7318, 3311 Toledo Road, Hyattsville, Maryland 20782-2003.

Query Letter 4
(More Specific Information)

(Letterhead)

Dear Doctor _____

We are writing this letter to obtain additional information about the cause of death that you certified for

_____, who died _____.

Accurate cause-of-death information is essential, not only to the family of the decedent, but also for medical research, funding, and resource allocation in our State and at the national level.

In this particular death, we are requesting more specific information. In order to classify this death properly in our statistics, would you please supply the information on the attachment? We want to assure you that the information you provide us is confidential and will be handled accordingly.

If you have any question or would like to know more about various methods for certifying a cause-of-death statement, please contact _____. Instructions and an example of a properly completed death certificate are provided with the attached material.

We appreciate your attention and prompt reply.

Sincerely,

State Registrar/Vital Statistics Cooperative Program

Attachment

Query for Additional Information

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	

IMMEDIATE CAUSE (Final
disease or condition -------->   a. _____
resulting in death)   Due to (or as a consequence of):   _____

Sequentially list conditions,   b. _____
if any, leading to the cause   Due to (or as a consequence of):   _____
listed on line a. Enter the

UNDERLYING CAUSE   c. _____
(disease or injury that   Due to (or as a consequence of):   _____
initiated the events resulting
in death) **LAST**   d. _____   _____

PART II. Enter other <u>significant conditions</u> contributing to death but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ☐ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH?	36. IF FEMALE:	37. MANNER OF DEATH
☐ Yes ☐ Probably ☐ No ☐ Unknown	☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	☐ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

Is this condition, **_____**, secondary to another condition?
Yes___, No___
If Yes, please indicate the primary condition _____

2. Is there a known specific site of the condition, _____ ?
Yes__, Unknown___
If Yes, please state _____

3. If known, please state a more specific type of the condition, _____, or part of this organ or site.
_____
4. If known, please state the type or etiology of this condition, _____,
_____

_____, M.D.
(Signature of Certifying Physician)

Please provide your office phone:_____ fax:_____

(Please see other side)

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Instructions on Medical Certification of Causes of Death

Example of properly completed medical certification

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	
IMMEDIATE CAUSE (Final disease or condition --------> resulting in death) a. <u>Pneumonia</u> Due to (or as a consequence of):	1 week
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the b. <u>Right Hemiplegia</u> Due to (or as a consequence of):	6 months
UNDERLYING CAUSE (disease or injury that initiated the events resulting c. <u>Cerebral thrombosis</u> Due to (or as a consequence of):	6 months
in death) **LAST** d. <u>Cerebral artery atherosclerosis</u>	_years_

PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? □ Yes ■ No
Hypertension	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? □ Yes ■ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? □ Yes □ Probably ■ No □ Unknown	36. IF FEMALE: □ Not pregnant within past year □ Pregnant at time of death □ Not pregnant, but pregnant within 42 days of death □ Not pregnant, but pregnant 43 days to 1 year before death □ Unknown if pregnant within the past year	37. MANNER OF DEATH ■ Natural □ Homicide □ Accident □ Pending Investigation □ Suicide □ Could not be determined

ITEM 32 – CAUSE OF DEATH (See example above)

Accurate cause of death information is important
•to the public health community in evaluating and improving the health of all citizens, and
•often to the family, now and in the future, and to the person settling the decedent's estate.

The cause-of-death section consists of two parts. **Part I** is for reporting a chain of events leading directly to death, with the **immediate cause** of death (the final disease, injury, or complication directly causing death) on line a and the **underlying cause** of death (the disease or injury that initiated the chain of events that led directly and inevitably to death) on the lowest used line. **Part II** is for reporting all other significant diseases, conditions, or injuries that contributed to death but which did not result in the underlying cause of death given in **Part I**. **The cause-of-death information should be YOUR best medical OPINION.** A condition can be listed as "probable" even if it has not been definitively diagnosed.

Take care to make the entry legible. Use a computer printer with high resolution, typewriter with good black ribbon and clean keys, or print legibly using permanent **black** ink in completing the CAUSE OF DEATH Section. **Do not abbreviate** conditions entered in section.

Part I (Chain of events leading directly to death)

•Only **one** cause should be entered on each line. <u>Line (a)</u> **MUST ALWAYS** have an entry. **DO NOT** leave blank. Additional lines may be added if necessary.
•If the condition on <u>Line (a)</u> resulted from an underlying condition, put the underlying condition on <u>Line (b)</u>, and so on, until the full sequence is reported. **ALWAYS** enter the **underlying cause of death** on the <u>lowest used line</u> in Part I.
•For each cause indicate the best estimate of the interval between the presumed onset and the date of death. The terms "unknown" or "approximately" may be used. General terms, such as minutes, hours, or days, are acceptable, if necessary. **DO NOT** leave blank.
•The terminal event (for example, cardiac arrest or respiratory arrest) should not be used. If a mechanism of death seems most appropriate to you for line (a), then you must always list its cause(s) on the line(s) below it (for example, cardiac arrest **due to** coronary artery atherosclerosis *or* cardiac arrest **due to** blunt impact to chest).
• If an organ system failure such as congestive heart failure, hepatic failure, renal failure, or respiratory failure is listed as a cause of death, always report its etiology on the line(s) beneath it (for example, renal failure **due to** Type I diabetes mellitus).
•When indicating neoplasms as a cause of death, include the following: 1) primary site *or* that the primary site is unknown, 2) benign or malignant, 3) cell type *or* that the cell type is unknown, 4) grade of neoplasm, and 5) part or lobe of organ affected. (For example, a primary well-differentiated squamous cell carcinoma, lung, left upper lobe.)
•Always report the fatal injury (for example, stab wound of chest), the trauma (for example, transection of subclavian vein), and impairment of function (for example, air embolism).

Part II (Other significant conditions)

•Enter all diseases or conditions contributing to death that were not reported in the chain of events in Part I and that did not result in the **underlying cause of death**.
•If two or more possible sequences resulted in death, or if two conditions seem to have added together, report in Part I the one that, in your opinion, most directly caused death. Report in Part II the other conditions or diseases.

CHANGES TO CAUSE OF DEATH

Should additional medical information or autopsy findings become available that would change the cause of death originally reported, the original death certificate should be amended by the certifying physician by **immediately** reporting the revised cause of death to the State Vital Records Office.

ITEMS ON WHEN DEATH OCCURRED
Items 24-25 and 29-31 should always be completed. If the facility uses a separate pronouncer or other person to indicate that death has taken place with another person more familiar with the case completing the remainder of the medical portion of the death certificate, the pronouncer completes Items 24-28. If a certifier completes Items 24-25 as well as items 29-49, Items 26-28 may be left blank.

ITEMS 24-25, 29-30 – DATE AND TIME OF DEATH
Spell out the name of the month. If the exact date of death is unknown, enter the **approximate** date. If the date cannot be approximated, enter the date the body is found and identify as **date found**. Date pronounced and actual date may be the same. Enter the exact hour and minutes according to a 24-hour clock; estimates may be provided with "Approx." placed before the time.

ITEMS 33-34 - AUTOPSY
•33 - Enter "Yes" if either a partial or full autopsy was performed. Otherwise enter "No."
•34 - Enter "Yes" if autopsy findings were available to complete the cause of death; otherwise enter "No". Leave item blank if no autopsy was performed.

ITEM 35 - DID TOBACCO USE CONTRIBUTE TO DEATH?
Check "yes" if, in your opinion, the use of tobacco contributed to death. Tobacco use may contribute to deaths due to a wide variety of diseases; for example, tobacco use contributes to many deaths due to emphysema or lung cancer and some heart disease and cancers of the head and neck. Check "no" if, in your clinical judgment, tobacco use did not contribute to this particular death.

ITEM 36 - IF FEMALE, WAS DECEDENT PREGNANT AT TIME OF DEATH OR WITHIN PAST YEAR?
This information is important in determining pregnancy-related mortality.

ITEM 37 - MANNER OF DEATH
•Always check Manner of Death, which is important: 1) in determining accurate causes of death; 2) in processing insurance claims; and 3) in statistical studies of injuries and death.
•Indicate "Pending investigation" if the manner of death cannot be determined whether due to an accident, suicide, or homicide within the statutory time limit for filing the death certificate. This should be changed later to one of the other terms.
•Indicate "Could not be Determined" **ONLY** when it is impossible to determine the manner of death.

ITEMS 38-44 - ACCIDENT OR INJURY – to be filled out in all cases of deaths due to injury or poisoning.
•38 - Enter the exact month, day, and year of injury. Spell out the name of the month. **DO NOT** use a number for the month. (Remember, the date of injury may differ from the date of death.) Estimates may be provided with "Approx." placed before the date.
•39 - Enter the exact hour and minutes of injury or use your best estimate. Use a 24-hour clock.
•40 - Enter the general place (such as restaurant, vacant lot, or home) where the injury occurred. **DO NOT** enter firm or organization names. (For example, enter "factory", **not** "Standard Manufacturing, Inc.")
•41 - Complete if anything other than natural disease is mentioned in Part I or Part II of the medical certification, including homicides, suicides, and accidents. This includes all motor vehicle deaths. The item **must** be completed for decedents ages 14 years or over and may be completed for those less than 14 years of age if warranted. Enter "Yes" if the injury occurred at work. Otherwise enter "No". An injury may occur at work regardless of whether the injury occurred in the course of the decedent's "usual" occupation. Examples of injury at work and injury not at work follow:

Injury at work	Injury not at work
Injury while working or in vocational training on job premises	Injury while engaged in personal recreational activity on job premises
Injury while on break or at lunch or in parking lot on job premises	Injury while a visitor (not on official work business) to job premises
Injury while working for pay or compensation, including at home	Homemaker working at homemaking activities
Injury while working as a volunteer law enforcement official etc.	Student in school
Injury while traveling on business, including to/from business contacts	Working for self for no profit (mowing yard, repairing own roof, hobby)
	Commuting to or from work

•42 - Enter the complete address where the injury occurred including zip code.
•43 - Enter a brief but specific and clear description of how the injury occurred. Explain the circumstances or cause of the injury. Specify **type of gun** or **type of vehicle** (e.g., car, bulldozer, train, etc.) when relevant to circumstances. Indicate if more than one vehicle involved; specify type of vehicle decedent was in.
•44 -Specify role of decedent (e.g. driver, passenger). Driver/operator and passenger should be designated for modes other than motor vehicles such as bicycles. Other applies to watercraft, aircraft, animal, or people attached to outside of vehicles (e.g. surfers).

Rationale: Motor vehicle accidents are a major cause of unintentional deaths; details will help determine effectiveness of current safety features and laws.

Common problems in death certification
The **elderly decedent** should have a clear and distinct etiological sequence for cause of death, if possible. Terms such as senescence, infirmity, old age, and advanced age have little value for public health or medical research. Age is recorded elsewhere on the certificate. When a number of conditions resulted in death, the physician should choose the single sequence that, in his or her opinion, best describes the process leading to death, and place any other pertinent conditions in Part II. If after careful consideration the physician cannot determine a sequence that ends in death, then the medical examiner or coroner should be consulted about conducting an investigation or providing assistance in completing the cause of death.

The **infant decedent** should have a clear and distinct etiological sequence for cause of death, if possible. "Prematurity" should not be entered without explaining the etiology of prematurity. Maternal conditions may have initiated or affected the sequence that resulted in infant death, and such maternal causes should be reported in addition to the infant causes on the infant's death certificate (e.g., Hyaline membrane disease **due to** prematurity, 28 weeks **due to** placental abruption **due to** blunt trauma to mother's abdomen).

When **SIDS** is suspected, a complete investigation should be conducted, typically by a medical examiner or coroner. If the infant is under 1 year of age, no cause of death is determined after scene investigation, clinical history is reviewed, and a complete autopsy is performed, then the death can be reported as Sudden Infant Death Syndrome.

When processes such as the following are reported, additional information about the etiology should be reported:

Abscess	Carcinomatosis	Disseminated intra vascular	Hyponatremia	Pulmonary arrest
Abdominal hemorrhage	Cardiac arrest	coagulopathy	Hypotension	Pulmonary edema
Adhesions	Cardiac dysrhythmia	Dysrhythmia	Immunosuppression	Pulmonary embolism
Adult respiratory distress syndrome	Cardiomyopathy	End-stage liver disease	Increased intra cranial pressure	Pulmonary insufficiency
Acute myocardial infarction	Cardiopulmonary arrest	End-stage renal disease	Intra cranial hemorrhage	Renal failure
Altered mental status	Cellulitis	Epidural hematoma	Malnutrition	Respiratory arrest
Anemia	Cerebral edema	Exsanguination	Metabolic encephalopathy	Seizures
Anoxia	Cerebrovascular accident	Failure to thrive	Multi-organ failure	Sepsis
Anoxic encephalopathy	Cerebellar tonsillar herniation	Fracture	Multi-system organ failure	Septic shock
Arrhythmia	Chronic bedridden state	Gangrene	Myocardial infarction	Shock
Ascites	Cirrhosis	Gastrointestinal hemorrhage	Necrotizing soft-tissue infection	Starvation
Aspiration	Coagulopathy	Heart failure	Old age	Subdural hematoma
Atrial fibrillation	Compression fracture	Hemothorax	Open (or closed) head injury	Subarachnoid hemorrhage
Bacteremia	Congestive heart failure	Hepatic failure	Paralysis	Sudden death
Bedridden	Convulsions	Hepatitis	Pancytopenia	Thrombocytopenia
Biliary obstruction	Decubiti	Hepatorenal syndrome	Perforated gallbladder	Uncal herniation
Bowel obstruction	Dehydration	Hyperglycemia	Peritonitis	Urinary tract infection
Brain injury	Dementia (when not	Hyperkalemia	Pleural effusions	Ventricular fibrillation
Brain stem herniation	otherwise specified)	Hypovolemic shock	Pneumonia	Ventricular tachycardia
Carcinogenesis	Diarrhea			Volume depletion

If the certifier is unable to determine the etiology of a process such as those shown above, the process must be qualified as being of an unknown, undetermined, probable, presumed, or unspecified etiology so it is clear that a distinct etiology was not inadvertently or carelessly omitted.

The following conditions and types of death might seem to be specific or natural but when the medical history is examined further may be found to be complications of an injury or poisoning (possibly occurring long ago). Such cases should be reported to the medical examiner/coroner.

Asphyxia	Epidural hematoma	Hip fracture	Pulmonary emboli	Subdural hematoma
Bolus	Exsanguination	Hyperthermia	Seizure disorder	Surgery
Choking	Fall	Hypothermia	Sepsis	Thermal burns/chemical burns
Drug or alcohol overdose/drug or	Fracture	Open reduction of fracture	Subarachnoid hemorrhage	
alcohol abuse				

Contact your State vital statistics office for questions related to writing cause-of-death statements. Additional instructional material on writing cause-of-death statements including handbooks, summary instructions, and tutorials are available online at www.thename.org or www.cdc.gov/nchswww/about/major/dvs/handbk.htm, or by request from NCHS, Room 7318, 3311 Toledo Road, Hyattsville, Maryland 20782-2003.

Query Letter 5
(Reason for Treatment)

(Letterhead)

Dear Doctor _____

We are writing this letter to obtain additional information about the cause of death that you certified for _____, who died _____.

Accurate cause-of-death information is essential, not only to the family of the decedent, but also for medical research, funding, and resource allocation in our State and at the national level.

In this particular death, we need to know the condition that required the treatment in order to classify the cause of death correctly in our statistical records. In order to classify this death properly in our statistics, would you please supply the information on the attachment? We want to assure you that the information you provide us is confidential and will be handled accordingly.

If you have any question or would like to know more about various methods for certifying a cause-of-death statement, please contact _____.
Instructions and an example of a properly completed death certificate are provided with the attached material.

We appreciate your attention and prompt reply.

Sincerely,

State Registrar/Vital Statistics Cooperative Program

Attachment

Reason for treatment query

<table>
<tr><td colspan="2">CAUSE OF DEATH (See instructions and examples)</td><td>Approximate interval:
Onset to death</td></tr>
<tr><td colspan="2">32. PART I. Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.</td><td></td></tr>
<tr><td>IMMEDIATE CAUSE (Final disease or condition --------> resulting in death)</td><td>a. _____
Due to (or as a consequence of):</td><td>_____</td></tr>
<tr><td>Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST</td><td>b. _____
Due to (or as a consequence of):

c. _____
Due to (or as a consequence of):

d. _____</td><td>_____

_____

_____</td></tr>
<tr><td colspan="2">PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I</td><td>33. WAS AN AUTOPSY PERFORMED?
☐ Yes ☐ No
34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ☐ No</td></tr>
</table>

35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ☐ Probably ☐ No ☐ Unknown	36. IF FEMALE: ☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	37. MANNER OF DEATH ☐ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

38. DATE OF INJURY (Mo/Day/Yr) (Spell Month)	39. TIME OF INJURY	40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area)	41. INJURY AT WORK? ☐ Yes ☐ No

42. LOCATION OF INJURY: State: _____ City or Town: _____

Street & Number: _____ Apartment No.: _____ Zip Code: _____

43. DESCRIBE HOW INJURY OCCURRED:	44. IF TRANSPORTATION INJURY, SPECIFY: ☐ Driver/Operator ☐ Passenger ☐ Pedestrian ☐ Other (Specify)

1. State the medical condition or injury that necessitated the treatment, _____
_____
_____

2. Other _____

_____ , M.D.
(Signature of Certifying Physician)

Please provide your office phone:_____ fax:_____

(Please see other side)

Instructions on Medical Certification of Causes of Death

Example of properly completed medical certification

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	

IMMEDIATE CAUSE (Final disease or condition --------> resulting in death)	a. <u>Pulmonary embolism</u> Due to (or as a consequence of):	<u>1 day</u>
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the **UNDERLYING CAUSE** (disease or injury that initiated the events resulting in death) **LAST**	b. <u>Cholelithotomy</u> Due to (or as a consequence of):	<u>4 days</u>
	c. <u>Calculus of gallbladder</u> Due to (or as a consequence of):	<u>6 weeks</u>
	d. _____	_____

PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ☐ Yes ■ No
Arteriosclerotic heart disease – Emphysema	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ■ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? ■ Yes ☐ Probably ☐ No ☐ Unknown	36. IF FEMALE: ☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	37. MANNER OF DEATH ■ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

38. DATE OF INJURY (Mo/Day/Yr) (Spell Month)	39. TIME OF INJURY	40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area)	41. INJURY AT WORK? ☐Yes ☐ No

42. LOCATION OF INJURY: State:	City or Town:	
Street & Number:	Apartment No.:	Zip Code:

43. DESCRIBE HOW INJURY OCCURRED:	44. IF TRANSPORTATION INJURY, SPECIFY: ☐ Driver/Operator ☐ Passenger ☐ Pedestrian ☐ Other (Specify)

ITEM 32 – CAUSE OF DEATH (See example above)

Accurate cause of death information is important
•to the public health community in evaluating and improving the health of all citizens, and
•often to the family, now and in the future, and to the person settling the decedent's estate.

The cause-of-death section consists of two parts. **Part I** is for reporting a chain of events leading directly to death, with the **immediate cause** of death (the final disease, injury, or complication directly causing death) on line a and the **underlying cause** of death (the disease or injury that initiated the chain of events that led directly and inevitably to death) on the lowest used line. **Part II** is for reporting all other significant diseases, conditions, or injuries that contributed to death but which did not result in the underlying cause of death given in **Part I**. **The cause-of-death information should be YOUR best medical OPINION.** A condition can be listed as "probable" even if it has not been definitively diagnosed.

Take care to make the entry legible. Use a computer printer with high resolution, typewriter with good black ribbon and clean keys, or print legibly using permanent **black** ink in completing the CAUSE OF DEATH Section. **Do not abbreviate** conditions entered in section.

Part I (Chain of events leading directly to death)

•Only **one** cause should be entered on each line. <u>Line (a)</u> **MUST ALWAYS** have an entry. **DO NOT** leave blank. Additional lines may be added if necessary.
•If the condition on <u>Line (a)</u> resulted from an underlying condition, put the underlying condition on <u>Line (b)</u>, and so on, until the full sequence is reported. **ALWAYS** enter the **underlying cause of death** on the <u>lowest used line</u> in Part I.
 •For each cause indicate the best estimate of the interval between the presumed onset and the date of death. The terms "unknown" or "approximately" may be used. General terms, such as minutes, hours, or days, are acceptable, if necessary. **DO NOT** leave blank.
 •The terminal event (for example, cardiac arrest or respiratory arrest) should not be used. If a mechanism of death seems most appropriate to you for line (a), then you must always list its cause(s) on the line(s) below it (for example, cardiac arrest **due to** coronary artery atherosclerosis *or* cardiac arrest **due to** blunt impact to chest).
• If an organ system failure such as congestive heart failure, hepatic failure, renal failure, or respiratory failure is listed as a cause of death, always report its etiology on the line(s) beneath it (for example, renal failure **due to** Type I diabetes mellitus).

•When indicating neoplasms as a cause of death, include the following: 1) primary site *or* that the primary site is unknown, 2) benign or malignant, 3) cell type *or* that the cell type is unknown, 4) grade of neoplasm, and 5) part or lobe of organ affected. (For example, a primary well-differentiated squamous cell carcinoma, lung, left upper lobe.)
•Always report the fatal injury (for example, stab wound of chest), the trauma (for example, transection of subclavian vein), and impairment of function (for example, air embolism).

Part II (Other significant conditions)
•Enter all diseases or conditions contributing to death that were not reported in the chain of events in Part I and that did not result in the **underlying cause of death**.
•If two or more possible sequences resulted in death, or if two conditions seem to have added together, report in Part I the one that, in your opinion, most directly caused death. Report in Part II the other conditions or diseases.

CHANGES TO CAUSE OF DEATH
Should additional medical information or autopsy findings become available that would change the cause of death originally reported, the original death certificate should be amended by the certifying physician by **immediately** reporting the revised cause of death to the State Vital Records Office.

ITEMS ON WHEN DEATH OCCURRED
Items 24-25 and 29-31 should always be completed. If the facility uses a separate pronouncer or other person to indicate that death has taken place with another person more familiar with the case completing the remainder of the medical portion of the death certificate, the pronouncer completes Items 24-28. If a certifier completes Items 24-25 as well as items 29-49, Items 26-28 may be left blank.

