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# **REPORT OF THE PANEL TO EVALUATE THE U.S. STANDARD CERTIFICATES**

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**April 2000  
Addenda, November 2001**

**Division of Vital Statistics  
National Center for Health Statistics**

## **Acknowledgments**

The evaluation to prepare the 2003 standard certificates involved many people and much time. Special thanks are due to particular individuals for guiding and supporting the project through its course. Patricia W. Potrzebowski, Ph.D., Chairperson of the Parent Group showed insight, patience, and good humor in planning and conducting Panel meetings and in evaluating this report. Much credit is also due to the Subgroup Chairpersons, Dorothy S. Harshbarger, Alvin T. Onaka, Ph.D., Lorne A. Phillips, Ph.D., Michael R. Lavoie, and Steven Schwartz, Ph.D., and other Parent Group and subgroup members, who reviewed the standard certificates and made final decisions concerning the content of the documents and changes in procedure.

The National Center for Health Statistics (NCHS) Resource staff also merit special thanks, for they provided support to the Parent Group and subgroups, developed the final worksheets and certificates, and drafted substantial sections of this report. Mary Anne Freedman, Director of the Division of Vital Statistics, NCHS, helped keep the Parent Group on track with timely comments and advice concerning the objectives of the evaluation. George A. Gay and Julia L. Kowaleski ably steered the effort from its inception to conclusion.

Consultants at Laurel Consulting Group also deserve acknowledgment, for they supported the project from beginning to end. Credit goes to Alicia Simmons for managing the effort, Jennifer Gormley for handling all logistical arrangements, and Steven Simmons and Angela Saunders for providing minutes of each Panel meeting and sections of the final report.

## Table of Contents

Acknowledgments.....	ii
Executive Summary.....	1
1. Introduction.....	7
2. History of the Vital Statistics System.....	9
3. Overview of the Evaluation Process.....	12
4. Information Gathering.....	27
5. Race and Ethnicity.....	48
6. Education.....	52
7. Recommendations for the 2003 Revision of the U.S. Standard Certificate of Live Birth.....	56
8. Recommendations for the 2003 Revision of the U.S. Standard Certificate of Death.....	114
9. Recommendations for the 2003 Revision of the U.S. Standard Report of Fetal Death.....	154
10. Recommendations from the Standards and Design Subgroup.....	211
11. Supplemental Recommendations.....	215
12. Recommendations Related to the 1992 Model State Vital Statistics Act and Regulations.....	222
13. Secondary Data Items.....	223
Addenda.....	225

## Executive Summary

The National Vital Statistics System is the basis for the Nation's official statistics on births, deaths, fetal deaths, marriages, and divorces. These data are provided through vital registration systems which are maintained and operated by the individual States and territories where the original certificates are filed. While the legal authority for vital registration rests with the States and territories, the National Center for Health Statistics (NCHS) is required to produce national vital statistics by compiling data from the central vital records office in all of the 57 registration areas. Therefore NCHS closely collaborates with the States to develop standard certificates and reports for data collection and administrative purposes as well as standardized procedures for data preparation and processing to promote a uniform national data base. NCHS pays a portion of the costs incurred by the States through contractual agreements with each State.

In addition to the requirements of the VSCP, the U.S. Standard Certificates and Reports are one of the principal means by which uniformity of data collection and processing are achieved. To ensure that the standard certificates and reports and the items they contain meet health information and administrative needs, they are reviewed approximately every 10 to 15 years. The current standard certificates and report have been used since 1989. Implementation of the standard certificates was originally planned for 2002. In consultation with the National Association for Public Health Statistics and Information Systems (NAPHSIS), NCHS decided to delay implementation until January 1, 2003 because of the need to test the recommended changes before implementation and the complexity of changing automated systems in the States.

The first standard certificates used to register live births and deaths were produced by the Census Bureau in 1900. Since 1900 there have been 11 revisions of the Standard Certificate of Live Birth, 10 revisions of the Standard Certificate of Death, 7 revisions of the Report of Fetal Death (formerly Stillbirth), 3 revisions of the Standard Certificates of Marriage and Divorce or Annulment, and 1 revision of the Standard Report of Induced Termination of Pregnancy.<sup>1</sup>

The revision process for the certificates to be implemented in 2003 was similar to that used with previous revisions. The evaluation process began with a survey of the State vital registration and statistics executives to determine whether revisions were needed. The consensus from the States was that the birth and death certificates, as well as the fetal death report, should be revised. NCHS assembled a Panel of expert consultants to evaluate the 1989 Standard Certificates and to recommend revisions. The Panel included State vital registration and statistics executives as well as representatives of data provider and user organizations. The Panel was composed of a "Parent Group" that oversaw the process and four Subgroups that individually focused on birth, death, fetal death, and standards and design. Laurel Consulting Group provided logistic and

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<sup>1</sup>The revision process for 2003 evaluated only the live birth and death certificates and the fetal death report. See the History chapter for more information.

administrative support to the Panel.

This executive summary presents a brief overview of a complex process. It describes the evaluation method, objectives, schedule, group roles, and major decisions presented by the Panel.

### **Objectives of the Evaluation**

At the Panel's first meeting, held in January 1998, Chairperson Patricia Potrzebowski Ph.D., outlined the following evaluation objectives:

- Review the current certificates, prepare a report to assess the usefulness of the existing data items, and determine how the quality of the data can be improved and collected for statistical and legal purposes;
- Identify unmet data needs and determine if the standard certificates are the most appropriate place to collect such data. This included attempting to identify future data needs for the next 15-20 years; and
- Make recommendations for the content, format, and standard definitions of the proposed standard certificates. This task was to be accomplished with the understanding that a "certificate" is no longer represented by the piece of paper on which the data are collected, but by a standard vital statistics data base with a strong emphasis on electronic, automated data collection.

The expert Panel focused on the development of an information collection process to meet the needs of the many users of vital records and vital statistics into the next century. The Panel had the formidable task of moving from a system primarily based on the flow of paper to the faster electronic registration of vital events. The Panel looked beyond designing new paper documents and concentrated on cultivating an appropriate vital statistics data base grounded in the electronic transfer of information. Thus, the possibilities and uncertainties of employing computerized registration systems greatly influenced the discussions and deliberations in all Subgroups.

### **Schedule for the Evaluation**

The evaluation process began in 1994 with a survey of the State vital registration and statistics executives to determine whether revisions were necessary. The consensus from the States was that the birth and death certificates and the fetal death report should be revised and that the marriage, divorce, and induced termination of pregnancy forms should not be revised. The States were also asked to suggest items that should be added to or deleted from the revised certificates- -particularly items currently on their reporting forms (but not on the U.S. Standard Certificates), which they found useful.

Based on this survey, NCHS resolved to undertake an evaluation and revision of birth

and death certificates and the fetal death report. The result of the revision process was planned for implementation after ICD-10 coding was begun and any Y2K problems had been addressed. The original target date for implementation was 2002.

In 1997, after consultation with NAPHSIS, NCHS staff developed questionnaires to obtain information to use for the revision. These questionnaires were mailed to more than 1,600 individuals and professional organizations throughout the country. NCHS staff developed a list of national organizations and persons of national prominence to be sent the questionnaires and each State vital statistics office was asked to provide a list of persons and organizations within that State to receive the questionnaires. The results were provided to the Panel members to assist them in their review.

### **Panel Membership**

Assistance in the selection of the 24 Panel members was sought from several sources. NAPHSIS was consulted about the 11 individuals representing State vital registration and statistics executives. The Chairperson of the Panel was included among these individuals