ITEMS 24-25, 29-30 – DATE AND TIME OF DEATH
Spell out the name of the month. If the exact date of death is unknown, enter the **approximate** date. If the date cannot be approximated, enter the date the body is found and identify as **date found**. Date pronounced and actual date may be the same. Enter the exact hour and minutes according to a 24-hour clock; estimates may be provided with "Approx." placed before the time.

ITEMS 33-34 - AUTOPSY
•33 - Enter "Yes" if either a partial or full autopsy was performed. Otherwise enter "No."
•34 - Enter "Yes" if autopsy findings were available to complete the cause of death; otherwise enter "No". Leave item blank if no autopsy was performed.

ITEM 35 - DID TOBACCO USE CONTRIBUTE TO DEATH?
Check "yes" if, in your opinion, the use of tobacco contributed to death. Tobacco use may contribute to deaths due to a wide variety of diseases; for example, tobacco use contributes to many deaths due to emphysema or lung cancer and some heart disease and cancers of the head and neck. Check "no" if, in your clinical judgment, tobacco use did not contribute to this particular death.

ITEM 36 - IF FEMALE, WAS DECEDENT PREGNANT AT TIME OF DEATH OR WITHIN PAST YEAR?
This information is important in determining pregnancy-related mortality.

ITEM 37 - MANNER OF DEATH
•Always check Manner of Death, which is important: 1) in determining accurate causes of death; 2) in processing insurance claims; and 3) in statistical studies of injuries and death.
•Indicate "Pending investigation" if the manner of death cannot be determined whether due to an accident, suicide, or homicide within the statutory time limit for filing the death certificate. This should be changed later to one of the other terms.
•Indicate "Could not be Determined" **ONLY** when it is impossible to determine the manner of death.

ITEMS 38-44 - ACCIDENT OR INJURY – to be filled out in all cases of deaths due to injury or poisoning.
•38 - Enter the exact month, day, and year of injury. Spell out the name of the month. **DO NOT** use a number for the month. (Remember, the date of injury may differ from the date of death.) Estimates may be provided with "Approx." placed before the date.
•39 **-** Enter the exact hour and minutes of injury or use your best estimate. Use a 24-hour clock.
•40 - Enter the general place (such as restaurant, vacant lot, or home) where the injury occurred. **DO NOT** enter firm or organization names. (For example, enter "factory", **not** "Standard Manufacturing, Inc.")
•41 - Complete if anything other than natural disease is mentioned in Part I or Part II of the medical certification, including homicides, suicides, and accidents. This includes all motor vehicle deaths. The item **must** be completed for decedents ages 14 years or over and may be completed for those less than 14 years of age if warranted. Enter "Yes" if the injury occurred at work. Otherwise enter "No". An injury may occur at work regardless of whether the injury occurred in the course of the decedent's "usual" occupation. Examples of injury at work and injury not at work follow:

Injury at work	Injury not at work
Injury while working or in vocational training on job premises	Injury while engaged in personal recreational activity on job premises
Injury while on break or at lunch or in parking lot on job premises	Injury while a visitor (not on official work business) to job premises
Injury while working for pay or compensation, including at home	Homemaker working at homemaking activities
Injury while working as a volunteer law enforcement official etc.	Student in school
Injury while traveling on business, including to/from business contacts	Working for self for no profit (mowing yard, repairing own roof, hobby)
	Commuting to or from work

•42 - Enter the complete address where the injury occurred including zip code.

•43 - Enter a brief but specific and clear description of how the injury occurred. Explain the circumstances or cause of the injury. Specify **type of gun** or **type of vehicle** (e.g., car, bulldozer, train, etc.) when relevant to circumstances. Indicate if more than one vehicle involved; specify type of vehicle decedent was in.
•44 -Specify role of decedent (e.g. driver, passenger). Driver/operator and passenger should be designated for modes other than motor vehicles such as bicycles. Other applies to watercraft, aircraft, animal, or people attached to outside of vehicles (e.g. surfers).

Rationale: Motor vehicle accidents are a major cause of unintentional deaths; details will help determine effectiveness of current safety features and laws.

Common problems in death certification
The **elderly decedent** should have a clear and distinct etiological sequence for cause of death, if possible. Terms such as senescence, infirmity, old age, and advanced age have little value for public health or medical research. Age is recorded elsewhere on the certificate. When a number of conditions resulted in death, the physician should choose the single sequence that, in his or her opinion, best describes the process leading to death, and place any other pertinent conditions in Part II. If after careful consideration the physician cannot determine a sequence that ends in death, then the medical examiner or coroner should be consulted about conducting an investigation or providing assistance in completing the cause of death.

The **infant decedent** should have a clear and distinct etiological sequence for cause of death, if possible. "Prematurity" should not be entered without explaining the etiology of prematurity. Maternal conditions may have initiated or affected the sequence that resulted in infant death, and such maternal causes should be reported in addition to the infant causes on the infant's death certificate (e.g., Hyaline membrane disease **due to** prematurity, 28 weeks **due to** placental abruption **due to** blunt trauma to mother's abdomen).

When **SIDS** is suspected, a complete investigation should be conducted, typically by a medical examiner or coroner. If the infant is under 1 year of age, no cause of death is determined after scene investigation, clinical history is reviewed, and a complete autopsy is performed, then the death can be reported as Sudden Infant Death Syndrome.

When processes such as the following are reported, additional information about the etiology should be reported:

Abscess	Carcinomatosis	Disseminated intra vascular	Hyponatremia	Pulmonary arrest
Abdominal hemorrhage	Cardiac arrest	coagulopathy	Hypotension	Pulmonary edema
Adhesions	Cardiac dysrhythmia	Dysrhythmia	Immunosuppression	Pulmonary embolism
Adult respiratory distress syndrome	Cardiomyopathy	End-stage liver disease	Increased intra cranial pressure	Pulmonary insufficiency
Acute myocardial infarction	Cardiopulmonary arrest	End-stage renal disease	Intra cranial hemorrhage	Renal failure
Altered mental status	Cellulitis	Epidural hematoma	Malnutrition	Respiratory arrest
Anemia	Cerebral edema	Exsanguination	Metabolic encephalopathy	Seizures
Anoxia	Cerebrovascular accident	Failure to thrive	Multi-organ failure	Sepsis
Anoxic encephalopathy	Cerebellar tonsillar herniation	Fracture	Multi-system organ failure	Septic shock
Arrhythmia	Chronic bedridden state	Gangrene	Myocardial infarction	Shock
Ascites	Cirrhosis	Gastrointestinal hemorrhage	Necrotizing soft-tissue infection	Starvation
Aspiration	Coagulopathy	Heart failure	Old age	Subdural hematoma
Atrial fibrillation	Compression fracture	Hemothorax	Open (or closed) head injury	Subarachnoid hemorrhage
Bacteremia	Congestive heart failure	Hepatic failure	Paralysis	Sudden death
Bedridden	Convulsions	Hepatitis	Pancytopenia	Thrombocytopenia
Biliary obstruction	Decubiti	Hepatorenal syndrome	Perforated gallbladder	Uncal herniation
Bowel obstruction	Dehydration	Hyperglycemia	Peritonitis	Urinary tract infection
Brain injury	Dementia (when not	Hyperkalemia	Pleural effusions	Ventricular fibrillation
Brain stem herniation	otherwise specified)	Hypovolemic shock	Pneumonia	Ventricular tachycardia
Carcinogenesis	Diarrhea			Volume depletion

If the certifier is unable to determine the etiology of a process such as those shown above, the process must be qualified as being of an unknown, undetermined, probable, presumed, or unspecified etiology so it is clear that a distinct etiology was not inadvertently or carelessly omitted.

The following conditions and types of death might seem to be specific or natural but when the medical history is examined further may be found to be complications of an injury or poisoning (possibly occurring long ago). Such cases should be reported to the medical examiner/coroner.

Asphyxia	Epidural hematoma	Hip fracture	Pulmonary emboli	Subdural hematoma
Bolus	Exsanguination	Hyperthermia	Seizure disorder	Surgery
Choking	Fall	Hypothermia	Sepsis	Thermal burns/chemical burns
Drug or alcohol overdose/drug or alcohol abuse	Fracture	Open reduction of fracture	Subarachnoid hemorrhage	

Contact your State vital statistics office for questions related to writing cause-of-death statements. Additional instructional material on writing cause-of-death statements including handbooks, summary instructions, and tutorials are available online at www.thename.org or www.cdc.gov/nchswww/about/major/dvs/handbk.htm, or by request from NCHS, Room 7318, 3311 Toledo Road, Hyattsville, Maryland 20782-2003.

Query Letter 6
(Mental Disorders)

(Letterhead)

Dear Doctor _____

We are writing this letter to obtain additional information about the cause of death that you certified for
_____, who died _____.

Accurate cause-of-death information is essential, not only to the family of the decedent, but also for medical research, funding, and resource allocation in our State and at the national level.

In this particular death, we need to know whether a specific life threatening condition was associated with the reported mental disorder. In order to classify this death properly in our statistics, would you please supply the information on the attachment? We want to assure you that the information you provide us is confidential and will be handled accordingly.

If you have any question or would like to know more about various methods for certifying a cause-of-death statement, please contact _____. Instructions and an example of a properly completed death certificate are provided with the attached material.

We appreciate your attention and prompt reply.

Sincerely,

State Registrar/Vital Statistics Cooperative Program

Attachment

Mental Disorder Query

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. PART I. Enter the chain of events--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	

IMMEDIATE CAUSE (Final
disease or condition --------> a. _____
resulting in death)   Due to (or as a consequence of):   _____

Sequentially list conditions,   b. _____
if any, leading to the cause   Due to (or as a consequence of):   _____
listed on line a. Enter the
UNDERLYING CAUSE   c. _____
(disease or injury that   Due to (or as a consequence of):   _____
initiated the events resulting
in death) **LAST**   d. _____   _____

PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ☐ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH?	36. IF FEMALE:	37. MANNER OF DEATH
☐ Yes ☐ Probably ☐ No ☐ Unknown	☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	☐ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

If death did result from a mental disorder, please state the condition that resulted from the mental disorder and that caused death:

_____
_____
_____

Otherwise, please state the underlying cause of death that initiated the chain of events leading to death:

_____

_____, M.D.
(Signature of Certifying Physician)

Please provide your office phone:_____ fax:_____

(Please see other side)

Instructions on Medical Certification of Causes of Death

Example of properly completed medical certification

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the chain of events--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	
IMMEDIATE CAUSE (Final disease or condition --------> resulting in death) a. <u>Aspiration pneumonia</u> Due to (or as a consequence of):	<u>3 days</u>
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the **UNDERLYING CAUSE** b. <u>Mental retardation</u> Due to (or as a consequence of):	<u>15 years</u>
(disease or injury that initiated the events resulting c. _____ Due to (or as a consequence of):	_____
in death) **LAST** d. _____	_____

PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ■ Yes ☐ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ■ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ☐ Probably ■ No ☐ Unknown	36. IF FEMALE: ■ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	37. MANNER OF DEATH ■ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

38. DATE OF INJURY (Mo/Day/Yr) (Spell Month)	39. TIME OF INJURY	40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area)	41. INJURY AT WORK? ☐ Yes ☐ No

42. LOCATION OF INJURY: State:	City or Town:	
Street & Number:	Apartment No.:	Zip Code:

43. DESCRIBE HOW INJURY OCCURRED:	44. IF TRANSPORTATION INJURY, SPECIFY: ☐ Driver/Operator ☐ Passenger ☐ Pedestrian ☐ Other (Specify)

ITEM 32 – CAUSE OF DEATH (See example above)

Accurate cause of death information is important
•to the public health community in evaluating and improving the health of all citizens, and
•often to the family, now and in the future, and to the person settling the decedent's estate.

The cause-of-death section consists of two parts. **Part I** is for reporting a chain of events leading directly to death, with the **immediate cause** of death (the final disease, injury, or complication directly causing death) on line a and the **underlying cause** of death (the disease or injury that initiated the chain of events that led directly and inevitably to death) on the lowest used line. **Part II** is for reporting all other significant diseases, conditions, or injuries that contributed to death but which did not result in the underlying cause of death given in **Part I**. **The cause-of-death information should be YOUR best medical OPINION.** A condition can be listed as "probable" even if it has not been definitively diagnosed.

Take care to make the entry legible. Use a computer printer with high resolution, typewriter with good black ribbon and clean keys, or print legibly using permanent **black** ink in completing the CAUSE OF DEATH Section. **Do not abbreviate** conditions entered in section.

Part I (Chain of events leading directly to death)

•Only **one** cause should be entered on each line. Line (a) **MUST ALWAYS** have an entry. **DO NOT** leave blank. Additional lines may be added if necessary.
•If the condition on Line (a) resulted from an underlying condition, put the underlying condition on Line (b), and so on, until the full sequence is reported. **ALWAYS** enter the **underlying cause of death** on the lowest used line in Part I.
•For each cause indicate the best estimate of the interval between the presumed onset and the date of death. The terms "unknown" or "approximately" may be used. General terms, such as minutes, hours, or days, are acceptable, if necessary. **DO NOT** leave blank.
•The terminal event (for example, cardiac arrest or respiratory arrest) should not be used. If a mechanism of death seems most appropriate to you for line (a), then you must always list its cause(s) on the line(s) below it (for example, cardiac arrest **due to** coronary artery atherosclerosis *or* cardiac arrest **due to** blunt impact to chest).
• If an organ system failure such as congestive heart failure, hepatic failure, renal failure, or respiratory failure is listed as a cause of death, always report its etiology on the line(s) beneath it (for example, renal failure **due to** Type I diabetes mellitus).

•When indicating neoplasms as a cause of death, include the following: 1) primary site *or* that the primary site is unknown, 2) benign or malignant, 3) cell type *or* that the cell type is unknown, 4) grade of neoplasm, and 5) part or lobe of organ affected. (For example, a primary well-differentiated squamous cell carcinoma, lung, left upper lobe.)
•Always report the fatal injury (for example, stab wound of chest), the trauma (for example, transection of subclavian vein), and impairment of function (for example, air embolism).

Part II (Other significant conditions)
•Enter all diseases or conditions contributing to death that were not reported in the chain of events in Part I and that did not result in the **underlying cause of death**.
•If two or more possible sequences resulted in death, or if two conditions seem to have added together, report in Part I the one that, in your opinion, most directly caused death. Report in Part II the other conditions or diseases.

CHANGES TO CAUSE OF DEATH
Should additional medical information or autopsy findings become available that would change the cause of death originally reported, the original death certificate should be amended by the certifying physician by **immediately** reporting the revised cause of death to the State Vital Records Office.

ITEMS ON WHEN DEATH OCCURRED
Items 24-25 and 29-31 should always be completed. If the facility uses a separate pronouncer or other person to indicate that death has taken place with another person more familiar with the case completing the remainder of the medical portion of the death certificate, the pronouncer completes Items 24-28. If a certifier completes Items 24-25 as well as items 29-49, Items 26-28 may be left blank.

ITEMS 24-25, 29-30 – DATE AND TIME OF DEATH
Spell out the name of the month. If the exact date of death is unknown, enter the **approximate** date. If the date cannot be approximated, enter the date the body is found and identify as **date found**. Date pronounced and actual date may be the same. Enter the exact hour and minutes according to a 24-hour clock; estimates may be provided with "Approx." placed before the time.

ITEMS 33-34 - AUTOPSY
•33 - Enter "Yes" if either a partial or full autopsy was performed. Otherwise enter "No."
•34 - Enter "Yes" if autopsy findings were available to complete the cause of death; otherwise enter "No". Leave item blank if no autopsy was performed.

ITEM 35 - DID TOBACCO USE CONTRIBUTE TO DEATH?
Check "yes" if, in your opinion, the use of tobacco contributed to death. Tobacco use may contribute to deaths due to a wide variety of diseases; for example, tobacco use contributes to many deaths due to emphysema or lung cancer and some heart disease and cancers of the head and neck. Check "no" if, in your clinical judgment, tobacco use did not contribute to this particular death.

ITEM 36 - IF FEMALE, WAS DECEDENT PREGNANT AT TIME OF DEATH OR WITHIN PAST YEAR?
This information is important in determining pregnancy-related mortality.

ITEM 37 - MANNER OF DEATH
•Always check Manner of Death, which is important: 1) in determining accurate causes of death; 2) in processing insurance claims; and 3) in statistical studies of injuries and death.
•Indicate "Pending investigation" if the manner of death cannot be determined whether due to an accident, suicide, or homicide within the statutory time limit for filing the death certificate. This should be changed later to one of the other terms.
•Indicate "Could not be Determined" **ONLY** when it is impossible to determine the manner of death.

ITEMS 38-44 - ACCIDENT OR INJURY – to be filled out in all cases of deaths due to injury or poisoning.
•38 - Enter the exact month, day, and year of injury. Spell out the name of the month. **DO NOT** use a number for the month. (Remember, the date of injury may differ from the date of death.) Estimates may be provided with "Approx." placed before the date.
•39 **-** Enter the exact hour and minutes of injury or use your best estimate. Use a 24-hour clock.
•40 - Enter the general place (such as restaurant, vacant lot, or home) where the injury occurred. **DO NOT** enter firm or organization names. (For example, enter "factory", **not** "Standard Manufacturing, Inc.")
•41 - Complete if anything other than natural disease is mentioned in Part I or Part II of the medical certification, including homicides, suicides, and accidents. This includes all motor vehicle deaths. The item **must** be completed for decedents ages 14 years or over and may be completed for those less than 14 years of age if warranted. Enter "Yes" if the injury occurred at work. Otherwise enter "No". An injury may occur at work regardless of whether the injury occurred in the course of the decedent's "usual" occupation. Examples of injury at work and injury not at work follow:

Injury at work	**Injury not at work**
Injury while working or in vocational training on job premises	Injury while engaged in personal recreational activity on job premises
Injury while on break or at lunch or in parking lot on job premises	Injury while a visitor (not on official work business) to job premises
Injury while working for pay or compensation, including at home	Homemaker working at homemaking activities
Injury while working as a volunteer law enforcement official etc.	Student in school
Injury while traveling on business, including to/from business contacts	Working for self for no profit (mowing yard, repairing own roof, hobby)
	Commuting to or from work

•42 - Enter the complete address where the injury occurred including zip code.

•43 - Enter a brief but specific and clear description of how the injury occurred. Explain the circumstances or cause of the injury. Specify **type of gun** or **type of vehicle** (e.g., car, bulldozer, train, etc.) when relevant to circumstances. Indicate if more than one vehicle involved; specify type of vehicle decedent was in.

•44 -Specify role of decedent (e.g. driver, passenger). Driver/operator and passenger should be designated for modes other than motor vehicles such as bicycles. Other applies to watercraft, aircraft, animal, or people attached to outside of vehicles (e.g. surfers).

Rationale: Motor vehicle accidents are a major cause of unintentional deaths; details will help determine effectiveness of current safety features and laws.

Common problems in death certification

The **elderly decedent** should have a clear and distinct etiological sequence for cause of death, if possible. Terms such as senescence, infirmity, old age, and advanced age have little value for public health or medical research. Age is recorded elsewhere on the certificate. When a number of conditions resulted in death, the physician should choose the single sequence that, in his or her opinion, best describes the process leading to death, and place any other pertinent conditions in Part II. If after careful consideration the physician cannot determine a sequence that ends in death, then the medical examiner or coroner should be consulted about conducting an investigation or providing assistance in completing the cause of death.

The **infant decedent** should have a clear and distinct etiological sequence for cause of death, if possible. "Prematurity" should not be entered without explaining the etiology of prematurity. Maternal conditions may have initiated or affected the sequence that resulted in infant death, and such maternal causes should be reported in addition to the infant causes on the infant's death certificate (e.g., Hyaline membrane disease **due to** prematurity, 28 weeks **due to** placental abruption **due to** blunt trauma to mother's abdomen).

When **SIDS** is suspected, a complete investigation should be conducted, typically by a medical examiner or coroner. If the infant is under 1 year of age, no cause of death is determined after scene investigation, clinical history is reviewed, and a complete autopsy is performed, then the death can be reported as Sudden Infant Death Syndrome.

When processes such as the following are reported, additional information about the etiology should be reported:

Abscess	Carcinomatosis	Disseminated intra vascular	Hyponatremia	Pulmonary arrest
Abdominal hemorrhage	Cardiac arrest	coagulopathy	Hypotension	Pulmonary edema
Adhesions	Cardiac dysrhythmia	Dysrhythmia	Immunosuppression	Pulmonary embolism
Adult respiratory distress syndrome	Cardiomyopathy	End-stage liver disease	Increased intra cranial pressure	Pulmonary insufficiency
Acute myocardial infarction	Cardiopulmonary arrest	End-stage renal disease	Intra cranial hemorrhage	Renal failure
Altered mental status	Cellulitis	Epidural hematoma	Malnutrition	Respiratory arrest
Anemia	Cerebral edema	Exsanguination	Metabolic encephalopathy	Seizures
Anoxia	Cerebrovascular accident	Failure to thrive	Multi-organ failure	Sepsis
Anoxic encephalopathy	Cerebellar tonsillar herniation	Fracture	Multi-system organ failure	Septic shock
Arrhythmia	Chronic bedridden state	Gangrene	Myocardial infarction	Shock
Ascites	Cirrhosis	Gastrointestinal hemorrhage	Necrotizing soft-tissue infection	Starvation
Aspiration	Coagulopathy	Heart failure	Old age	Subdural hematoma
Atrial fibrillation	Compression fracture	Hemothorax	Open (or closed) head injury	Subarachnoid hemorrhage
Bacteremia	Congestive heart failure	Hepatic failure	Paralysis	Sudden death
Bedridden	Convulsions	Hepatitis	Pancytopenia	Thrombocytopenia
Biliary obstruction	Decubiti	Hepatorenal syndrome	Perforated gallbladder	Uncal herniation
Bowel obstruction	Dehydration	Hyperglycemia	Peritonitis	Urinary tract infection
Brain injury	Dementia (when not	Hyperkalemia	Pleural effusions	Ventricular fibrillation
Brain stem herniation	otherwise specified)	Hypovolemic shock	Pneumonia	Ventricular tachycardia
Carcinogenesis	Diarrhea			Volume depletion

If the certifier is unable to determine the etiology of a process such as those shown above, the process must be qualified as being of an unknown, undetermined, probable, presumed, or unspecified etiology so it is clear that a distinct etiology was not inadvertently or carelessly omitted.

The following conditions and types of death might seem to be specific or natural but when the medical history is examined further may be found to be complications of an injury or poisoning (possibly occurring long ago). Such cases should be reported to the medical examiner/coroner.

Asphyxia	Epidural hematoma	Hip fracture	Pulmonary emboli	Subdural hematoma
Bolus	Exsanguination	Hyperthermia	Seizure disorder	Surgery
Choking	Fall	Hypothermia	Sepsis	Thermal burns/chemical burns
Drug or alcohol overdose/drug or	Fracture	Open reduction of fracture	Subarachnoid hemorrhage	
alcohol abuse				

Contact your State vital statistics office for questions related to writing cause-of-death statements. Additional instructional material on writing cause-of-death statements including handbooks, summary instructions, and tutorials are available online at www.thename.org or www.cdc.gov/nchswww/about/major/dvs/handbk.htm, or by request from NCHS, Room 7318, 3311 Toledo Road, Hyattsville, Maryland 20782-2003.

Query Letter 7
(Drugs and Other Agents)

(Letterhead)

Dear Doctor _____

We are writing this letter to obtain additional information about the cause of death that you certified for

_____, who died _____.

Accurate cause-of-death information is essential, not only to the family of the decedent, but also for medical

research, funding, and resource allocation in our State and at the national level.

In this particular death, we need additional information about the drugs associated with the death. In order to

classify this death properly in our statistics, would you please supply the information on the attachment? We

want to assure you that the information you provide us is confidential and will be handled accordingly.

If you have any question or would like to know more about various methods for certifying a cause-of-death

statement, please contact _____. Instructions and an example of a

properly completed death certificate are provided with the attached material.

We appreciate your attention and prompt reply.

Sincerely,

State Registrar/Vital Statistics Cooperative Program

Attachment

Drugs and Other Agents Query

CAUSE OF DEATH (See instructions and examples)		Approximate interval: Onset to death
32. **PART I.** Enter the chain of events--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.		
IMMEDIATE CAUSE (Final disease or condition --------> resulting in death)	a. _____ Due to (or as a consequence of):	_____
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the	b. _____ Due to (or as a consequence of):	_____
UNDERLYING CAUSE (disease or injury that initiated the events resulting	c. _____ Due to (or as a consequence of):	_____
in death) **LAST**	d. _____	_____

PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ☐ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ☐ Probably ☐ No ☐ Unknown	36. IF FEMALE: ☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	37. MANNER OF DEATH ☐ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

1. Please state the type or name of drug(s) that brought about the medical complications which led to death.

_____

2. Please state the type or name of other agent(s) or exposure that brought about the medical complications which led to death. _____

3. Other _____

_____, M.D.
(Signature of Certifying Physician)

Please provide your office phone:_____ fax:_____

(Please see other side)

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Instructions on Medical Certification of Causes of Death

Example of properly completed medical certification

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	

		Approximate interval: Onset to death
IMMEDIATE CAUSE (Final disease or condition ---------> resulting in death)	a. <u>Staphylococcus endocarditis</u> Due to (or as a consequence of):	2 weeks
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the **UNDERLYING CAUSE** (disease or injury that initiated the events resulting in death) **LAST**	b. <u>Chronic intravenous heroin use</u> Due to (or as a consequence of):	7 years
	c. <u>Opiate addiction</u> Due to (or as a consequence of):	7years
	d.	_____

PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ☐ Yes ■ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ■ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ☐ Probably ■ No ☐ Unknown	36. IF FEMALE: ■ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	37. MANNER OF DEATH ■ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

ITEM 32 – CAUSE OF DEATH (See example above)
Accurate cause of death information is important
•to the public health community in evaluating and improving the health of all citizens, and
•often to the family, now and in the future, and to the person settling the decedent's estate.

The cause-of-death section consists of two parts. **Part I** is for reporting a chain of events leading directly to death, with the **immediate cause** of death (the final disease, injury, or complication directly causing death) on line a and the **underlying cause** of death (the disease or injury that initiated the chain of events that led directly and inevitably to death) on the lowest used line. **Part II** is for reporting all other significant diseases, conditions, or injuries that contributed to death but which did not result in the underlying cause of death given in **Part I**. **The cause-of-death information should be YOUR best medical OPINION.** A condition can be listed as "probable" even if it has not been definitively diagnosed.

Take care to make the entry legible. Use a computer printer with high resolution, typewriter with good black ribbon and clean keys, or print legibly using permanent **black** ink in completing the CAUSE OF DEATH Section. **Do not abbreviate** conditions entered in section.

Part I (Chain of events leading directly to death)
•Only **one** cause should be entered on each line. <u>Line (a)</u> **MUST ALWAYS** have an entry. **DO NOT** leave blank. Additional lines may be added if necessary.
•If the condition on <u>Line (a)</u> resulted from an underlying condition, put the underlying condition on <u>Line (b)</u>, and so on, until the full sequence is reported. **ALWAYS** enter the **underlying cause of death** on the <u>lowest used line</u> in Part I.
•For each cause indicate the best estimate of the interval between the presumed onset and the date of death. The terms "unknown" or "approximately" may be used. General terms, such as minutes, hours, or days, are acceptable, if necessary. **DO NOT** leave blank.
•The terminal event (for example, cardiac arrest or respiratory arrest) should not be used. If a mechanism of death seems most appropriate to you for line (a), then you must always list its cause(s) on the line(s) below it (for example, cardiac arrest **due to** coronary artery atherosclerosis *or* cardiac arrest **due to** blunt impact to chest).
• If an organ system failure such as congestive heart failure, hepatic failure, renal failure, or respiratory failure is listed as a cause of death, always report its etiology on the line(s) beneath it (for example, renal failure **due to** Type I diabetes mellitus).
•When indicating neoplasms as a cause of death, include the following: 1) primary site *or* that the primary site is unknown, 2) benign or malignant, 3) cell type *or* that the cell type is unknown, 4) grade of neoplasm, and 5) part or lobe of organ affected. (For example, a primary well-differentiated squamous cell carcinoma, lung, left upper lobe.)
•Always report the fatal injury (for example, stab wound of chest), the trauma (for example, transection of subclavian vein), and impairment of function (for example, air embolism).

Part II (Other significant conditions)
•Enter all diseases or conditions contributing to death that were not reported in the chain of events in Part I and that did not result in the **underlying cause of death**.
•If two or more possible sequences resulted in death, or if two conditions seem to have added together, report in Part I the one that, in your opinion, most directly caused death. Report in Part II the other conditions or diseases.

CHANGES TO CAUSE OF DEATH

Should additional medical information or autopsy findings become available that would change the cause of death originally reported, the original death certificate should be amended by the certifying physician by **immediately** reporting the revised cause of death to the State Vital Records Office.

ITEMS ON WHEN DEATH OCCURRED

Items 24-25 and 29-31 should always be completed. If the facility uses a separate pronouncer or other person to indicate that death has taken place with another person more familiar with the case completing the remainder of the medical portion of the death certificate, the pronouncer completes Items 24-28. If a certifier completes Items 24-25 as well as items 29-49, Items 26-28 may be left blank.

ITEMS 24-25, 29-30 – DATE AND TIME OF DEATH

Spell out the name of the month. If the exact date of death is unknown, enter the **approximate** date. If the date cannot be approximated, enter the date the body is found and identify as **date found**. Date pronounced and actual date may be the same. Enter the exact hour and minutes according to a 24-hour clock; estimates may be provided with "Approx." placed before the time.

ITEMS 33-34 - AUTOPSY

•33 - Enter "Yes" if either a partial or full autopsy was performed. Otherwise enter "No."
•34 - Enter "Yes" if autopsy findings were available to complete the cause of death; otherwise enter "No". Leave item blank if no autopsy was performed.

ITEM 35 - DID TOBACCO USE CONTRIBUTE TO DEATH?

Check "yes" if, in your opinion, the use of tobacco contributed to death. Tobacco use may contribute to deaths due to a wide variety of diseases; for example, tobacco use contributes to many deaths due to emphysema or lung cancer and some heart disease and cancers of the head and neck. Check "no" if, in your clinical judgment, tobacco use did not contribute to this particular death.

ITEM 36 - IF FEMALE, WAS DECEDENT PREGNANT AT TIME OF DEATH OR WITHIN PAST YEAR?

This information is important in determining pregnancy-related mortality.

ITEM 37 - MANNER OF DEATH

•Always check Manner of Death, which is important: 1) in determining accurate causes of death; 2) in processing insurance claims; and 3) in statistical studies of injuries and death.
•Indicate "Pending investigation" if the manner of death cannot be determined whether due to an accident, suicide, or homicide within the statutory time limit for filing the death certificate. This should be changed later to one of the other terms.
•Indicate "Could not be Determined" **ONLY** when it is impossible to determine the manner of death.

ITEMS 38-44 - ACCIDENT OR INJURY – to be filled out in all cases of deaths due to injury or poisoning.

•38 - Enter the exact month, day, and year of injury. Spell out the name of the month. **DO NOT** use a number for the month. (Remember, the date of injury may differ from the date of death.) Estimates may be provided with "Approx." placed before the date.
•39 **-** Enter the exact hour and minutes of injury or use your best estimate. Use a 24-hour clock.
•40 - Enter the general place (such as restaurant, vacant lot, or home) where the injury occurred. **DO NOT** enter firm or organization names. (For example, enter "factory", **not** "Standard Manufacturing, Inc.")
•41 - Complete if anything other than natural disease is mentioned in Part I or Part II of the medical certification, including homicides, suicides, and accidents. This includes all motor vehicle deaths. The item **must** be completed for decedents ages 14 years or over and may be completed for those less than 14 years of age if warranted. Enter "Yes" if the injury occurred at work. Otherwise enter "No". An injury may occur at work regardless of whether the injury occurred in the course of the decedent's "usual" occupation. Examples of injury at work and injury not at work follow:

Injury at work	**Injury not at work**
Injury while working or in vocational training on job premises	Injury while engaged in personal recreational activity on job premises
Injury while on break or at lunch or in parking lot on job premises	Injury while a visitor (not on official work business) to job premises
Injury while working for pay or compensation, including at home	Homemaker working at homemaking activities
Injury while working as a volunteer law enforcement official etc.	Student in school
Injury while traveling on business, including to/from business contacts	Working for self for no profit (mowing yard, repairing own roof, hobby)
	Commuting to or from work

•42 - Enter the complete address where the injury occurred including zip code.
•43 - Enter a brief but specific and clear description of how the injury occurred. Explain the circumstances or cause of the injury. Specify **type of gun** or **type of vehicle** (e.g., car, bulldozer, train, etc.) when relevant to circumstances. Indicate if more than one vehicle involved; specify type of vehicle decedent was in.
•44 -Specify role of decedent (e.g. driver, passenger). Driver/operator and passenger should be designated for modes other than motor vehicles such as bicycles. Other applies to watercraft, aircraft, animal, or people attached to outside of vehicles (e.g. surfers).

Rationale: Motor vehicle accidents are a major cause of unintentional deaths; details will help determine effectiveness of current safety features and laws.

Common problems in death certification

The **elderly decedent** should have a clear and distinct etiological sequence for cause of death, if possible. Terms such as senescence, infirmity, old age, and advanced age have little value for public health or medical research. Age is recorded elsewhere on the certificate. When a number of conditions resulted in death, the physician should choose the single sequence that, in his or her opinion, best describes the process leading to death, and place any other pertinent conditions in Part II. If after careful consideration the physician cannot determine a sequence that ends in death, then the medical examiner or coroner should be consulted about conducting an investigation or providing assistance in completing the cause of death.

The **infant decedent** should have a clear and distinct etiological sequence for cause of death, if possible. "Prematurity" should not be entered without explaining the etiology of prematurity. Maternal conditions may have initiated or affected the sequence that resulted in infant death, and such maternal causes should be reported in addition to the infant causes on the infant's death certificate (e.g., Hyaline membrane disease **due to** prematurity, 28 weeks **due to** placental abruption **due to** blunt trauma to mother's abdomen).

When **SIDS** is suspected, a complete investigation should be conducted, typically by a medical examiner or coroner. If the infant is under 1 year of age, no cause of death is determined after scene investigation, clinical history is reviewed, and a complete autopsy is performed, then the death can be reported as Sudden Infant Death Syndrome.

When processes such as the following are reported, additional information about the etiology should be reported:

Abscess	Carcinomatosis	Disseminated intra vascular	Hyponatremia	Pulmonary arrest
Abdominal hemorrhage	Cardiac arrest	coagulopathy	Hypotension	Pulmonary edema
Adhesions	Cardiac dysrhythmia	Dysrhythmia	Immunosuppression	Pulmonary embolism
Adult respiratory distress syndrome	Cardiomyopathy	End-stage liver disease	Increased intra cranial pressure	Pulmonary insufficiency
Acute myocardial infarction	Cardiopulmonary arrest	End-stage renal disease	Intra cranial hemorrhage	Renal failure
Altered mental status	Cellulitis	Epidural hematoma	Malnutrition	Respiratory arrest
Anemia	Cerebral edema	Exsanguination	Metabolic encephalopathy	Seizures
Anoxia	Cerebrovascular accident	Failure to thrive	Multi-organ failure	Sepsis
Anoxic encephalopathy	Cerebellar tonsillar herniation	Fracture	Multi-system organ failure	Septic shock
Arrhythmia	Chronic bedridden state	Gangrene	Myocardial infarction	Shock
Ascites	Cirrhosis	Gastrointestinal hemorrhage	Necrotizing soft-tissue infection	Starvation
Aspiration	Coagulopathy	Heart failure	Old age	Subdural hematoma
Atrial fibrillation	Compression fracture	Hemothorax	Open (or closed) head injury	Subarachnoid hemorrhage
Bacteremia	Congestive heart failure	Hepatic failure	Paralysis	Sudden death
Bedridden	Convulsions	Hepatitis	Pancytopenia	Thrombocytopenia
Biliary obstruction	Decubiti	Hepatorenal syndrome	Perforated gallbladder	Uncal herniation
Bowel obstruction	Dehydration	Hyperglycemia	Peritonitis	Urinary tract infection
Brain injury	Dementia (when not	Hyperkalemia	Pleural effusions	Ventricular fibrillation
Brain stem herniation	otherwise specified)	Hypovolemic shock	Pneumonia	Ventricular tachycardia
Carcinogenesis	Diarrhea			Volume depletion

If the certifier is unable to determine the etiology of a process such as those shown above, the process must be qualified as being of an unknown, undetermined, probable, presumed, or unspecified etiology so it is clear that a distinct etiology was not inadvertently or carelessly omitted.

The following conditions and types of death might seem to be specific or natural but when the medical history is examined further may be found to be complications of an injury or poisoning (possibly occurring long ago). Such cases should be reported to the medical examiner/coroner.

Asphyxia	Epidural hematoma	Hip fracture	Pulmonary emboli	Subdural hematoma
Bolus	Exsanguination	Hyperthermia	Seizure disorder	Surgery
Choking	Fall	Hypothermia	Sepsis	Thermal burns/chemical burns
Drug or alcohol overdose/drug or alcohol abuse	Fracture	Open reduction of fracture	Subarachnoid hemorrhage	

Contact your State vital statistics office for questions related to writing cause-of-death statements. Additional instructional material on writing cause-of-death statements including handbooks, summary instructions, and tutorials are available online at www.thename.org or www.cdc.gov/nchswww/about/major/dvs/handbk.htm, or by request from NCHS, Room 7318, 3311 Toledo Road, Hyattsville, Maryland 20782-2003.

Query Letter 8
(Ill-defined, Trivial, Etc.)

(Letterhead)

Dear Doctor _____

We are writing this letter to obtain additional information about the cause of death that you certified for

_____, who died _____.

Accurate cause-of-death information is essential, not only to the family of the decedent, but also for medical

research, funding, and resource allocation in our State and at the national level.

In this particular death, we need to know if a more serious condition gave rise to the reported cause of death. In

order to classify this death properly in our statistics, would you please supply the information on the

attachment? We want to assure you that the information you provide us is confidential and will be handled

accordingly.

If you have any question or would like to know more about various methods for certifying a cause-of-death

statement, please contact _____. Instructions and an example of a properly

completed death certificate are provided with the attached material.

We appreciate your attention and prompt reply.

Sincerely,

State Registrar/Vital Statistics Cooperative Program

Attachment

Ill-defined or Trivial Query

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	

IMMEDIATE CAUSE (Final
disease or condition --------->   a. _____   _____
resulting in death)   Due to (or as a consequence of):

Sequentially list conditions,   b. _____   _____
if any, leading to the cause   Due to (or as a consequence of):
listed on line a. Enter the

UNDERLYING CAUSE   c. _____   _____
(disease or injury that   Due to (or as a consequence of):
initiated the events resulting

in death) **LAST**   d. _____   _____

PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ☐ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH?	36. IF FEMALE:	37. MANNER OF DEATH
☐ Yes ☐ Probably ☐ No ☐ Unknown	☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	☐ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

1. In your opinion, what was the underlying cause of this condition?

_____

OR

2. Did this condition give rise to another more serious condition which led to death?

If so, please state _____

_____

3. Other _____

_____, M.D.

(Signature of Certifying Physician)

Please provide your office phone:_____ fax:_____

(Please see other side)

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Instructions on Medical Certification of Causes of Death

Example of properly completed medical certification

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	

IMMEDIATE CAUSE (Final disease or condition --------> resulting in death)

a. <u>Convulsion_____</u>   3 minutes
    Due to (or as a consequence of):

Sequentially list conditions, if any, leading to the cause listed on line a. Enter the

b. <u>Fever   _____ ___</u>   1 day_
    Due to (or as a consequence of):

UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) **LAST**

c. <u>Influenza_____</u>   6 days
    Due to (or as a consequence of):

d. _____   _____

PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I

Arteriosclerosis, gout

33. WAS AN AUTOPSY PERFORMED? ☐ Yes ■ No

34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ■ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ■ Probably ☐ No ☐ Unknown	36. IF FEMALE: ☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	37. MANNER OF DEATH ■ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

ITEM 32 – CAUSE OF DEATH (See example above)

Accurate cause of death information is important
•to the public health community in evaluating and improving the health of all citizens, and
•often to the family, now and in the future, and to the person settling the decedent's estate.

The cause-of-death section consists of two parts. **Part I** is for reporting a chain of events leading directly to death, with the **immediate cause** of death (the final disease, injury, or complication directly causing death) on line a and the **underlying cause** of death (the disease or injury that initiated the chain of events that led directly and inevitably to death) on the lowest used line. **Part II** is for reporting all other significant diseases, conditions, or injuries that contributed to death but which did not result in the underlying cause of death given in **Part I**. **The cause-of-death information should be YOUR best medical OPINION.** A condition can be listed as "probable" even if it has not been definitively diagnosed.

Take care to make the entry legible. Use a computer printer with high resolution, typewriter with good black ribbon and clean keys, or print legibly using permanent **black** ink in completing the CAUSE OF DEATH Section. **Do not abbreviate** conditions entered in section.

Part I (Chain of events leading directly to death)

•Only **one** cause should be entered on each line. <u>Line (a)</u> **MUST ALWAYS** have an entry. **DO NOT** leave blank. Additional lines may be added if necessary.
•If the condition on <u>Line (a)</u> resulted from an underlying condition, put the underlying condition on <u>Line (b)</u>, and so on, until the full sequence is reported. **ALWAYS** enter the **underlying cause of death** on the <u>lowest used line</u> in Part I.
•For each cause indicate the best estimate of the interval between the presumed onset and the date of death. The terms "unknown" or "approximately" may be used. General terms, such as minutes, hours, or days, are acceptable, if necessary. **DO NOT** leave blank.
•The terminal event (for example, cardiac arrest or respiratory arrest) should not be used. If a mechanism of death seems most appropriate to you for line (a), then you must always list its cause(s) on the line(s) below it (for example, cardiac arrest **due to** coronary artery atherosclerosis *or* cardiac arrest **due to** blunt impact to chest).
• If an organ system failure such as congestive heart failure, hepatic failure, renal failure, or respiratory failure is listed as a cause of death, always report its etiology on the line(s) beneath it (for example, renal failure **due to** Type I diabetes mellitus).
•When indicating neoplasms as a cause of death, include the following: 1) primary site *or* that the primary site is unknown, 2) benign or malignant, 3) cell type *or* that the cell type is unknown, 4) grade of neoplasm, and 5) part or lobe of organ affected. (For example, a primary well-differentiated squamous cell carcinoma, lung, left upper lobe.)
•Always report the fatal injury (for example, stab wound of chest), the trauma (for example, transection of subclavian vein), and impairment of function (for example, air embolism).

Part II (Other significant conditions)

•Enter all diseases or conditions contributing to death that were not reported in the chain of events in Part I and that did not result in the **underlying cause of death**.
•If two or more possible sequences resulted in death, or if two conditions seem to have added together, report in Part I the one that, in your opinion, most directly caused death. Report in Part II the other conditions or diseases.

CHANGES TO CAUSE OF DEATH

Should additional medical information or autopsy findings become available that would change the cause of death originally reported, the original death certificate should be amended by the certifying physician by **immediately** reporting the revised cause of death to the State Vital Records Office.

ITEMS ON WHEN DEATH OCCURRED
Items 24-25 and 29-31 should always be completed. If the facility uses a separate pronouncer or other person to indicate that death has taken place with another person more familiar with the case completing the remainder of the medical portion of the death certificate, the pronouncer completes Items 24-28. If a certifier completes Items 24-25 as well as items 29-49, Items 26-28 may be left blank.

ITEMS 24-25, 29-30 – DATE AND TIME OF DEATH
Spell out the name of the month. If the exact date of death is unknown, enter the **approximate** date. If the date cannot be approximated, enter the date the body is found and identify as **date found**. Date pronounced and actual date may be the same. Enter the exact hour and minutes according to a 24-hour clock; estimates may be provided with "Approx." placed before the time.

ITEMS 33-34 - AUTOPSY
•33 - Enter "Yes" if either a partial or full autopsy was performed. Otherwise enter "No."
•34 - Enter "Yes" if autopsy findings were available to complete the cause of death; otherwise enter "No". Leave item blank if no autopsy was performed.

ITEM 35 - DID TOBACCO USE CONTRIBUTE TO DEATH?
Check "yes" if, in your opinion, the use of tobacco contributed to death. Tobacco use may contribute to deaths due to a wide variety of diseases; for example, tobacco use contributes to many deaths due to emphysema or lung cancer and some heart disease and cancers of the head and neck. Check "no" if, in your clinical judgment, tobacco use did not contribute to this particular death.

ITEM 36 - IF FEMALE, WAS DECEDENT PREGNANT AT TIME OF DEATH OR WITHIN PAST YEAR?
This information is important in determining pregnancy-related mortality.

ITEM 37 - MANNER OF DEATH
•Always check Manner of Death, which is important: 1) in determining accurate causes of death; 2) in processing insurance claims; and 3) in statistical studies of injuries and death.
•Indicate "Pending investigation" if the manner of death cannot be determined whether due to an accident, suicide, or homicide within the statutory time limit for filing the death certificate. This should be changed later to one of the other terms.
•Indicate "Could not be Determined" **ONLY** when it is impossible to determine the manner of death.

ITEMS 38-44 - ACCIDENT OR INJURY – to be filled out in all cases of deaths due to injury or poisoning.
•38 - Enter the exact month, day, and year of injury. Spell out the name of the month. **DO NOT** use a number for the month. (Remember, the date of injury may differ from the date of death.) Estimates may be provided with "Approx." placed before the date.
•39 **-** Enter the exact hour and minutes of injury or use your best estimate. Use a 24-hour clock.
•40 - Enter the general place (such as restaurant, vacant lot, or home) where the injury occurred. **DO NOT** enter firm or organization names. (For example, enter "factory", **not** "Standard Manufacturing, Inc.")
•41 - Complete if anything other than natural disease is mentioned in Part I or Part II of the medical certification, including homicides, suicides, and accidents. This includes all motor vehicle deaths. The item **must** be completed for decedents ages 14 years or over and may be completed for those less than 14 years of age if warranted. Enter "Yes" if the injury occurred at work. Otherwise enter "No". An injury may occur at work regardless of whether the injury occurred in the course of the decedent's "usual" occupation. Examples of injury at work and injury not at work follow:

Injury at work	Injury not at work
Injury while working or in vocational training on job premises	Injury while engaged in personal recreational activity on job premises
Injury while on break or at lunch or in parking lot on job premises	Injury while a visitor (not on official work business) to job premises
Injury while working for pay or compensation, including at home	Homemaker working at homemaking activities
Injury while working as a volunteer law enforcement official etc.	Student in school
Injury while traveling on business, including to/from business contacts	Working for self for no profit (mowing yard, repairing own roof, hobby)
	Commuting to or from work

•42 - Enter the complete address where the injury occurred including zip code.
•43 - Enter a brief but specific and clear description of how the injury occurred. Explain the circumstances or cause of the injury. Specify **type of gun** or **type of vehicle** (e.g., car, bulldozer, train, etc.) when relevant to circumstances. Indicate if more than one vehicle involved; specify type of vehicle decedent was in.
•44 -Specify role of decedent (e.g. driver, passenger). Driver/operator and passenger should be designated for modes other than motor vehicles such as bicycles. Other applies to watercraft, aircraft, animal, or people attached to outside of vehicles (e.g. surfers).

Rationale: Motor vehicle accidents are a major cause of unintentional deaths; details will help determine effectiveness of current safety features and laws.

Common problems in death certification
The **elderly decedent** should have a clear and distinct etiological sequence for cause of death, if possible. Terms such as senescence, infirmity, old age, and advanced age have little value for public health or medical research. Age is recorded elsewhere on the certificate. When a number of conditions resulted in death, the physician should choose the single sequence that, in his or her opinion, best describes the process leading to death, and place any other pertinent conditions in Part II. If after careful consideration the physician cannot determine a sequence that ends in death, then the medical examiner or coroner should be consulted about conducting an investigation or providing assistance in completing the cause of death.

The **infant decedent** should have a clear and distinct etiological sequence for cause of death, if possible. "Prematurity" should not be entered without explaining the etiology of prematurity. Maternal conditions may have initiated or affected the sequence that resulted in infant death, and such maternal causes should be

reported in addition to the infant causes on the infant's death certificate (e.g., Hyaline membrane disease **due to** prematurity, 28 weeks **due to** placental abruption **due to** blunt trauma to mother's abdomen).

When **SIDS** is suspected, a complete investigation should be conducted, typically by a medical examiner or coroner. If the infant is under 1 year of age, no cause of death is determined after scene investigation, clinical history is reviewed, and a complete autopsy is performed, then the death can be reported as Sudden Infant Death Syndrome.

When processes such as the following are reported, additional information about the etiology should be reported:

Abscess	Carcinomatosis	Disseminated intra vascular	Hyponatremia	Pulmonary arrest
Abdominal hemorrhage	Cardiac arrest	coagulopathy	Hypotension	Pulmonary edema
Adhesions	Cardiac dysrhythmia	Dysrhythmia	Immunosuppression	Pulmonary embolism
Adult respiratory distress syndrome	Cardiomyopathy	End-stage liver disease	Increased intra cranial pressure	Pulmonary insufficiency
Acute myocardial infarction	Cardiopulmonary arrest	End-stage renal disease	Intra cranial hemorrhage	Renal failure
Altered mental status	Cellulitis	Epidural hematoma	Malnutrition	Respiratory arrest
Anemia	Cerebral edema	Exsanguination	Metabolic encephalopathy	Seizures
Anoxia	Cerebrovascular accident	Failure to thrive	Multi-organ failure	Sepsis
Anoxic encephalopathy	Cerebellar tonsillar herniation	Fracture	Multi-system organ failure	Septic shock
Arrhythmia	Chronic bedridden state	Gangrene	Myocardial infarction	Shock
Ascites	Cirrhosis	Gastrointestinal hemorrhage	Necrotizing soft-tissue infection	Starvation
Aspiration	Coagulopathy	Heart failure	Old age	Subdural hematoma
Atrial fibrillation	Compression fracture	Hemothorax	Open (or closed) head injury	Subarachnoid hemorrhage
Bacteremia	Congestive heart failure	Hepatic failure	Paralysis	Sudden death
Bedridden	Convulsions	Hepatitis	Pancytopenia	Thrombocytopenia
Biliary obstruction	Decubiti	Hepatorenal syndrome	Perforated gallbladder	Uncal herniation
Bowel obstruction	Dehydration	Hyperglycemia	Peritonitis	Urinary tract infection
Brain injury	Dementia (when not	Hyperkalemia	Pleural effusions	Ventricular fibrillation
Brain stem herniation	otherwise specified)	Hypovolemic shock	Pneumonia	Ventricular tachycardia
Carcinogenesis	Diarrhea			Volume depletion

If the certifier is unable to determine the etiology of a process such as those shown above, the process must be qualified as being of an unknown, undetermined, probable, presumed, or unspecified etiology so it is clear that a distinct etiology was not inadvertently or carelessly omitted.

The following conditions and types of death might seem to be specific or natural but when the medical history is examined further may be found to be complications of an injury or poisoning (possibly occurring long ago). Such cases should be reported to the medical examiner/coroner.

Asphyxia	Epidural hematoma	Hip fracture	Pulmonary emboli	Subdural hematoma
Bolus	Exsanguination	Hyperthermia	Seizure disorder	Surgery
Choking	Fall	Hypothermia	Sepsis	Thermal burns/chemical burns
Drug or alcohol overdose/drug or alcohol abuse	Fracture	Open reduction of fracture	Subarachnoid hemorrhage	

Contact your State vital statistics office for questions related to writing cause-of-death statements. Additional instructional material on writing cause-of-death statements including handbooks, summary instructions, and tutorials are available online at www.thename.org or www.cdc.gov/nchswww/about/major/dvs/handbk.htm, or by request from NCHS, Room 7318, 3311 Toledo Road, Hyattsville, Maryland 20782-2003.

Query Letter 9
(Pregnancy Related)

(Letterhead)

Dear Doctor _____

We are writing this letter to obtain additional information about the cause of death that you certified for

_____, who died _____.

Accurate cause-of-death information is essential, not only to the family of the decedent, but also for medical research, funding, and resource allocation in our State and at the national level.

In the case of this particular death, we need additional information to properly classify the maternal death. In order to classify this death properly in our statistics, would you please supply the information on the attachment? We want to assure you that the information you provide us is confidential and will be handled accordingly.

If you have any question or would like to know more about various methods for certifying a cause-of-death statement, please contact _____. Instructions and an example of a properly completed death certificate are provided with the attached material.

We appreciate your attention and prompt reply.

Sincerely,

State Registrar/Vital Statistics Cooperative Program

Attachment

Pregnancy-related Query

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	

IMMEDIATE CAUSE (Final disease or condition ---------> resulting in death)

a. _____ _____
Due to (or as a consequence of):

Sequentially list conditions, if any, leading to the cause listed on line a. Enter the

b. _____ _____
Due to (or as a consequence of):

UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) **LAST**

c. _____ _____
Due to (or as a consequence of):

d. _____

PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ☐ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ☐ Probably ☐ No ☐ Unknown	36. IF FEMALE: ☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	37. MANNER OF DEATH ☐ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

38. DATE OF INJURY (Mo/Day/Yr) (Spell Month)	39. TIME OF INJURY	40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area)	41. INJURY AT WORK? ☐ Yes ☐ No

42. LOCATION OF INJURY: State: _____ City or Town: _____

Street & Number: _____ Apartment No.: _____ Zip Code: _____

43. DESCRIBE HOW INJURY OCCURRED:	44. IF TRANSPORTATION INJURY, SPECIFY: ☐ Driver/Operator ☐ Passenger ☐ Pedestrian ☐ Other (Specify)

1. What was the complication of the pregnancy (or a concomitant disease or injury) that initiated the chain of events leading to death?

_____

2. Was the abortion spontaneous ___?, legally induced___?, therapeutic ___? other___?

3. Other _____

_____, M.D.
(Signature of Certifying Physician)

Please provide your office phone:_____ fax:_____

(Please see other side)

Instructions on Medical Certification of Causes of Death

Example of properly completed medical certification

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	

<table>
<tr><td>IMMEDIATE CAUSE (Final disease or condition --------> resulting in death)</td><td>a. <u>Intestinal hemorrhage</u>
Due to (or as a consequence of):</td><td>10 minutes</td></tr>
<tr><td>Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST</td><td>b. <u>Ruptured intestine</u> __
Due to (or as a consequence of):</td><td>1 day_</td></tr>
<tr><td></td><td>c. <u>Non-medically induced abortion</u>
Due to (or as a consequence of):</td><td>1 day_</td></tr>
<tr><td></td><td>d. _____</td><td>_____</td></tr>
</table>

PART II. Enter other <u>significant conditions</u> contributing to death but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ☐ Yes ■ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ■ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ☐ Probably ■ No ☐ Unknown	36. IF FEMALE: ☐ Not pregnant within past year ☐ Pregnant at time of death ■ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	37. MANNER OF DEATH ■ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

38. DATE OF INJURY (Mo/Day/Yr) (Spell Month) August 15, 2003	39. TIME OF INJURY Approx. 2320	40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area)	41. INJURY AT WORK? ☐Yes ☐ No

42. LOCATION OF INJURY: State: Missouri	City or Town: near Alexandria	
Street & Number: mile marker 17 on state route 46a	Apartment No.:	Zip Code:

43. DESCRIBE HOW INJURY OCCURRED:	44. IF TRANSPORTATION INJURY, SPECIFY: ☐ Driver/Operator ☐ Passenger ☐ Pedestrian ☐ Other (Specify)

ITEM 32 – CAUSE OF DEATH (See example above)
Accurate cause of death information is important
•to the public health community in evaluating and improving the health of all citizens, and
•often to the family, now and in the future, and to the person settling the decedent's estate.

The cause-of-death section consists of two parts. **Part I** is for reporting a chain of events leading directly to death, with the **immediate cause** of death (the final disease, injury, or complication directly causing death) on line a and the **underlying cause** of death (the disease or injury that initiated the chain of events that led directly and inevitably to death) on the lowest used line. **Part II** is for reporting all other significant diseases, conditions, or injuries that contributed to death but which did not result in the underlying cause of death given in **Part I**. **The cause-of-death information should be YOUR best medical OPINION.** A condition can be listed as "probable" even if it has not been definitively diagnosed.

Take care to make the entry legible. Use a computer printer with high resolution, typewriter with good black ribbon and clean keys, or print legibly using permanent **black** ink in completing the CAUSE OF DEATH Section. **Do not abbreviate** conditions entered in section.

Part I (Chain of events leading directly to death)
•Only **one** cause should be entered on each line. <u>Line (a)</u> **MUST ALWAYS** have an entry. **DO NOT** leave blank. Additional lines may be added if necessary.
•If the condition on <u>Line (a)</u> resulted from an underlying condition, put the underlying condition on <u>Line (b)</u>, and so on, until the full sequence is reported. **ALWAYS** enter the **underlying cause of death** on the <u>lowest used line</u> in Part I.
•For each cause indicate the best estimate of the interval between the presumed onset and the date of death. The terms "unknown" or "approximately" may be used. General terms, such as minutes, hours, or days, are acceptable, if necessary. **DO NOT** leave blank.
•The terminal event (for example, cardiac arrest or respiratory arrest) should not be used. If a mechanism of death seems most appropriate to you for line (a), then you must always list its cause(s) on the line(s) below it (for example, cardiac arrest **due to** coronary artery atherosclerosis *or* cardiac arrest **due to** blunt impact to chest).
• If an organ system failure such as congestive heart failure, hepatic failure, renal failure, or respiratory failure is listed as a cause of death, always report its etiology on the line(s) beneath it (for example, renal failure **due to** Type I diabetes mellitus).
•When indicating neoplasms as a cause of death, include the following: 1) primary site *or* that the primary site is unknown, 2) benign or malignant, 3) cell type *or* that the cell type is unknown, 4) grade of neoplasm, and 5) part or lobe of organ affected. (For example, a primary well-differentiated squamous cell carcinoma, lung, left upper lobe.)

•Always report the fatal injury (for example, stab wound of chest), the trauma (for example, transection of subclavian vein), and impairment of function (for example, air embolism).

Part II (Other significant conditions)
•Enter all diseases or conditions contributing to death that were not reported in the chain of events in Part I and that did not result in the **underlying cause of death**.
•If two or more possible sequences resulted in death, or if two conditions seem to have added together, report in Part I the one that, in your opinion, most directly caused death. Report in Part II the other conditions or diseases.

CHANGES TO CAUSE OF DEATH
Should additional medical information or autopsy findings become available that would change the cause of death originally reported, the original death certificate should be amended by the certifying physician by **immediately** reporting the revised cause of death to the State Vital Records Office.

ITEMS ON WHEN DEATH OCCURRED
Items 24-25 and 29-31 should always be completed. If the facility uses a separate pronouncer or other person to indicate that death has taken place with another person more familiar with the case completing the remainder of the medical portion of the death certificate, the pronouncer completes Items 24-28. If a certifier completes Items 24-25 as well as items 29-49, Items 26-28 may be left blank.

ITEMS 24-25, 29-30 – DATE AND TIME OF DEATH
Spell out the name of the month. If the exact date of death is unknown, enter the **approximate** date. If the date cannot be approximated, enter the date the body is found and identify as **date found**. Date pronounced and actual date may be the same. Enter the exact hour and minutes according to a 24-hour clock; estimates may be provided with "Approx." placed before the time.

ITEMS 33-34 - AUTOPSY
•33 - Enter "Yes" if either a partial or full autopsy was performed. Otherwise enter "No."
•34 - Enter "Yes" if autopsy findings were available to complete the cause of death; otherwise enter "No". Leave item blank if no autopsy was performed.

ITEM 35 - DID TOBACCO USE CONTRIBUTE TO DEATH?
Check "yes" if, in your opinion, the use of tobacco contributed to death. Tobacco use may contribute to deaths due to a wide variety of diseases; for example, tobacco use contributes to many deaths due to emphysema or lung cancer and some heart disease and cancers of the head and neck. Check "no" if, in your clinical judgment, tobacco use did not contribute to this particular death.

ITEM 36 - IF FEMALE, WAS DECEDENT PREGNANT AT TIME OF DEATH OR WITHIN PAST YEAR?
This information is important in determining pregnancy-related mortality.

ITEM 37 - MANNER OF DEATH
•Always check Manner of Death, which is important: 1) in determining accurate causes of death; 2) in processing insurance claims; and 3) in statistical studies of injuries and death.
•Indicate "Pending investigation" if the manner of death cannot be determined whether due to an accident, suicide, or homicide within the statutory time limit for filing the death certificate. This should be changed later to one of the other terms.
•Indicate "Could not be Determined" **ONLY** when it is impossible to determine the manner of death.

ITEMS 38-44 - ACCIDENT OR INJURY – to be filled out in all cases of deaths due to injury or poisoning.
•38 - Enter the exact month, day, and year of injury. Spell out the name of the month. **DO NOT** use a number for the month. (Remember, the date of injury may differ from the date of death.) Estimates may be provided with "Approx." placed before the date.
•39 **-** Enter the exact hour and minutes of injury or use your best estimate. Use a 24-hour clock.
•40 - Enter the general place (such as restaurant, vacant lot, or home) where the injury occurred. **DO NOT** enter firm or organization names. (For example, enter "factory", **not** "Standard Manufacturing, Inc.")
•41 - Complete if anything other than natural disease is mentioned in Part I or Part II of the medical certification, including homicides, suicides, and accidents. This includes all motor vehicle deaths. The item **must** be completed for decedents ages 14 years or over and may be completed for those less than 14 years of age if warranted. Enter "Yes" if the injury occurred at work. Otherwise enter "No". An injury may occur at work regardless of whether the injury occurred in the course of the decedent's "usual" occupation. Examples of injury at work and injury not at work follow:

Injury at work	**Injury not at work**
Injury while working or in vocational training on job premises	Injury while engaged in personal recreational activity on job premises
Injury while on break or at lunch or in parking lot on job premises	Injury while a visitor (not on official work business) to job premises
Injury while working for pay or compensation, including at home	Homemaker working at homemaking activities
Injury while working as a volunteer law enforcement official etc.	Student in school
Injury while traveling on business, including to/from business contacts	Working for self for no profit (mowing yard, repairing own roof, hobby)
	Commuting to or from work

•42 - Enter the complete address where the injury occurred including zip code.
•43 - Enter a brief but specific and clear description of how the injury occurred. Explain the circumstances or cause of the injury. Specify **type of gun** or **type of vehicle** (e.g., car, bulldozer, train, etc.) when relevant to circumstances. Indicate if more than one vehicle involved; specify type of vehicle decedent was in.
•44 -Specify role of decedent (e.g. driver, passenger). Driver/operator and passenger should be designated for modes other than motor vehicles such as bicycles. Other applies to watercraft, aircraft, animal, or people attached to outside of vehicles (e.g. surfers).

<u>Rationale</u>: Motor vehicle accidents are a major cause of unintentional deaths; details will help determine effectiveness of current safety features and laws.

Common problems in death certification
The **elderly decedent** should have a clear and distinct etiological sequence for cause of death, if possible. Terms such as senescence, infirmity, old age, and advanced age have little value for public health or medical research. Age is recorded elsewhere on the certificate. When a number of conditions resulted in death, the physician should choose the single sequence that, in his or her opinion, best describes the process leading to death, and place any other pertinent conditions in Part II. If after careful consideration the physician cannot determine a sequence that ends in death, then the medical examiner or coroner should be consulted about conducting an investigation or providing assistance in completing the cause of death.

The **infant decedent** should have a clear and distinct etiological sequence for cause of death, if possible. "Prematurity" should not be entered without explaining the etiology of prematurity. Maternal conditions may have initiated or affected the sequence that resulted in infant death, and such maternal causes should be reported in addition to the infant causes on the infant's death certificate (e.g., Hyaline membrane disease **due to** prematurity, 28 weeks **due to** placental abruption **due to** blunt trauma to mother's abdomen).

When **SIDS** is suspected, a complete investigation should be conducted, typically by a medical examiner or coroner. If the infant is under 1 year of age, no cause of death is determined after scene investigation, clinical history is reviewed, and a complete autopsy is performed, then the death can be reported as Sudden Infant Death Syndrome.

When processes such as the following are reported, additional information about the etiology should be reported:

Abscess	Carcinomatosis	Disseminated intra vascular	Hyponatremia	Pulmonary arrest
Abdominal hemorrhage	Cardiac arrest	coagulopathy	Hypotension	Pulmonary edema
Adhesions	Cardiac dysrhythmia	Dysrhythmia	Immunosuppression	Pulmonary embolism
Adult respiratory distress syndrome	Cardiomyopathy	End-stage liver disease	Increased intra cranial pressure	Pulmonary insufficiency
Acute myocardial infarction	Cardiopulmonary arrest	End-stage renal disease	Intra cranial hemorrhage	Renal failure
Altered mental status	Cellulitis	Epidural hematoma	Malnutrition	Respiratory arrest
Anemia	Cerebral edema	Exsanguination	Metabolic encephalopathy	Seizures
Anoxia	Cerebrovascular accident	Failure to thrive	Multi-organ failure	Sepsis
Anoxic encephalopathy	Cerebellar tonsillar herniation	Fracture	Multi-system organ failure	Septic shock
Arrhythmia	Chronic bedridden state	Gangrene	Myocardial infarction	Shock
Ascites	Cirrhosis	Gastrointestinal hemorrhage	Necrotizing soft-tissue infection	Starvation
Aspiration	Coagulopathy	Heart failure	Old age	Subdural hematoma
Atrial fibrillation	Compression fracture	Hemothorax	Open (or closed) head injury	Subarachnoid hemorrhage
Bacteremia	Congestive heart failure	Hepatic failure	Paralysis	Sudden death
Bedridden	Convulsions	Hepatitis	Pancytopenia	Thrombocytopenia
Biliary obstruction	Decubiti	Hepatorenal syndrome	Perforated gallbladder	Uncal herniation
Bowel obstruction	Dehydration	Hyperglycemia	Peritonitis	Urinary tract infection
Brain injury	Dementia (when not	Hyperkalemia	Pleural effusions	Ventricular fibrillation
Brain stem herniation	otherwise specified)	Hypovolemic shock	Pneumonia	Ventricular tachycardia
Carcinogenesis	Diarrhea			Volume depletion

If the certifier is unable to determine the etiology of a process such as those shown above, the process must be qualified as being of an unknown, undetermined, probable, presumed, or unspecified etiology so it is clear that a distinct etiology was not inadvertently or carelessly omitted.

The following conditions and types of death might seem to be specific or natural but when the medical history is examined further may be found to be complications of an injury or poisoning (possibly occurring long ago). Such cases should be reported to the medical examiner/coroner.

Asphyxia	Epidural hematoma	Hip fracture	Pulmonary emboli	Subdural hematoma
Bolus	Exsanguination	Hyperthermia	Seizure disorder	Surgery
Choking	Fall	Hypothermia	Sepsis	Thermal burns/chemical burns
Drug or alcohol overdose/drug or	Fracture	Open reduction of fracture	Subarachnoid hemorrhage	
alcohol abuse				

Contact your State vital statistics office for questions related to writing cause-of-death statements. Additional instructional material on writing cause-of-death statements including handbooks, summary instructions, and tutorials are available online at www.thename.org or www.cdc.gov/nchswww/about/major/dvs/handbk.htm, or by request from NCHS, Room 7318, 3311 Toledo Road, Hyattsville, Maryland 20782-2003.

Query Letter 10
(External Causes)

The following sample query letter consists of a lengthy series of questions even though the attachments have been separated into four. The questions are designed to address a variety of problems in certification. We would suggest that specific query letters list only the questions that are relevant for the specific case. This will improve the appearance of the query letter.

(Letterhead)

Dear Doctor _____

We are writing this letter to obtain additional information about the cause of death that you certified for

_____, who died _____.

Accurate cause-of-death information is essential, not only to the family of the decedent, but also for medical research, funding, and resource allocation in our State and at the national level.

In this particular death, we need additional information to properly classify the death. In order to classify this death properly in our statistics, would you please supply the information on the attachment? We want to assure you that the information you provide us is confidential and will be handled accordingly.

If you have any question, please contact_____. Instructions and an example of a properly completed death certificate are provided with the attached material.

We appreciate your attention and prompt reply.

Sincerely,

State Registrar/Vital Statistics Cooperative Program

4 Attachments

Query for Accidents Not Involving Transportation

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. PART I. Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	

IMMEDIATE CAUSE (Final
disease or condition --------> a. _____
resulting in death)   Due to (or as a consequence of):

Sequentially list conditions,   b. _____
if any, leading to the cause   Due to (or as a consequence of):
listed on line a. Enter the
UNDERLYING CAUSE   c. _____
(disease or injury that   Due to (or as a consequence of):
initiated the events resulting
in death) **LAST**   d. _____

PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? □ Yes □ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? □ Yes □ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? □ Yes □ Probably □ No □ Unknown	36. IF FEMALE: □ Not pregnant within past year □ Pregnant at time of death □ Not pregnant, but pregnant within 42 days of death □ Not pregnant, but pregnant 43 days to 1 year before death □ Unknown if pregnant within the past year	37. MANNER OF DEATH □ Natural □ Homicide □ Accident □ Pending Investigation □ Suicide □ Could not be determined

38. DATE OF INJURY (Mo/Day/Yr) (Spell Month)	39. TIME OF INJURY	40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area)	41. INJURY AT WORK? □ Yes □ No

42. LOCATION OF INJURY: State: City or Town:

Street & Number: Apartment No.:   Zip Code:

43. DESCRIBE HOW INJURY OCCURRED:	44. IF TRANSPORTATION INJURY, SPECIFY: □ Driver/Operator □ Passenger □ Pedestrian □ Other (Specify)

1A. Please state if the manner of death was accidental, homicidal, suicidal, natural, or undetermined. _____.

If undetermined, was there a pending investigation? _____.

1B. State what happened to the decedent, describe in detail the external event that caused the death.

_____

_____

_____

_____

1C. State the medical condition(s) that required the treatment (medical, surgical, medicaments)

_____

_____

_____

1D. Describe in detail the treatment (medical, surgical, name of medicaments) or the exposure (name of chemicals, type of medical devices, or other applicable external factors)

_____

_____

2. <u>Fire</u>

A. Origin of fire (blowlamp, candle, match, torch, fireplace etc.)_____

B. If fire was caused by explosion, indicate agent (aerosol, gasoline, bomb etc.)_____

C. Fire located in: Private dwelling___ Other building or structure ___ Not in building or structure (stationary vehicle, forest etc)___ Other_____

D. Resulted in large uncontrolled fire: Yes___ No___

E. Fire ignited: Explosive material (specify type) _____ Clothing (type) _____Other _____

F. Victim: Burned ___ Incinerated, cremated ___ Asphyxiated by (smoke, flame, fumes, etc.) _____ Other _____

3. Fall (state how it happened, e.g. fall from/on/into/out of name of structure)

_____

4. Describe in detail the external event (_____) that eventually brought about the medical complications which caused the death.

_____

_____

_____.

5. Place of occurrence (home, residential institution, public administrative area, sports area, street and highway, trade and service areas, industrial and construction area, farm, other -please specify-)

_____

_____, M.D.

(Signature of Certifying Physician)

Please provide your office phone:_____ fax:_____

(Please see other side)

Instructions on Medical Certification of Causes of Death

Example of properly completed medical certification

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	

IMMEDIATE CAUSE (Final disease or condition --------> resulting in death)

a. Epidural hemorrhage _____   1 hour

Due to (or as a consequence of):

Sequentially list conditions, if any, leading to the cause listed on line a. Enter the **UNDERLYING CAUSE** (disease or injury that initiated the events resulting in death) **LAST**

b. Fractured skull _____   1 hour

Due to (or as a consequence of):

c. Fall on stairway _____   1 hour

Due to (or as a consequence of):

d. _____

PART II. Enter other <u>significant conditions</u> contributing to death but not resulting in the underlying cause given in PART I

Chronic rheumatic endocarditis

33. WAS AN AUTOPSY PERFORMED? ☐ Yes ■ No

34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ■ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH?
☐ Yes ☐ Probably
■ No ☐ Unknown

36. IF FEMALE:
☐ Not pregnant within past year
☐ Pregnant at time of death
☐ Not pregnant, but pregnant within 42 days of death
☐ Not pregnant, but pregnant 43 days to 1 year before death
☐ Unknown if pregnant within the past year

37. MANNER OF DEATH
☐ Natural ☐ Homicide
■ Accident ☐ Pending Investigation
☐ Suicide ☐ Could not be determined

38. DATE OF INJURY (Mo/Day/Yr) (Spell Month)
June 30, 2006

39. TIME OF INJURY
1500

40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area)
decedent's home

41. INJURY AT WORK?
☐ Yes ■ No

42. LOCATION OF INJURY: State: North Carolina   City or Town: Cary

Street & Number: 1426 May Drive   Apartment No.:   Zip Code: 27512-0004

43. DESCRIBE HOW INJURY OCCURRED:
Fell down basement stairs onto a cement floor

44. IF TRANSPORTATION INJURY, SPECIFY:
☐ Driver/Operator
☐ Passenger
☐ Pedestrian
☐ Other (Specify)

ITEM 32 – CAUSE OF DEATH (See example above)

Accurate cause of death information is important
•to the public health community in evaluating and improving the health of all citizens, and
•often to the family, now and in the future, and to the person settling the decedent's estate.

The cause-of-death section consists of two parts. **Part I** is for reporting a chain of events leading directly to death, with the **immediate cause** of death (the final disease, injury, or complication directly causing death) on line a and the **underlying cause** of death (the disease or injury that initiated the chain of events that led directly and inevitably to death) on the lowest used line. **Part II** is for reporting all other significant diseases, conditions, or injuries that contributed to death but which did not result in the underlying cause of death given in **Part I**. **The cause-of-death information should be YOUR best medical OPINION.** A condition can be listed as "probable" even if it has not been definitively diagnosed.

Take care to make the entry legible. Use a computer printer with high resolution, typewriter with good black ribbon and clean keys, or print legibly using permanent **black** ink in completing the CAUSE OF DEATH Section. **Do not abbreviate** conditions entered in section.

Part I (Chain of events leading directly to death)

•Only **one** cause should be entered on each line. <u>Line (a)</u> **MUST ALWAYS** have an entry. **DO NOT** leave blank. Additional lines may be added if necessary.
•If the condition on <u>Line (a)</u> resulted from an underlying condition, put the underlying condition on <u>Line (b)</u>, and so on, until the full sequence is reported. **ALWAYS** enter the **underlying cause of death** on the <u>lowest used line</u> in Part I.
•For each cause indicate the best estimate of the interval between the presumed onset and the date of death. The terms "unknown" or "approximately" may be used. General terms, such as minutes, hours, or days, are acceptable, if necessary. **DO NOT** leave blank.
•The terminal event (for example, cardiac arrest or respiratory arrest) should not be used. If a mechanism of death seems most appropriate to you for line (a), then you must always list its cause(s) on the line(s) below it (for example, cardiac arrest **due to** coronary artery atherosclerosis or cardiac arrest **due to** blunt impact to chest).
• If an organ system failure such as congestive heart failure, hepatic failure, renal failure, or respiratory failure is listed as a cause of death, always report its etiology on the line(s) beneath it (for example, renal failure **due to** Type I diabetes mellitus).

•When indicating neoplasms as a cause of death, include the following: 1) primary site *or* that the primary site is unknown, 2) benign or malignant, 3) cell type *or* that the cell type is unknown, 4) grade of neoplasm, and 5) part or lobe of organ affected. (For example, a primary well-differentiated squamous cell carcinoma, lung, left upper lobe.)
•Always report the fatal injury (for example, stab wound of chest), the trauma (for example, transection of subclavian vein), and impairment of function (for example, air embolism).

Part II (Other significant conditions)
•Enter all diseases or conditions contributing to death that were not reported in the chain of events in Part I and that did not result in the **underlying cause of death**.
•If two or more possible sequences resulted in death, or if two conditions seem to have added together, report in Part I the one that, in your opinion, most directly caused death. Report in Part II the other conditions or diseases.

CHANGES TO CAUSE OF DEATH
Should additional medical information or autopsy findings become available that would change the cause of death originally reported, the original death certificate should be amended by the certifying physician by **immediately** reporting the revised cause of death to the State Vital Records Office.

ITEMS ON WHEN DEATH OCCURRED
Items 24-25 and 29-31 should always be completed. If the facility uses a separate pronouncer or other person to indicate that death has taken place with another person more familiar with the case completing the remainder of the medical portion of the death certificate, the pronouncer completes Items 24-28. If a certifier completes Items 24-25 as well as items 29-49, Items 26-28 may be left blank.

ITEMS 24-25, 29-30 – DATE AND TIME OF DEATH
Spell out the name of the month. If the exact date of death is unknown, enter the **approximate** date. If the date cannot be approximated, enter the date the body is found and identify as **date found**. Date pronounced and actual date may be the same. Enter the exact hour and minutes according to a 24-hour clock; estimates may be provided with "Approx." placed before the time.

ITEMS 33-34 - AUTOPSY
•33 - Enter "Yes" if either a partial or full autopsy was performed. Otherwise enter "No."
•34 - Enter "Yes" if autopsy findings were available to complete the cause of death; otherwise enter "No". Leave item blank if no autopsy was performed.

ITEM 35 - DID TOBACCO USE CONTRIBUTE TO DEATH?
Check "yes" if, in your opinion, the use of tobacco contributed to death. Tobacco use may contribute to deaths due to a wide variety of diseases; for example, tobacco use contributes to many deaths due to emphysema or lung cancer and some heart disease and cancers of the head and neck. Check "no" if, in your clinical judgment, tobacco use did not contribute to this particular death.

ITEM 36 - IF FEMALE, WAS DECEDENT PREGNANT AT TIME OF DEATH OR WITHIN PAST YEAR?
This information is important in determining pregnancy-related mortality.

ITEM 37 - MANNER OF DEATH
•Always check Manner of Death, which is important: 1) in determining accurate causes of death; 2) in processing insurance claims; and 3) in statistical studies of injuries and death.
•Indicate "Pending investigation" if the manner of death cannot be determined whether due to an accident, suicide, or homicide within the statutory time limit for filing the death certificate. This should be changed later to one of the other terms.
•Indicate "Could not be Determined" **ONLY** when it is impossible to determine the manner of death.

ITEMS 38-44 - ACCIDENT OR INJURY – to be filled out in all cases of deaths due to injury or poisoning.
•38 - Enter the exact month, day, and year of injury. Spell out the name of the month. **DO NOT** use a number for the month. (Remember, the date of injury may differ from the date of death.) Estimates may be provided with "Approx." placed before the date.
•39 **-** Enter the exact hour and minutes of injury or use your best estimate. Use a 24-hour clock.
•40 - Enter the general place (such as restaurant, vacant lot, or home) where the injury occurred. **DO NOT** enter firm or organization names. (For example, enter "factory", **not** "Standard Manufacturing, Inc.")
•41 - Complete if anything other than natural disease is mentioned in Part I or Part II of the medical certification, including homicides, suicides, and accidents. This includes all motor vehicle deaths. The item **must** be completed for decedents ages 14 years or over and may be completed for those less than 14 years of age if warranted. Enter "Yes" if the injury occurred at work. Otherwise enter "No". An injury may occur at work regardless of whether the injury occurred in the course of the decedent's "usual" occupation. Examples of injury at work and injury not at work follow:

Injury at work	**Injury not at work**
Injury while working or in vocational training on job premises	Injury while engaged in personal recreational activity on job premises
Injury while on break or at lunch or in parking lot on job premises	Injury while a visitor (not on official work business) to job premises
Injury while working for pay or compensation, including at home	Homemaker working at homemaking activities
Injury while working as a volunteer law enforcement official etc.	Student in school
Injury while traveling on business, including to/from business contacts	Working for self for no profit (mowing yard, repairing own roof, hobby)
	Commuting to or from work

•42 - Enter the complete address where the injury occurred including zip code.
•43 - Enter a brief but specific and clear description of how the injury occurred. Explain the circumstances or cause of the injury. Specify **type of gun** or **type of vehicle** (e.g., car, bulldozer, train, etc.) when relevant to circumstances. Indicate if more than one vehicle involved; specify type of vehicle decedent was in.

•44 -Specify role of decedent (e.g. driver, passenger). Driver/operator and passenger should be designated for modes other than motor vehicles such as bicycles. Other applies to watercraft, aircraft, animal, or people attached to outside of vehicles (e.g. surfers).

Rationale: Motor vehicle accidents are a major cause of unintentional deaths; details will help determine effectiveness of current safety features and laws.

Common problems in death certification
The **elderly decedent** should have a clear and distinct etiological sequence for cause of death, if possible. Terms such as senescence, infirmity, old age, and advanced age have little value for public health or medical research. Age is recorded elsewhere on the certificate. When a number of conditions resulted in death, the physician should choose the single sequence that, in his or her opinion, best describes the process leading to death, and place any other pertinent conditions in Part II. If after careful consideration the physician cannot determine a sequence that ends in death, then the medical examiner or coroner should be consulted about conducting an investigation or providing assistance in completing the cause of death.

The **infant decedent** should have a clear and distinct etiological sequence for cause of death, if possible. "Prematurity" should not be entered without explaining the etiology of prematurity. Maternal conditions may have initiated or affected the sequence that resulted in infant death, and such maternal causes should be reported in addition to the infant causes on the infant's death certificate (e.g., Hyaline membrane disease **due to** prematurity, 28 weeks **due to** placental abruption **due to** blunt trauma to mother's abdomen).

When **SIDS** is suspected, a complete investigation should be conducted, typically by a medical examiner or coroner. If the infant is under 1 year of age, no cause of death is determined after scene investigation, clinical history is reviewed, and a complete autopsy is performed, then the death can be reported as Sudden Infant Death Syndrome.

When processes such as the following are reported, additional information about the etiology should be reported:

Abscess	Carcinomatosis	Disseminated intra vascular	Hyponatremia	Pulmonary arrest
Abdominal hemorrhage	Cardiac arrest	coagulopathy	Hypotension	Pulmonary edema
Adhesions	Cardiac dysrhythmia	Dysrhythmia	Immunosuppression	Pulmonary embolism
Adult respiratory distress syndrome	Cardiomyopathy	End-stage liver disease	Increased intra cranial pressure	Pulmonary insufficiency
Acute myocardial infarction	Cardiopulmonary arrest	End-stage renal disease	Intra cranial hemorrhage	Renal failure
Altered mental status	Cellulitis	Epidural hematoma	Malnutrition	Respiratory arrest
Anemia	Cerebral edema	Exsanguination	Metabolic encephalopathy	Seizures
Anoxia	Cerebrovascular accident	Failure to thrive	Multi-organ failure	Sepsis
Anoxic encephalopathy	Cerebellar tonsillar herniation	Fracture	Multi-system organ failure	Septic shock
Arrhythmia	Chronic bedridden state	Gangrene	Myocardial infarction	Shock
Ascites	Cirrhosis	Gastrointestinal hemorrhage	Necrotizing soft-tissue infection	Starvation
Aspiration	Coagulopathy	Heart failure	Old age	Subdural hematoma
Atrial fibrillation	Compression fracture	Hemothorax	Open (or closed) head injury	Subarachnoid hemorrhage
Bacteremia	Congestive heart failure	Hepatic failure	Paralysis	Sudden death
Bedridden	Convulsions	Hepatitis	Pancytopenia	Thrombocytopenia
Biliary obstruction	Decubiti	Hepatorenal syndrome	Perforated gallbladder	Uncal herniation
Bowel obstruction	Dehydration	Hyperglycemia	Peritonitis	Urinary tract infection
Brain injury	Dementia (when not	Hyperkalemia	Pleural effusions	Ventricular fibrillation
Brain stem herniation	otherwise specified)	Hypovolemic shock	Pneumonia	Ventricular tachycardia
Carcinogenesis	Diarrhea			Volume depletion

If the certifier is unable to determine the etiology of a process such as those shown above, the process must be qualified as being of an unknown, undetermined, probable, presumed, or unspecified etiology so it is clear that a distinct etiology was not inadvertently or carelessly omitted.

The following conditions and types of death might seem to be specific or natural but when the medical history is examined further may be found to be complications of an injury or poisoning (possibly occurring long ago). Such cases should be reported to the medical examiner/coroner.

Asphyxia	Epidural hematoma	Hip fracture	Pulmonary emboli	Subdural hematoma
Bolus	Exsanguination	Hyperthermia	Seizure disorder	Surgery
Choking	Fall	Hypothermia	Sepsis	Thermal burns/chemical burns
Drug or alcohol overdose/drug or alcohol abuse	Fracture	Open reduction of fracture	Subarachnoid hemorrhage	

Contact your State vital statistics office for questions related to writing cause-of-death statements. Additional instructional material on writing cause-of-death statements including handbooks, summary instructions, and tutorials are available online at www.thename.org or www.cdc.gov/nchswww/about/major/dvs/handbk.htm, or by request from NCHS, Room 7318, 3311 Toledo Road, Hyattsville, Maryland 20782-2003.

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	

IMMEDIATE CAUSE (Final
disease or condition -------->   a. _____   _____
resulting in death)   Due to (or as a consequence of):

Sequentially list conditions,   b. _____   _____
if any, leading to the cause   Due to (or as a consequence of):
listed on line a. Enter the
UNDERLYING CAUSE   c. _____   _____
(disease or injury that   Due to (or as a consequence of):
initiated the events resulting
in death) **LAST**   d. _____   _____

PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ☐ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ☐ Probably ☐ No ☐ Unknown	36. IF FEMALE: ☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	37. MANNER OF DEATH ☐ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

38. DATE OF INJURY (Mo/Day/Yr) (Spell Month) August 15, 2003	39. TIME OF INJURY Approx. 2320	40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area) road side near state highway	41. INJURY AT WORK? ☐ Yes ☐ No

42. LOCATION OF INJURY: State: City or Town:
Street & Number: Apartment No.:   Zip Code:

43. DESCRIBE HOW INJURY OCCURRED:	44. IF TRANSPORTATION INJURY, SPECIFY: ☐ Driver/Operator ☐ Passenger ☐ Pedestrian ☐ Other (Specify)

1A. Please state if the manner of death was accidental, homicidal, suicidal, natural, or undetermined. _____.
If undetermined, was there a pending investigation? _____.
1B. State what happened to the decedent, describe in detail the external event that caused the death.

_____
_____
_____
_____

2. Describe in detail the external event (_____) that eventually brought about the medical
complications which caused the death.

_____
_____
_____.

3. Place of occurrence (home, residential institution, public administrative area, sports area, street and highway, trade and service
areas, industrial and construction area, farm, other -please specify-)

_____

4A. Type of vehicle, e.g. automobile, motorcycle, 3-wheeled motor vehicle for on road use, van, pick-up truck, heavy transport
vehicle, bus, vehicle mainly used on industrial premises within buildings (e.g., forklift), vehicle mainly used in agriculture (e.g.,
tractor, combine), construction vehicle (e.g., bulldozer), all-terrain vehicle or other vehicle designed for off-road use, bicycle, train,
streetcar, animal, powered fishing boat, water-skis, helicopter, private airplane

_____

4B. Location at time of accident. On highway ___ Off highway___ Stationary (parked car)___ Railway yard, track, railroad___ In
flight, midair___ At airport, on runway___ In water___ Other_____
4C. Collision: Yes___ No___.

If Yes, collision with what type of vehicle _____ and location at time of collision
_____

4D.1) Involving vehicle: Loss of control ___ Sinking ___ Explosion, fire___ Object thrown on__ Excessive heat___
Other _____
2) What happened to decedent? Fell___ Injured while boarding ___Inhaled smoke ___Fell from vehicle___
        Run over by___ Hit by moving part___ Crushed___ Thrown from___ Other _____
    3) Status of decedent: (check a. or b.)
        a. If IN or ON vehicle:
        Driver___ Passenger___ Occupant___ Rider___ Crew of vehicle___ Other _____
        b. If NOT in or on vehicle:
        Pedestrian___ Outside of vehicle___ Water skier___ Swimmer___ Person on ground injured in air transport accident__
        Airline ground crew ___ Dock worker___ Other_____
    4) If decedent was occupant of vehicle, please specify type of vehicle _____

_____, M.D.
(Signature of Certifying Physician)

Please provide your office phone:_____ fax:_____

(Please see other side)

Instructions on Medical Certification of Causes of Death

Example of properly completed medical certification

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	
IMMEDIATE CAUSE (Final disease or condition --------> resulting in death) a. <u>Aspiration pneumonia</u> Due to (or as a consequence of):	2 Days
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the **UNDERLYING CAUSE** b. <u>Complications of coma</u> Due to (or as a consequence of):	7 weeks
(disease or injury that initiated the events resulting c. <u>Blunt force injuries</u> Due to (or as a consequence of):	7 weeks
in death) **LAST** d. <u>Motor vehicle accident</u>	7 weeks

PART II. Enter other <u>significant conditions</u> contributing to death but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ☐ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ☐ Probably ☐ No ☐ Unknown	36. IF FEMALE: ☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	37. MANNER OF DEATH ☐ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

38. DATE OF INJURY (Mo/Day/Yr) (Spell Month) August 15, 2005	39. TIME OF INJURY Approx. 2320	40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area) road side near state highway	41. INJURY AT WORK? ☐ Yes ☐ No

42. LOCATION OF INJURY: State: Missouri   City or Town: near Alexandria Street & Number: mile marker 17 on state route 46a   Apartment No.:   Zip Code:

43. DESCRIBE HOW INJURY OCCURRED: Decedent driver of van, ran off road into tree	44. IF TRANSPORTATION INJURY, SPECIFY: ☐ Driver/Operator ☐ Passenger ☐ Pedestrian ☐ Other (Specify)

ITEM 32 – CAUSE OF DEATH (See example above)
Accurate cause of death information is important
•to the public health community in evaluating and improving the health of all citizens, and
•often to the family, now and in the future, and to the person settling the decedent's estate.

The cause-of-death section consists of two parts. **Part I** is for reporting a chain of events leading directly to death, with the **immediate cause** of death (the final disease, injury, or complication directly causing death) on line a and the **underlying cause** of death (the disease or injury that initiated the chain of events that led directly and inevitably to death) on the lowest used line. **Part II** is for reporting all other significant diseases, conditions, or injuries that contributed to death but which did not result in the underlying cause of death given in **Part I**. **The cause-of-death information should be YOUR best medical OPINION.** A condition can be listed as "probable" even if it has not been definitively diagnosed.

Take care to make the entry legible. Use a computer printer with high resolution, typewriter with good black ribbon and clean keys, or print legibly using permanent **black** ink in completing the CAUSE OF DEATH Section. **Do not abbreviate** conditions entered in section.

Part I (Chain of events leading directly to death)
•Only **one** cause should be entered on each line. <u>Line (a)</u> **MUST ALWAYS** have an entry. **DO NOT** leave blank. Additional lines may be added if necessary.
•If the condition on <u>Line (a)</u> resulted from an underlying condition, put the underlying condition on <u>Line (b)</u>, and so on, until the full sequence is reported. **ALWAYS** enter the **underlying cause of death** on the <u>lowest used line</u> in Part I.
•For each cause indicate the best estimate of the interval between the presumed onset and the date of death. The terms "unknown" or "approximately" may be used. General terms, such as minutes, hours, or days, are acceptable, if necessary. **DO NOT** leave blank.
•The terminal event (for example, cardiac arrest or respiratory arrest) should not be used. If a mechanism of death seems most appropriate to you for line (a), then you must always list its cause(s) on the line(s) below it (for example, cardiac arrest **due to** coronary artery atherosclerosis or cardiac arrest **due to** blunt impact to chest).
• If an organ system failure such as congestive heart failure, hepatic failure, renal failure, or respiratory failure is listed as a cause of death, always report its etiology on the line(s) beneath it (for example, renal failure **due to** Type I diabetes mellitus).
•When indicating neoplasms as a cause of death, include the following: 1) primary site or that the primary site is unknown, 2) benign or malignant, 3) cell type or that the cell type is unknown, 4) grade of neoplasm, and 5) part or lobe of organ affected. (For example, a primary well-differentiated squamous cell carcinoma, lung, left upper lobe.)

•Always report the fatal injury (for example, stab wound of chest), the trauma (for example, transection of subclavian vein), and impairment of function (for example, air embolism).

Part II (Other significant conditions)
•Enter all diseases or conditions contributing to death that were not reported in the chain of events in Part I and that did not result in the **underlying cause of death**.
•If two or more possible sequences resulted in death, or if two conditions seem to have added together, report in Part I the one that, in your opinion, most directly caused death. Report in Part II the other conditions or diseases.

CHANGES TO CAUSE OF DEATH
Should additional medical information or autopsy findings become available that would change the cause of death originally reported, the original death certificate should be amended by the certifying physician by **immediately** reporting the revised cause of death to the State Vital Records Office.

ITEMS ON WHEN DEATH OCCURRED
Items 24-25 and 29-31 should always be completed. If the facility uses a separate pronouncer or other person to indicate that death has taken place with another person more familiar with the case completing the remainder of the medical portion of the death certificate, the pronouncer completes Items 24-28. If a certifier completes Items 24-25 as well as items 29-49, Items 26-28 may be left blank.

ITEMS 24-25, 29-30 – DATE AND TIME OF DEATH
Spell out the name of the month. If the exact date of death is unknown, enter the **approximate** date. If the date cannot be approximated, enter the date the body is found and identify as **date found**. Date pronounced and actual date may be the same. Enter the exact hour and minutes according to a 24-hour clock; estimates may be provided with "Approx." placed before the time.

ITEMS 33-34 - AUTOPSY
•33 - Enter "Yes" if either a partial or full autopsy was performed. Otherwise enter "No."
•34 - Enter "Yes" if autopsy findings were available to complete the cause of death; otherwise enter "No". Leave item blank if no autopsy was performed.

ITEM 35 - DID TOBACCO USE CONTRIBUTE TO DEATH?
Check "yes" if, in your opinion, the use of tobacco contributed to death. Tobacco use may contribute to deaths due to a wide variety of diseases; for example, tobacco use contributes to many deaths due to emphysema or lung cancer and some heart disease and cancers of the head and neck. Check "no" if, in your clinical judgment, tobacco use did not contribute to this particular death.

ITEM 36 - IF FEMALE, WAS DECEDENT PREGNANT AT TIME OF DEATH OR WITHIN PAST YEAR?
This information is important in determining pregnancy-related mortality.

ITEM 37 - MANNER OF DEATH
•Always check Manner of Death, which is important: 1) in determining accurate causes of death; 2) in processing insurance claims; and 3) in statistical studies of injuries and death.
•Indicate "Pending investigation" if the manner of death cannot be determined whether due to an accident, suicide, or homicide within the statutory time limit for filing the death certificate. This should be changed later to one of the other terms.
•Indicate "Could not be Determined" **ONLY** when it is impossible to determine the manner of death.

ITEMS 38-44 - ACCIDENT OR INJURY – to be filled out in all cases of deaths due to injury or poisoning.
•38 - Enter the exact month, day, and year of injury. Spell out the name of the month. **DO NOT** use a number for the month. (Remember, the date of injury may differ from the date of death.) Estimates may be provided with "Approx." placed before the date.
•39 **-** Enter the exact hour and minutes of injury or use your best estimate. Use a 24-hour clock.
•40 - Enter the general place (such as restaurant, vacant lot, or home) where the injury occurred. **DO NOT** enter firm or organization names. (For example, enter "factory", **not** "Standard Manufacturing, Inc.")
•41 - Complete if anything other than natural disease is mentioned in Part I or Part II of the medical certification, including homicides, suicides, and accidents. This includes all motor vehicle deaths. The item **must** be completed for decedents ages 14 years or over and may be completed for those less than 14 years of age if warranted. Enter "Yes" if the injury occurred at work. Otherwise enter "No". An injury may occur at work regardless of whether the injury occurred in the course of the decedent's "usual" occupation. Examples of injury at work and injury not at work follow:

Injury at work	Injury not at work
Injury while working or in vocational training on job premises	Injury while engaged in personal recreational activity on job premises
Injury while on break or at lunch or in parking lot on job premises	Injury while a visitor (not on official work business) to job premises
Injury while working for pay or compensation, including at home	Homemaker working at homemaking activities
Injury while working as a volunteer law enforcement official etc.	Student in school
Injury while traveling on business, including to/from business contacts	Working for self for no profit (mowing yard, repairing own roof, hobby)
	Commuting to or from work

•42 - Enter the complete address where the injury occurred including zip code.
•43 - Enter a brief but specific and clear description of how the injury occurred. Explain the circumstances or cause of the injury. Specify **type of gun** or **type of vehicle** (e.g., car, bulldozer, train, etc.) when relevant to circumstances. Indicate if more than one vehicle involved; specify type of vehicle decedent was in.
•44 -Specify role of decedent (e.g. driver, passenger). Driver/operator and passenger should be designated for modes other than motor vehicles such as bicycles. Other applies to watercraft, aircraft, animal, or people attached to outside of vehicles (e.g. surfers).

<u>Rationale</u>: Motor vehicle accidents are a major cause of unintentional deaths; details will help determine effectiveness of current safety features and laws.

Common problems in death certification

The **elderly decedent** should have a clear and distinct etiological sequence for cause of death, if possible. Terms such as senescence, infirmity, old age, and advanced age have little value for public health or medical research. Age is recorded elsewhere on the certificate. When a number of conditions resulted in death, the physician should choose the single sequence that, in his or her opinion, best describes the process leading to death, and place any other pertinent conditions in Part II. If after careful consideration the physician cannot determine a sequence that ends in death, then the medical examiner or coroner should be consulted about conducting an investigation or providing assistance in completing the cause of death.

The **infant decedent** should have a clear and distinct etiological sequence for cause of death, if possible. "Prematurity" should not be entered without explaining the etiology of prematurity. Maternal conditions may have initiated or affected the sequence that resulted in infant death, and such maternal causes should be reported in addition to the infant causes on the infant's death certificate (e.g., Hyaline membrane disease **due to** prematurity, 28 weeks **due to** placental abruption **due to** blunt trauma to mother's abdomen).

When **SIDS** is suspected, a complete investigation should be conducted, typically by a medical examiner or coroner. If the infant is under 1 year of age, no cause of death is determined after scene investigation, clinical history is reviewed, and a complete autopsy is performed, then the death can be reported as Sudden Infant Death Syndrome.

When processes such as the following are reported, additional information about the etiology should be reported:

Abscess	Carcinomatosis	Disseminated intra vascular	Hyponatremia	Pulmonary arrest
Abdominal hemorrhage	Cardiac arrest	coagulopathy	Hypotension	Pulmonary edema
Adhesions	Cardiac dysrhythmia	Dysrhythmia	Immunosuppression	Pulmonary embolism
Adult respiratory distress syndrome	Cardiomyopathy	End-stage liver disease	Increased intra cranial pressure	Pulmonary insufficiency
Acute myocardial infarction	Cardiopulmonary arrest	End-stage renal disease	Intra cranial hemorrhage	Renal failure
Altered mental status	Cellulitis	Epidural hematoma	Malnutrition	Respiratory arrest
Anemia	Cerebral edema	Exsanguination	Metabolic encephalopathy	Seizures
Anoxia	Cerebrovascular accident	Failure to thrive	Multi-organ failure	Sepsis
Anoxic encephalopathy	Cerebellar tonsillar herniation	Fracture	Multi-system organ failure	Septic shock
Arrhythmia	Chronic bedridden state	Gangrene	Myocardial infarction	Shock
Ascites	Cirrhosis	Gastrointestinal hemorrhage	Necrotizing soft-tissue infection	Starvation
Aspiration	Coagulopathy	Heart failure	Old age	Subdural hematoma
Atrial fibrillation	Compression fracture	Hemothorax	Open (or closed) head injury	Subarachnoid hemorrhage
Bacteremia	Congestive heart failure	Hepatic failure	Paralysis	Sudden death
Bedridden	Convulsions	Hepatitis	Pancytopenia	Thrombocytopenia
Biliary obstruction	Decubiti	Hepatorenal syndrome	Perforated gallbladder	Uncal herniation
Bowel obstruction	Dehydration	Hyperglycemia	Peritonitis	Urinary tract infection
Brain injury	Dementia (when not	Hyperkalemia	Pleural effusions	Ventricular fibrillation
Brain stem herniation	otherwise specified)	Hypovolemic shock	Pneumonia	Ventricular tachycardia
Carcinogenesis	Diarrhea			Volume depletion

If the certifier is unable to determine the etiology of a process such as those shown above, the process must be qualified as being of an unknown, undetermined, probable, presumed, or unspecified etiology so it is clear that a distinct etiology was not inadvertently or carelessly omitted.

The following conditions and types of death might seem to be specific or natural but when the medical history is examined further may be found to be complications of an injury or poisoning (possibly occurring long ago). Such cases should be reported to the medical examiner/coroner.

Asphyxia	Epidural hematoma	Hip fracture	Pulmonary emboli	Subdural hematoma
Bolus	Exsanguination	Hyperthermia	Seizure disorder	Surgery
Choking	Fall	Hypothermia	Sepsis	Thermal burns/chemical burns
Drug or alcohol overdose/drug or alcohol abuse	Fracture	Open reduction of fracture	Subarachnoid hemorrhage	

Contact your State vital statistics office for questions related to writing cause-of-death statements. Additional instructional material on writing cause-of-death statements including handbooks, summary instructions, and tutorials are available online at www.thename.org or www.cdc.gov/nchswww/about/major/dvs/handbk.htm, or by request from NCHS, Room 7318, 3311 Toledo Road, Hyattsville, Maryland 20782-2003.

32. **PART I.** Enter the chain of events--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	Approximate interval: Onset to death

CAUSE OF DEATH (See instructions and examples)

		Approximate interval: Onset to death
IMMEDIATE CAUSE (Final disease or condition --------> resulting in death)	a. _____ Due to (or as a consequence of):	2 Days
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the **UNDERLYING CAUSE** (disease or injury that initiated the events resulting in death) **LAST**	b. _____ Due to (or as a consequence of):	7 weeks
	c. _____ Due to (or as a consequence of):	7 weeks
	d. _____	7 weeks

PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ☐ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ☐ Probably ☐ No ☐ Unknown	36. IF FEMALE: ☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	37. MANNER OF DEATH ☐ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

38. DATE OF INJURY (Mo/Day/Yr) (Spell Month)	39. TIME OF INJURY	40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area)	41. INJURY AT WORK? ☐ Yes ☐ No

42. LOCATION OF INJURY: State: Missouri	City or Town:
Street & Number: mile marker 17 on state route 46a	Apartment No.:	Zip Code:

43. DESCRIBE HOW INJURY OCCURRED:	44. IF TRANSPORTATION INJURY, SPECIFY: ☐ Driver/Operator ☐ Passenger ☐ Pedestrian ☐ Other (Specify)

1A. Please state if the manner of death was accidental, homicidal, suicidal, natural, or undetermined. _____.
If undetermined, was there a pending investigation? _____.
1B. State what happened to the decedent, describe in detail the external event that caused the death.

_____
_____
_____

2. How did the decedent commit suicide? (If applicable, state type of weapon, poison, medication etc.)

_____
_____

3. Describe in detail the external event (_____) that eventually brought about the medical complications which caused the death.

_____
_____
_____.

4. Place of occurrence (home, residential institution, public administrative area, sports area, street and highway, trade and service areas, industrial and construction area, farm, other -please specify-)

_____

_____, M.D.
(Signature of Certifying Physician)

Please provide your office phone:_____ fax:_____

(Please see other side)

Instructions on Medical Certification of Causes of Death

Example of properly completed medical certification

CAUSE OF DEATH (See instructions and examples)	Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.	

IMMEDIATE CAUSE (Final disease or condition --------> resulting in death)

a. <u>Penetration brain injury</u>   **2 Days**
Due to (or as a consequence of):

Sequentially list conditions, if any, leading to the cause listed on line a. Enter the **UNDERLYING CAUSE** (disease or injury that initiated the events resulting in death) **LAST**

b. <u>Gunshot wound to head</u>   **7 weeks**
Due to (or as a consequence of):

c. _____   _____
Due to (or as a consequence of):

d. _____   _____

PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ■ Yes ☐ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ■ Yes ☐ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH?	36. IF FEMALE:	37. MANNER OF DEATH
☐ Yes ☐ Probably ■ No ☐ Unknown	☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	☐ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ■ Suicide ☐ Could not be determined

38. DATE OF INJURY (Mo/Day/Yr) (Spell Month) May 10, 2005	39. TIME OF INJURY 2100	40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area) decedent's home	41. INJURY AT WORK? ☐Yes ■ No

42. LOCATION OF INJURY: State: Alabama	City or Town: near Alexandria
Street & Number: 3129 Discus Avenue	Apartment No.:	Zip Code: 36102-8888

43. DESCRIBE HOW INJURY OCCURRED: Cleaning gun but had contact wound to right temple	44. IF TRANSPORTATION INJURY, SPECIFY: ☐ Driver/Operator ☐ Passenger ☐ Pedestrian ☐ Other (Specify)

ITEM 32 – CAUSE OF DEATH (See example above)

Accurate cause of death information is important
•to the public health community in evaluating and improving the health of all citizens, and
•often to the family, now and in the future, and to the person settling the decedent's estate.

The cause-of-death section consists of two parts. **Part I** is for reporting a chain of events leading directly to death, with the **immediate cause** of death (the final disease, injury, or complication directly causing death) on line a and the **underlying cause** of death (the disease or injury that initiated the chain of events that led directly and inevitably to death) on the lowest used line. **Part II** is for reporting all other significant diseases, conditions, or injuries that contributed to death but which did not result in the underlying cause of death given in **Part I**. **The cause-of-death information should be YOUR best medical OPINION.** A condition can be listed as "probable" even if it has not been definitively diagnosed.

Take care to make the entry legible. Use a computer printer with high resolution, typewriter with good black ribbon and clean keys, or print legibly using permanent **black** ink in completing the CAUSE OF DEATH Section. **Do not abbreviate** conditions entered in section.

Part I (Chain of events leading directly to death)

•Only **one** cause should be entered on each line. Line (a) **MUST ALWAYS** have an entry. **DO NOT** leave blank. Additional lines may be added if necessary.
•If the condition on Line (a) resulted from an underlying condition, put the underlying condition on Line (b), and so on, until the full sequence is reported. **ALWAYS** enter the **underlying cause of death** on the lowest used line in Part I.
 •For each cause indicate the best estimate of the interval between the presumed onset and the date of death. The terms "unknown" or "approximately" may be used. General terms, such as minutes, hours, or days, are acceptable, if necessary. **DO NOT** leave blank.
 •The terminal event (for example, cardiac arrest or respiratory arrest) should not be used. If a mechanism of death seems most appropriate to you for line (a), then you must always list its cause(s) on the line(s) below it (for example, cardiac arrest **due to** coronary artery atherosclerosis *or* cardiac arrest **due to** blunt impact to chest).
• If an organ system failure such as congestive heart failure, hepatic failure, renal failure, or respiratory failure is listed as a cause of death, always report its etiology on the line(s) beneath it (for example, renal failure **due to** Type I diabetes mellitus).
•When indicating neoplasms as a cause of death, include the following: 1) primary site *or* that the primary site is unknown, 2) benign or malignant, 3) cell type *or* that the cell type is unknown, 4) grade of neoplasm, and 5) part or lobe of organ affected. (For example, a primary well-differentiated squamous cell carcinoma, lung, left upper lobe.)

•Always report the fatal injury (for example, stab wound of chest), the trauma (for example, transection of subclavian vein), and impairment of function (for example, air embolism).

Part II (Other significant conditions)
•Enter all diseases or conditions contributing to death that were not reported in the chain of events in Part I and that did not result in the **underlying cause of death**.
•If two or more possible sequences resulted in death, or if two conditions seem to have added together, report in Part I the one that, in your opinion, most directly caused death. Report in Part II the other conditions or diseases.

CHANGES TO CAUSE OF DEATH
Should additional medical information or autopsy findings become available that would change the cause of death originally reported, the original death certificate should be amended by the certifying physician by **immediately** reporting the revised cause of death to the State Vital Records Office.

ITEMS ON WHEN DEATH OCCURRED
Items 24-25 and 29-31 should always be completed. If the facility uses a separate pronouncer or other person to indicate that death has taken place with another person more familiar with the case completing the remainder of the medical portion of the death certificate, the pronouncer completes Items 24-28. If a certifier completes Items 24-25 as well as items 29-49, Items 26-28 may be left blank.

ITEMS 24-25, 29-30 – DATE AND TIME OF DEATH
Spell out the name of the month. If the exact date of death is unknown, enter the **approximate** date. If the date cannot be approximated, enter the date the body is found and identify as **date found**. Date pronounced and actual date may be the same. Enter the exact hour and minutes according to a 24-hour clock; estimates may be provided with "Approx." placed before the time.

ITEMS 33-34 - AUTOPSY
•33 - Enter "Yes" if either a partial or full autopsy was performed. Otherwise enter "No."
•34 - Enter "Yes" if autopsy findings were available to complete the cause of death; otherwise enter "No". Leave item blank if no autopsy was performed.

ITEM 35 - DID TOBACCO USE CONTRIBUTE TO DEATH?
Check "yes" if, in your opinion, the use of tobacco contributed to death. Tobacco use may contribute to deaths due to a wide variety of diseases; for example, tobacco use contributes to many deaths due to emphysema or lung cancer and some heart disease and cancers of the head and neck. Check "no" if, in your clinical judgment, tobacco use did not contribute to this particular death.

ITEM 36 - IF FEMALE, WAS DECEDENT PREGNANT AT TIME OF DEATH OR WITHIN PAST YEAR?
This information is important in determining pregnancy-related mortality.

ITEM 37 - MANNER OF DEATH
•Always check Manner of Death, which is important: 1) in determining accurate causes of death; 2) in processing insurance claims; and 3) in statistical studies of injuries and death.
•Indicate "Pending investigation" if the manner of death cannot be determined whether due to an accident, suicide, or homicide within the statutory time limit for filing the death certificate. This should be changed later to one of the other terms.
•Indicate "Could not be Determined" **ONLY** when it is impossible to determine the manner of death.

ITEMS 38-44 - ACCIDENT OR INJURY – to be filled out in all cases of deaths due to injury or poisoning.
•38 - Enter the exact month, day, and year of injury. Spell out the name of the month. **DO NOT** use a number for the month. (Remember, the date of injury may differ from the date of death.) Estimates may be provided with "Approx." placed before the date.
•39 **-** Enter the exact hour and minutes of injury or use your best estimate. Use a 24-hour clock.
•40 - Enter the general place (such as restaurant, vacant lot, or home) where the injury occurred. **DO NOT** enter firm or organization names. (For example, enter "factory", **not** "Standard Manufacturing, Inc.")
•41 - Complete if anything other than natural disease is mentioned in Part I or Part II of the medical certification, including homicides, suicides, and accidents. This includes all motor vehicle deaths. The item **must** be completed for decedents ages 14 years or over and may be completed for those less than 14 years of age if warranted. Enter "Yes" if the injury occurred at work. Otherwise enter "No". An injury may occur at work regardless of whether the injury occurred in the course of the decedent's "usual" occupation. Examples of injury at work and injury not at work follow:

Injury at work	Injury not at work
Injury while working or in vocational training on job premises	Injury while engaged in personal recreational activity on job premises
Injury while on break or at lunch or in parking lot on job premises	Injury while a visitor (not on official work business) to job premises
Injury while working for pay or compensation, including at home	Homemaker working at homemaking activities
Injury while working as a volunteer law enforcement official etc.	Student in school
Injury while traveling on business, including to/from business contacts	Working for self for no profit (mowing yard, repairing own roof, hobby)
	Commuting to or from work

•42 - Enter the complete address where the injury occurred including zip code.
•43 - Enter a brief but specific and clear description of how the injury occurred. Explain the circumstances or cause of the injury. Specify **type of gun** or **type of vehicle** (e.g., car, bulldozer, train, etc.) when relevant to circumstances. Indicate if more than one vehicle involved; specify type of vehicle decedent was in.
•44 -Specify role of decedent (e.g. driver, passenger). Driver/operator and passenger should be designated for modes other than motor vehicles such as bicycles. Other applies to watercraft, aircraft, animal, or people attached to outside of vehicles (e.g. surfers).

<u>Rationale</u>: Motor vehicle accidents are a major cause of unintentional deaths; details will help determine effectiveness of current safety features and laws.

Common problems in death certification

The **elderly decedent** should have a clear and distinct etiological sequence for cause of death, if possible. Terms such as senescence, infirmity, old age, and advanced age have little value for public health or medical research. Age is recorded elsewhere on the certificate. When a number of conditions resulted in death, the physician should choose the single sequence that, in his or her opinion, best describes the process leading to death, and place any other pertinent conditions in Part II. If after careful consideration the physician cannot determine a sequence that ends in death, then the medical examiner or coroner should be consulted about conducting an investigation or providing assistance in completing the cause of death.

The **infant decedent** should have a clear and distinct etiological sequence for cause of death, if possible. "Prematurity" should not be entered without explaining the etiology of prematurity. Maternal conditions may have initiated or affected the sequence that resulted in infant death, and such maternal causes should be reported in addition to the infant causes on the infant's death certificate (e.g., Hyaline membrane disease **due to** prematurity, 28 weeks **due to** placental abruption **due to** blunt trauma to mother's abdomen).

When **SIDS** is suspected, a complete investigation should be conducted, typically by a medical examiner or coroner. If the infant is under 1 year of age, no cause of death is determined after scene investigation, clinical history is reviewed, and a complete autopsy is performed, then the death can be reported as Sudden Infant Death Syndrome.

When processes such as the following are reported, additional information about the etiology should be reported:

Abscess	Carcinomatosis	Disseminated intra vascular	Hyponatremia	Pulmonary arrest
Abdominal hemorrhage	Cardiac arrest	coagulopathy	Hypotension	Pulmonary edema
Adhesions	Cardiac dysrhythmia	Dysrhythmia	Immunosuppression	Pulmonary embolism
Adult respiratory distress syndrome	Cardiomyopathy	End-stage liver disease	Increased intra cranial pressure	Pulmonary insufficiency
Acute myocardial infarction	Cardiopulmonary arrest	End-stage renal disease	Intra cranial hemorrhage	Renal failure
Altered mental status	Cellulitis	Epidural hematoma	Malnutrition	Respiratory arrest
Anemia	Cerebral edema	Exsanguination	Metabolic encephalopathy	Seizures
Anoxia	Cerebrovascular accident	Failure to thrive	Multi-organ failure	Sepsis
Anoxic encephalopathy	Cerebellar tonsillar herniation	Fracture	Multi-system organ failure	Septic shock
Arrhythmia	Chronic bedridden state	Gangrene	Myocardial infarction	Shock
Ascites	Cirrhosis	Gastrointestinal hemorrhage	Necrotizing soft-tissue infection	Starvation
Aspiration	Coagulopathy	Heart failure	Old age	Subdural hematoma
Atrial fibrillation	Compression fracture	Hemothorax	Open (or closed) head injury	Subarachnoid hemorrhage
Bacteremia	Congestive heart failure	Hepatic failure	Paralysis	Sudden death
Bedridden	Convulsions	Hepatitis	Pancytopenia	Thrombocytopenia
Biliary obstruction	Decubiti	Hepatorenal syndrome	Perforated gallbladder	Uncal herniation
Bowel obstruction	Dehydration	Hyperglycemia	Peritonitis	Urinary tract infection
Brain injury	Dementia (when not	Hyperkalemia	Pleural effusions	Ventricular fibrillation
Brain stem herniation	otherwise specified)	Hypovolemic shock	Pneumonia	Ventricular tachycardia
Carcinogenesis	Diarrhea			Volume depletion

If the certifier is unable to determine the etiology of a process such as those shown above, the process must be qualified as being of an unknown, undetermined, probable, presumed, or unspecified etiology so it is clear that a distinct etiology was not inadvertently or carelessly omitted.

The following conditions and types of death might seem to be specific or natural but when the medical history is examined further may be found to be complications of an injury or poisoning (possibly occurring long ago). Such cases should be reported to the medical examiner/coroner.

Asphyxia	Epidural hematoma	Hip fracture	Pulmonary emboli	Subdural hematoma
Bolus	Exsanguination	Hyperthermia	Seizure disorder	Surgery
Choking	Fall	Hypothermia	Sepsis	Thermal burns/chemical burns
Drug or alcohol overdose/drug or	Fracture	Open reduction of fracture	Subarachnoid hemorrhage	
alcohol abuse				

Contact your State vital statistics office for questions related to writing cause-of-death statements. Additional instructional material on writing cause-of-death statements including handbooks, summary instructions, and tutorials are available online at www.thename.org or www.cdc.gov/nchswww/about/major/dvs/handbk.htm, or by request from NCHS, Room 7318, 3311 Toledo Road, Hyattsville, Maryland 20782-2003.

32. **CAUSE OF DEATH (See instructions and examples)**	Approximate interval: Onset to death

PART I. Enter the chain of events--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.

IMMEDIATE CAUSE (Final disease or condition --------> resulting in death)

a. _____
Due to (or as a consequence of):

Sequentially list conditions, if any, leading to the cause listed on line a. Enter the **UNDERLYING CAUSE** (disease or injury that initiated the events resulting in death) **LAST**

b. _____
Due to (or as a consequence of):

c. _____
Due to (or as a consequence of):

d. _____

PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I

33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No

34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ☐ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH?
☐ Yes ☐ Probably
☐ No ☐ Unknown

36. IF FEMALE:
☐ Not pregnant within past year
☐ Pregnant at time of death
☐ Not pregnant, but pregnant within 42 days of death
☐ Not pregnant, but pregnant 43 days to 1 year before death
☐ Unknown if pregnant within the past year

37. MANNER OF DEATH
☐ Natural ☐ Homicide
☐ Accident ☐ Pending Investigation
☐ Suicide ☐ Could not be determined

38. DATE OF INJURY (Mo/Day/Yr) (Spell Month)

39. TIME OF INJURY

40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area)

41. INJURY AT WORK? ☐ Yes ☐ No

42. LOCATION OF INJURY: State: _____ City or Town: _____
Street & Number: _____ Apartment No.: _____ Zip Code: _____

43. DESCRIBE HOW INJURY OCCURRED:

44. IF TRANSPORTATION INJURY, SPECIFY:
☐ Driver/Operator
☐ Passenger
☐ Pedestrian
☐ Other (Specify)

1A. Please state if the manner of death was accidental, homicidal, suicidal, natural, or undetermined. _____.
If undetermined, was there a pending investigation? _____.

1B. State what happened to the decedent, describe in detail the external event that caused the death.
_____
_____
_____
_____

2. How was the decedent assaulted? (If applicable, state type of weapon, poison, medication etc.)
_____
_____

3. Describe in detail the external event (_____) that eventually brought about the medical complications which caused the death.
_____
_____
_____.

4. Place of occurrence (home, residential institution, public administrative area, sports area, street and highway, trade and service areas, industrial and construction area, farm, other -please specify-)
_____

_____ , M.D.

(Signature of Certifying Physician)

Please provide your office phone:_____ fax:_____

(Please see other side)

Instructions on Medical Certification of Causes of Death

Example of properly completed medical certification

<table>
<tr>
<td colspan="2">CAUSE OF DEATH (See instructions and examples)</td>
<td>Approximate interval:
Onset to death</td>
</tr>
<tr>
<td colspan="2">32. PART I. Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.</td>
<td></td>
</tr>
<tr>
<td>IMMEDIATE CAUSE (Final disease or condition --------> resulting in death)</td>
<td>a. <u>Intrathoracic hemorrhage</u>
   Due to (or as a consequence of):</td>
<td>15 hours</td>
</tr>
<tr>
<td rowspan="3">Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST</td>
<td>b. <u>Stab wound of lung</u>
   Due to (or as a consequence of):</td>
<td>15 hours</td>
</tr>
<tr>
<td>c. _____
   Due to (or as a consequence of):</td>
<td>_____</td>
</tr>
<tr>
<td>d. _____</td>
<td>_____</td>
</tr>
<tr>
<td colspan="2">PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I

   Several stab wounds of abdomen and extremities</td>
<td>33. WAS AN AUTOPSY PERFORMED?
   ■ Yes □ No
34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ■ Yes □ No</td>
</tr>
<tr>
<td>35. DID TOBACCO USE CONTRIBUTE TO DEATH?

  □ Yes □ Probably

  ■ No □ Unknown</td>
<td>36. IF FEMALE:
□ Not pregnant within past year
□ Pregnant at time of death
□ Not pregnant, but pregnant within 42 days of death
□ Not pregnant, but pregnant 43 days to 1 year before death
□ Unknown if pregnant within the past year</td>
<td>37. MANNER OF DEATH

□ Natural ■ Homicide
□ Accident □ Pending Investigation
□ Suicide □ Could not be determined</td>
</tr>
<tr>
<td>38. DATE OF INJURY (Mo/Day/Yr) (Spell Month)

August 23, 2006</td>
<td>39. TIME OF INJURY

0330   40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area)

   Alley</td>
<td>41. INJURY AT WORK?

□Yes ■ No</td>
</tr>
<tr>
<td colspan="3">42. LOCATION OF INJURY: State: Maryland   City or Town: Davidsonville

   Street & Number: alley between 331 & 333 Smith Street   Apartment No.:   Zip Code: 21035-3330</td>
</tr>
<tr>
<td colspan="2">43. DESCRIBE HOW INJURY OCCURRED:

   Stabbed by a sharp instrument</td>
<td>44. IF TRANSPORTATION INJURY, SPECIFY:

□ Driver/Operator
□ Passenger
□ Pedestrian
□ Other (Specify)</td>
</tr>
</table>

ITEM 32 – CAUSE OF DEATH (See example above)

Accurate cause of death information is important
•to the public health community in evaluating and improving the health of all citizens, and
•often to the family, now and in the future, and to the person settling the decedent's estate.

The cause-of-death section consists of two parts. **Part I** is for reporting a chain of events leading directly to death, with the **immediate cause** of death (the final disease, injury, or complication directly causing death) on line a and the **underlying cause** of death (the disease or injury that initiated the chain of events that led directly and inevitably to death) on the lowest used line. **Part II** is for reporting all other significant diseases, conditions, or injuries that contributed to death but which did not result in the underlying cause of death given in **Part I**. **The cause-of-death information should be YOUR best medical OPINION.** A condition can be listed as "probable" even if it has not been definitively diagnosed.

Take care to make the entry legible. Use a computer printer with high resolution, typewriter with good black ribbon and clean keys, or print legibly using permanent **black** ink in completing the CAUSE OF DEATH Section. **Do not abbreviate** conditions entered in section.

Part I (Chain of events leading directly to death)

•Only **one** cause should be entered on each line. Line (a) **MUST ALWAYS** have an entry. **DO NOT** leave blank. Additional lines may be added if necessary.
•If the condition on Line (a) resulted from an underlying condition, put the underlying condition on Line (b), and so on, until the full sequence is reported. **ALWAYS** enter the **underlying cause of death** on the lowest used line in Part I.
•For each cause indicate the best estimate of the interval between the presumed onset and the date of death. The terms "unknown" or "approximately" may be used. General terms, such as minutes, hours, or days, are acceptable, if necessary. **DO NOT** leave blank.
•The terminal event (for example, cardiac arrest or respiratory arrest) should not be used. If a mechanism of death seems most appropriate to you for line (a), then you must always list its cause(s) on the line(s) below it (for example, cardiac arrest **due to** coronary artery atherosclerosis *or* cardiac arrest **due to** blunt impact to chest).
• If an organ system failure such as congestive heart failure, hepatic failure, renal failure, or respiratory failure is listed as a cause of death, always report its etiology on the line(s) beneath it (for example, renal failure **due to** Type I diabetes mellitus).
•When indicating neoplasms as a cause of death, include the following: 1) primary site *or* that the primary site is unknown, 2) benign or malignant, 3) cell type *or* that the cell type is unknown, 4) grade of neoplasm, and 5) part or lobe of organ affected. (For example, a primary well-differentiated squamous cell carcinoma, lung, left upper lobe.)

•Always report the fatal injury (for example, stab wound of chest), the trauma (for example, transection of subclavian vein), and impairment of function (for example, air embolism).

Part II (Other significant conditions)
•Enter all diseases or conditions contributing to death that were not reported in the chain of events in Part I and that did not result in the **underlying cause of death**.
•If two or more possible sequences resulted in death, or if two conditions seem to have added together, report in Part I the one that, in your opinion, most directly caused death. Report in Part II the other conditions or diseases.

CHANGES TO CAUSE OF DEATH
Should additional medical information or autopsy findings become available that would change the cause of death originally reported, the original death certificate should be amended by the certifying physician by **immediately** reporting the revised cause of death to the State Vital Records Office.

ITEMS ON WHEN DEATH OCCURRED
Items 24-25 and 29-31 should always be completed. If the facility uses a separate pronouncer or other person to indicate that death has taken place with another person more familiar with the case completing the remainder of the medical portion of the death certificate, the pronouncer completes Items 24-28. If a certifier completes Items 24-25 as well as items 29-49, Items 26-28 may be left blank.

ITEMS 24-25, 29-30 – DATE AND TIME OF DEATH
Spell out the name of the month. If the exact date of death is unknown, enter the **approximate** date. If the date cannot be approximated, enter the date the body is found and identify as **date found**. Date pronounced and actual date may be the same. Enter the exact hour and minutes according to a 24-hour clock; estimates may be provided with "Approx." placed before the time.

ITEMS 33-34 - AUTOPSY
•33 - Enter "Yes" if either a partial or full autopsy was performed. Otherwise enter "No."
•34 - Enter "Yes" if autopsy findings were available to complete the cause of death; otherwise enter "No". Leave item blank if no autopsy was performed.

ITEM 35 - DID TOBACCO USE CONTRIBUTE TO DEATH?
Check "yes" if, in your opinion, the use of tobacco contributed to death. Tobacco use may contribute to deaths due to a wide variety of diseases; for example, tobacco use contributes to many deaths due to emphysema or lung cancer and some heart disease and cancers of the head and neck. Check "no" if, in your clinical judgment, tobacco use did not contribute to this particular death.

ITEM 36 - IF FEMALE, WAS DECEDENT PREGNANT AT TIME OF DEATH OR WITHIN PAST YEAR?
This information is important in determining pregnancy-related mortality.

ITEM 37 - MANNER OF DEATH
•Always check Manner of Death, which is important: 1) in determining accurate causes of death; 2) in processing insurance claims; and 3) in statistical studies of injuries and death.
•Indicate "Pending investigation" if the manner of death cannot be determined whether due to an accident, suicide, or homicide within the statutory time limit for filing the death certificate. This should be changed later to one of the other terms.
•Indicate "Could not be Determined" **ONLY** when it is impossible to determine the manner of death.

ITEMS 38-44 - ACCIDENT OR INJURY – to be filled out in all cases of deaths due to injury or poisoning.
•38 - Enter the exact month, day, and year of injury. Spell out the name of the month. **DO NOT** use a number for the month. (Remember, the date of injury may differ from the date of death.) Estimates may be provided with "Approx." placed before the date.
•39 **-** Enter the exact hour and minutes of injury or use your best estimate. Use a 24-hour clock.
•40 - Enter the general place (such as restaurant, vacant lot, or home) where the injury occurred. **DO NOT** enter firm or organization names. (For example, enter "factory", **not** "Standard Manufacturing, Inc.")
•41 - Complete if anything other than natural disease is mentioned in Part I or Part II of the medical certification, including homicides, suicides, and accidents. This includes all motor vehicle deaths. The item **must** be completed for decedents ages 14 years or over and may be completed for those less than 14 years of age if warranted. Enter "Yes" if the injury occurred at work. Otherwise enter "No". An injury may occur at work regardless of whether the injury occurred in the course of the decedent's "usual" occupation. Examples of injury at work and injury not at work follow:

Injury at work	**Injury not at work**
Injury while working or in vocational training on job premises	Injury while engaged in personal recreational activity on job premises
Injury while on break or at lunch or in parking lot on job premises	Injury while a visitor (not on official work business) to job premises
Injury while working for pay or compensation, including at home	Homemaker working at homemaking activities
Injury while working as a volunteer law enforcement official etc.	Student in school
Injury while traveling on business, including to/from business contacts	Working for self for no profit (mowing yard, repairing own roof, hobby)
	Commuting to or from work

•42 - Enter the complete address where the injury occurred including zip code.
•43 - Enter a brief but specific and clear description of how the injury occurred. Explain the circumstances or cause of the injury. Specify **type of gun** or **type of vehicle** (e.g., car, bulldozer, train, etc.) when relevant to circumstances. Indicate if more than one vehicle involved; specify type of vehicle decedent was in.
•44 -Specify role of decedent (e.g. driver, passenger). Driver/operator and passenger should be designated for modes other than motor vehicles such as bicycles. Other applies to watercraft, aircraft, animal, or people attached to outside of vehicles (e.g. surfers).

<u>Rationale</u>: Motor vehicle accidents are a major cause of unintentional deaths; details will help determine effectiveness of current safety features and laws.

Common problems in death certification
The **elderly decedent** should have a clear and distinct etiological sequence for cause of death, if possible. Terms such as senescence, infirmity, old age, and advanced age have little value for public health or medical research. Age is recorded elsewhere on the certificate. When a number of conditions resulted in death, the physician should choose the single sequence that, in his or her opinion, best describes the process leading to death, and place any other pertinent conditions in Part II. If after careful consideration the physician cannot determine a sequence that ends in death, then the medical examiner or coroner should be consulted about conducting an investigation or providing assistance in completing the cause of death.

The **infant decedent** should have a clear and distinct etiological sequence for cause of death, if possible. "Prematurity" should not be entered without explaining the etiology of prematurity. Maternal conditions may have initiated or affected the sequence that resulted in infant death, and such maternal causes should be reported in addition to the infant causes on the infant's death certificate (e.g., Hyaline membrane disease **due to** prematurity, 28 weeks **due to** placental abruption **due to** blunt trauma to mother's abdomen).

When **SIDS** is suspected, a complete investigation should be conducted, typically by a medical examiner or coroner. If the infant is under 1 year of age, no cause of death is determined after scene investigation, clinical history is reviewed, and a complete autopsy is performed, then the death can be reported as Sudden Infant Death Syndrome.

When processes such as the following are reported, additional information about the etiology should be reported:

Abscess	Carcinomatosis	Disseminated intra vascular	Hyponatremia	Pulmonary arrest
Abdominal hemorrhage	Cardiac arrest	coagulopathy	Hypotension	Pulmonary edema
Adhesions	Cardiac dysrhythmia	Dysrhythmia	Immunosuppression	Pulmonary embolism
Adult respiratory distress syndrome	Cardiomyopathy	End-stage liver disease	Increased intra cranial pressure	Pulmonary insufficiency
Acute myocardial infarction	Cardiopulmonary arrest	End-stage renal disease	Intra cranial hemorrhage	Renal failure
Altered mental status	Cellulitis	Epidural hematoma	Malnutrition	Respiratory arrest
Anemia	Cerebral edema	Exsanguination	Metabolic encephalopathy	Seizures
Anoxia	Cerebrovascular accident	Failure to thrive	Multi-organ failure	Sepsis
Anoxic encephalopathy	Cerebellar tonsillar herniation	Fracture	Multi-system organ failure	Septic shock
Arrhythmia	Chronic bedridden state	Gangrene	Myocardial infarction	Shock
Ascites	Cirrhosis	Gastrointestinal hemorrhage	Necrotizing soft-tissue infection	Starvation
Aspiration	Coagulopathy	Heart failure	Old age	Subdural hematoma
Atrial fibrillation	Compression fracture	Hemothorax	Open (or closed) head injury	Subarachnoid hemorrhage
Bacteremia	Congestive heart failure	Hepatic failure	Paralysis	Sudden death
Bedridden	Convulsions	Hepatitis	Pancytopenia	Thrombocytopenia
Biliary obstruction	Decubiti	Hepatorenal syndrome	Perforated gallbladder	Uncal herniation
Bowel obstruction	Dehydration	Hyperglycemia	Peritonitis	Urinary tract infection
Brain injury	Dementia (when not	Hyperkalemia	Pleural effusions	Ventricular fibrillation
Brain stem herniation	otherwise specified)	Hypovolemic shock	Pneumonia	Ventricular tachycardia
Carcinogenesis	Diarrhea			Volume depletion

If the certifier is unable to determine the etiology of a process such as those shown above, the process must be qualified as being of an unknown, undetermined, probable, presumed, or unspecified etiology so it is clear that a distinct etiology was not inadvertently or carelessly omitted.

The following conditions and types of death might seem to be specific or natural but when the medical history is examined further may be found to be complications of an injury or poisoning (possibly occurring long ago). Such cases should be reported to the medical examiner/coroner.

Asphyxia	Epidural hematoma	Hip fracture	Pulmonary emboli	Subdural hematoma
Bolus	Exsanguination	Hyperthermia	Seizure disorder	Surgery
Choking	Fall	Hypothermia	Sepsis	Thermal burns/chemical burns
Drug or alcohol overdose/drug or alcohol abuse	Fracture	Open reduction of fracture	Subarachnoid hemorrhage	

Contact your State vital statistics office for questions related to writing cause-of-death statements. Additional instructional material on writing cause-of-death statements including handbooks, summary instructions, and tutorials are available online at www.thename.org or www.cdc.gov/nchswww/about/major/dvs/handbk.htm, or by request from NCHS, Room 7318, 3311 Toledo Road, Hyattsville, Maryland 20782-2003.

Query Letter 11
(Format)

(Letterhead)

Dear Doctor _____

We are writing this letter to obtain additional information about the cause of death that you certified for

_____, who died _____.

Accurate cause-of-death information is essential, not only to the family of the decedent, but also for medical research,

funding, and resource allocation in our State and at the national level.

In this particular death, we would appreciate your review of the reported sequence of conditions for completeness and

logic. In order to classify this death properly in our statistics, would you please supply the information on the

attachment? We want to assure you that the information you provide us is confidential and will be handled accordingly.

If you have any question or would like to know more about various methods for certifying a cause-of-death statement,

please contact _____. Instructions and an example of a properly

completed death certificate are provided with the attached material.

We appreciate your attention and prompt reply.

Sincerely,

State Registrar/Vital Statistics Cooperative Program

Attachment

Format Query

<table>
<tr>
<td colspan="2">CAUSE OF DEATH (See instructions and examples)</td>
<td>Approximate interval:
Onset to death</td>
</tr>
<tr>
<td colspan="3">32. PART I. Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.</td>
</tr>
<tr>
<td>IMMEDIATE CAUSE (Final
disease or condition -------->
resulting in death)</td>
<td>a. _____
Due to (or as a consequence of):</td>
<td>_____</td>
</tr>
<tr>
<td>Sequentially list conditions,
if any, leading to the cause
listed on line a. Enter the</td>
<td>b. _____
Due to (or as a consequence of):</td>
<td>_____</td>
</tr>
<tr>
<td>UNDERLYING CAUSE
(disease or injury that
initiated the events resulting</td>
<td>c. _____
Due to (or as a consequence of):</td>
<td>_____</td>
</tr>
<tr>
<td>in death) LAST</td>
<td>d. _____</td>
<td>_____</td>
</tr>
</table>

PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I	33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No
	34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? ☐ Yes ☐ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ☐ Probably ☐ No ☐ Unknown	36. IF FEMALE: ☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	37. MANNER OF DEATH ☐ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined

1. Is the reported sequence of conditions correct (i.e., condition on line a results from condition on line b)? Yes___ No___
   If not, please indicate the correct order with the most recent condition on the top line and the condition starting the sequence on the lowest line:

   _____
   _____
   _____
   _____

2. Is the duration for condition_____ correct? Yes___ No____
   If not, the duration should be _____.

_____ , M.D.
(Signature of Certifying Physician)

Please provide your office phone:_____ fax:_____

(Please see other side)

Instructions on Medical Certification of Causes of Death

Example of properly completed medical certification

CAUSE OF DEATH (See instructions and examples)		Approximate interval: Onset to death
32. **PART I.** Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.		
IMMEDIATE CAUSE (Final disease or condition --------> resulting in death)	a. <u>Rupture of myocardium</u> Due to (or as a consequence of):	<u>Minutes</u>
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the **UNDERLYING CAUSE** (disease or injury that initiated the events resulting in death) **LAST**	b. <u>Acute myocardial infarction</u> Due to (or as a consequence of):	<u>6 days</u>
	c. <u>Coronary artery thrombosis</u> Due to (or as a consequence of):	<u>5 years</u>
	d. <u>Atherosclerotic coronary artery disease</u>	<u>7 years</u>

PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I
 	
      Diabetes, Chronic obstructive pulmonary disease, smoking
		33. WAS AN AUTOPSY PERFORMED?
		      □ Yes ■ No

		34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? □ Yes ■ No

35.   DID TOBACCO USE CONTRIBUTE TO DEATH?
 	
   ■ Yes   □ Probably
 	
   □ No   □ Unknown
	36. IF FEMALE:
	   ■ Not pregnant within past year
	   □ Pregnant at time of death
	   □ Not pregnant, but pregnant within 42 days of death
	   □ Not pregnant, but pregnant 43 days to 1 year before death
	   □ Unknown if pregnant within the past year
		37. MANNER OF DEATH
		
		   ■ Natural □ Homicide
		   □ Accident □ Pending Investigation
		   □ Suicide □ Could not be determined

ITEM 32 – CAUSE OF DEATH (See example above)

Accurate cause of death information is important
•to the public health community in evaluating and improving the health of all citizens, and
•often to the family, now and in the future, and to the person settling the decedent's estate.

The cause-of-death section consists of two parts. **Part I** is for reporting a chain of events leading directly to death, with the **immediate cause** of death (the final disease, injury, or complication directly causing death) on line a and the **underlying cause** of death (the disease or injury that initiated the chain of events that led directly and inevitably to death) on the lowest used line. **Part II** is for reporting all other significant diseases, conditions, or injuries that contributed to death but which did not result in the underlying cause of death given in **Part I**. **The cause-of-death information should be YOUR best medical OPINION.** A condition can be listed as "probable" even if it has not been definitively diagnosed.

Take care to make the entry legible. Use a computer printer with high resolution, typewriter with good black ribbon and clean keys, or print legibly using permanent **black** ink in completing the CAUSE OF DEATH Section. **Do not abbreviate** conditions entered in section.

<u>Part I</u> (Chain of events leading directly to death)

•Only **one** cause should be entered on each line. <u>Line (a)</u> **MUST ALWAYS** have an entry.   **DO NOT** leave blank. Additional lines may be added if necessary.
•If the condition on <u>Line (a)</u> resulted from an underlying condition, put the underlying condition on <u>Line (b)</u>, and so on, until the full sequence is reported. **ALWAYS** enter the **underlying cause of death** on the <u>lowest used line</u> in Part I.
 •For each cause indicate the best estimate of the interval between the presumed onset and the date of death. The terms "unknown" or "approximately" may be used. General terms, such as minutes, hours, or days, are acceptable, if necessary. **DO NOT** leave blank.
 •The terminal event (for example, cardiac arrest or respiratory arrest) should not be used. If a mechanism of death seems most appropriate to you for line (a), then you must always list its cause(s) on the line(s) below it (for example, cardiac arrest **due to** coronary artery atherosclerosis *or* cardiac arrest **due to** blunt impact to chest).
• If an organ system failure such as congestive heart failure, hepatic failure, renal failure, or respiratory failure is listed as a cause of death, always report its etiology on the line(s) beneath it (for example, renal failure **due to** Type I diabetes mellitus).
•When indicating neoplasms as a cause of death, include the following: 1) primary site *or* that the primary site is unknown, 2) benign or malignant, 3) cell type *or* that the cell type is unknown, 4) grade of neoplasm, and 5) part or lobe of organ affected. (For example, a primary well-differentiated squamous cell carcinoma, lung, left upper lobe.)
•Always report the fatal injury (for example, stab wound of chest), the trauma (for example, transection of subclavian vein), and impairment of function (for example, air embolism).

Part II (Other significant conditions)

•Enter all diseases or conditions contributing to death that were not reported in the chain of events in Part I and that did not result in the **underlying cause of death**.
•If two or more possible sequences resulted in death, or if two conditions seem to have added together, report in Part I the one that, in your opinion, most directly caused death. Report in Part II the other conditions or diseases.

CHANGES TO CAUSE OF DEATH

Should additional medical information or autopsy findings become available that would change the cause of death originally reported, the original death certificate should be amended by the certifying physician by **immediately** reporting the revised cause of death to the State Vital Records Office.

ITEMS ON WHEN DEATH OCCURRED

Items 24-25 and 29-31 should always be completed. If the facility uses a separate pronouncer or other person to indicate that death has taken place with another person more familiar with the case completing the remainder of the medical portion of the death certificate, the pronouncer completes Items 24-28. If a certifier completes Items 24-25 as well as items 29-49, Items 26-28 may be left blank.

ITEMS 24-25, 29-30 – DATE AND TIME OF DEATH

Spell out the name of the month. If the exact date of death is unknown, enter the **approximate** date. If the date cannot be approximated, enter the date the body is found and identify as **date found**. Date pronounced and actual date may be the same. Enter the exact hour and minutes according to a 24-hour clock; estimates may be provided with "Approx." placed before the time.

ITEMS 33-34 - AUTOPSY

•33 - Enter "Yes" if either a partial or full autopsy was performed. Otherwise enter "No."
•34 - Enter "Yes" if autopsy findings were available to complete the cause of death; otherwise enter "No". Leave item blank if no autopsy was performed.

ITEM 35 - DID TOBACCO USE CONTRIBUTE TO DEATH?

Check "yes" if, in your opinion, the use of tobacco contributed to death. Tobacco use may contribute to deaths due to a wide variety of diseases; for example, tobacco use contributes to many deaths due to emphysema or lung cancer and some heart disease and cancers of the head and neck. Check "no" if, in your clinical judgment, tobacco use did not contribute to this particular death.

ITEM 36 - IF FEMALE, WAS DECEDENT PREGNANT AT TIME OF DEATH OR WITHIN PAST YEAR?

This information is important in determining pregnancy-related mortality.

ITEM 37 - MANNER OF DEATH

•Always check Manner of Death, which is important: 1) in determining accurate causes of death; 2) in processing insurance claims; and 3) in statistical studies of injuries and death.
•Indicate "Pending investigation" if the manner of death cannot be determined whether due to an accident, suicide, or homicide within the statutory time limit for filing the death certificate. This should be changed later to one of the other terms.
•Indicate "Could not be Determined" **ONLY** when it is impossible to determine the manner of death.

ITEMS 38-44 - ACCIDENT OR INJURY – to be filled out in all cases of deaths due to injury or poisoning.

•38 - Enter the exact month, day, and year of injury. Spell out the name of the month. **DO NOT** use a number for the month. (Remember, the date of injury may differ from the date of death.) Estimates may be provided with "Approx." placed before the date.
•39 **-** Enter the exact hour and minutes of injury or use your best estimate. Use a 24-hour clock.
•40 - Enter the general place (such as restaurant, vacant lot, or home) where the injury occurred. **DO NOT** enter firm or organization names. (For example, enter "factory", **not** "Standard Manufacturing, Inc.")
•41 - Complete if anything other than natural disease is mentioned in Part I or Part II of the medical certification, including homicides, suicides, and accidents. This includes all motor vehicle deaths. The item **must** be completed for decedents ages 14 years or over and may be completed for those less than 14 years of age if warranted. Enter "Yes" if the injury occurred at work. Otherwise enter "No". An injury may occur at work regardless of whether the injury occurred in the course of the decedent's "usual" occupation. Examples of injury at work and injury not at work follow:

Injury at work	**Injury not at work**
Injury while working or in vocational training on job premises	Injury while engaged in personal recreational activity on job premises
Injury while on break or at lunch or in parking lot on job premises	Injury while a visitor (not on official work business) to job premises
Injury while working for pay or compensation, including at home	Homemaker working at homemaking activities
Injury while working as a volunteer law enforcement official etc.	Student in school
Injury while traveling on business, including to/from business contacts	Working for self for no profit (mowing yard, repairing own roof, hobby)
	Commuting to or from work

•42 - Enter the complete address where the injury occurred including zip code.
•43 - Enter a brief but specific and clear description of how the injury occurred. Explain the circumstances or cause of the injury. Specify **type of gun** or **type of vehicle** (e.g., car, bulldozer, train, etc.) when relevant to circumstances. Indicate if more than one vehicle involved; specify type of vehicle decedent was in.
•44 -Specify role of decedent (e.g. driver, passenger). Driver/operator and passenger should be designated for modes other than motor vehicles such as bicycles. Other applies to watercraft, aircraft, animal, or people attached to outside of vehicles (e.g. surfers).

Rationale: Motor vehicle accidents are a major cause of unintentional deaths; details will help determine effectiveness of current safety features and laws.

Common problems in death certification

The **elderly decedent** should have a clear and distinct etiological sequence for cause of death, if possible. Terms such as senescence, infirmity, old age, and advanced age have little value for public health or medical research. Age is recorded elsewhere on the certificate. When a number of conditions resulted in death, the physician should choose the single sequence that, in his or her opinion, best describes the process leading to death, and place any other pertinent conditions in Part II. If after careful consideration the physician cannot determine a sequence that ends in death, then the medical examiner or coroner should be consulted about conducting an investigation or providing assistance in completing the cause of death.

The **infant decedent** should have a clear and distinct etiological sequence for cause of death, if possible. "Prematurity" should not be entered without explaining the etiology of prematurity. Maternal conditions may have initiated or affected the sequence that resulted in infant death, and such maternal causes should be

reported in addition to the infant causes on the infant's death certificate (e.g., Hyaline membrane disease **due to** prematurity, 28 weeks **due to** placental abruption **due to** blunt trauma to mother's abdomen).

When **SIDS** is suspected, a complete investigation should be conducted, typically by a medical examiner or coroner. If the infant is under 1 year of age, no cause of death is determined after scene investigation, clinical history is reviewed, and a complete autopsy is performed, then the death can be reported as Sudden Infant Death Syndrome.

When processes such as the following are reported, additional information about the etiology should be reported:

Abscess	Carcinomatosis	Disseminated intra vascular	Hyponatremia	Pulmonary arrest
Abdominal hemorrhage	Cardiac arrest	coagulopathy	Hypotension	Pulmonary edema
Adhesions	Cardiac dysrhythmia	Dysrhythmia	Immunosuppression	Pulmonary embolism
Adult respiratory distress syndrome	Cardiomyopathy	End-stage liver disease	Increased intra cranial pressure	Pulmonary insufficiency
Acute myocardial infarction	Cardiopulmonary arrest	End-stage renal disease	Intra cranial hemorrhage	Renal failure
Altered mental status	Cellulitis	Epidural hematoma	Malnutrition	Respiratory arrest
Anemia	Cerebral edema	Exsanguination	Metabolic encephalopathy	Seizures
Anoxia	Cerebrovascular accident	Failure to thrive	Multi-organ failure	Sepsis
Anoxic encephalopathy	Cerebellar tonsillar herniation	Fracture	Multi-system organ failure	Septic shock
Arrhythmia	Chronic bedridden state	Gangrene	Myocardial infarction	Shock
Ascites	Cirrhosis	Gastrointestinal hemorrhage	Necrotizing soft-tissue infection	Starvation
Aspiration	Coagulopathy	Heart failure	Old age	Subdural hematoma
Atrial fibrillation	Compression fracture	Hemothorax	Open (or closed) head injury	Subarachnoid hemorrhage
Bacteremia	Congestive heart failure	Hepatic failure	Paralysis	Sudden death
Bedridden	Convulsions	Hepatitis	Pancytopenia	Thrombocytopenia
Biliary obstruction	Decubiti	Hepatorenal syndrome	Perforated gallbladder	Uncal herniation
Bowel obstruction	Dehydration	Hyperglycemia	Peritonitis	Urinary tract infection
Brain injury	Dementia (when not	Hyperkalemia	Pleural effusions	Ventricular fibrillation
Brain stem herniation	otherwise specified)	Hypovolemic shock	Pneumonia	Ventricular tachycardia
Carcinogenesis	Diarrhea			Volume depletion

If the certifier is unable to determine the etiology of a process such as those shown above, the process must be qualified as being of an unknown, undetermined, probable, presumed, or unspecified etiology so it is clear that a distinct etiology was not inadvertently or carelessly omitted.

The following conditions and types of death might seem to be specific or natural but when the medical history is examined further may be found to be complications of an injury or poisoning (possibly occurring long ago). Such cases should be reported to the medical examiner/coroner.

Asphyxia	Epidural hematoma	Hip fracture	Pulmonary emboli	Subdural hematoma
Bolus	Exsanguination	Hyperthermia	Seizure disorder	Surgery
Choking	Fall	Hypothermia	Sepsis	Thermal burns/chemical burns
Drug or alcohol overdose/drug or alcohol abuse	Fracture	Open reduction of fracture	Subarachnoid hemorrhage	

Contact your State vital statistics office for questions related to writing cause-of-death statements. Additional instructional material on writing cause-of-death statements including handbooks, summary instructions, and tutorials are available online at www.thename.org or www.cdc.gov/nchswww/about/major/dvs/handbk.htm, or by request from NCHS, Room 7318, 3311 Toledo Road, Hyattsville, Maryland 20782-2003.

Appendix C
Infrequent and Rare Causes of Death

ICD-10

code	Cause
A00	Cholera
A01	Typhoid and paratyphoid fevers
A05.1	Botulism (including infant and wound botulism)
A07.0-.2,.8-.9	Other protozoal intestinal diseases (excluding coccidiosis)
A20	Plague
A21	Tularemia
A22	Anthrax
A23	Brucellosis
A24.0	Glanders
A24.1-.4	Melioidosis
A25	Rat-bite fever
A27	Leptospirosis
A30	Leprosy [Hansen's disease]
A33	Tetanus neonatorum
A34	Obstetrical tetanus
A35	Other tetanus (Tetanus)
A36	Diphtheria
A37	Whooping cough
A44	Bartonellosis
A49.1	Streptococcus pneumoniae - less than 5 years of age
A65	Nonvenereal syphilis
A66	Yaws
A67	Pinta [carate]
A68	Relapsing fever
A69	Other spirochaetal infection
A70	Chlamydia psittaci infection (ornithosis)
A75	Typhus fever
~~A75.1-.9~~	~~Other typhus fever~~
A77.1	Spotted fever due to Rickettsia conorii (Boutonneuse fever)
A77.2	Spotted fever due to Rickettsia siberica (North Asian tick fever)
A77.3	Spotted fever due to Rickettsia australis (Queensland tick typhus)
A77.8	Other spotted fevers (Other tick-borne rickettsioses)
A77.9	Spotted fever, unspecified (unspecified tick-borne rickettsioses)
A78	Q fever
A79	Other rickettsioses
A80	Acute poliomyelitis
A81	Atypical virus infections of central nervous system
A82	Rabies
A84	Tick-borne viral encephalitis
A85.2	Arthropod-borne viral encephalitis, unspecified (Viral encephalitis transmitted by other and unspecified arthropods)
A90	Dengue fever [classical dengue]
A91	Dengue hemorrhagic fever
A92	Other mosquito-borne viral fevers
A93	Other arthropod-borne viral fevers, not elsewhere classified (including Oropouche fever, sandfly fever, Colorado tick fever and other specified fevers)

Appendix C
Infrequent and Rare Causes of Death

code	Cause
A94	Unspecified arthropod-borne viral fever
A95	Yellow fever
A96	Arenaviral hemorrhagic fever
A98-A99	Other and unspecified viral hemorrhagic fevers (including Crimean-Congo, Omsk, Kyasanur Forest, Ebola virus, Hanta virus)
B01	Varicella [chickenpox]
B03	Smallpox
B04	Monkeypox
B05	Measles
B06	Rubella [German measles]
B08.0	Other orthopoxvirus infections (including cowpox and paravaccinia)
B15	Acute hepatitis A – less than 20 years of age
B16	Acute hepatitis B – less than 20 years of age
B26	Mumps
B33.0	Epidemic myalgia (epidemic pleurodynia)
B50-B54	Malaria
B55	Leishmaniasis
B56	African trypanosomiasis
B57	Chagas' disease (including American trypanosomiasis)
B65	Schistosomiasis [bilharziasis]
B66	Other fluke infections (including other trematode infections)
B67	Echinococcosis
B68	Taeniasis
B69	Cysticercosis
B70	Diphyllobothriasis and sparganosis
B71	Other cestode infections
B72	Dracunculiasis (Dracontiasis)
B73	Onchocerciasis
B74	Filariasis (Filarial infection)
J09	**Influenza due to identified avian influenza virus**
P35.0	Congenital rubella syndrome
***U04.9**	**Severe acute respiratory syndrome [SARS], unspecified**
W88-W91	Exposure to radiation
Y36.5	War operation involving nuclear weapons

Causing adverse effects in therapeutic use:

Y58	Bacterial vaccines
Y59.0	Viral vaccines
Y59.1	Rickettsial vaccines
Y59.2	Protozoal vaccines
Y59.3	Immunoglobulin

Appendix D
ICD-10 Codes Selected for Querying for HIV Under Priority Level 1g

ICD-10 code	Abbreviated title
A07.2	Cryptosporidiosis
A07.3	Isosporiasis
A16.2-A19	Tuberculosis
A31	Nontuberculous mycobacteriosis
A42	Actinomycosis
A43	Nocardidosis
A812	Progressive multifocal leukoencephalopathy
B00	Herpes simplex
B25	Cytomegalovirus
B37	Candidiasis
B38	Coccidioidomycosis
B39	Histoplasmosis
B44	Aspergillosis
B45	Cryptococcosis
B58	Toxoplasmosis
B59	Pneumocystosis
C46	Kaposi's sarcoma
C83, C85	Non-Hodgkin's Lymphoma
G049	Encephalitis, myelitis, and encephalomyelitis, unspecified
G934	Encephalopathy, unspecified
G959	Disease of spinal cord, unspecified
R64	Cachexia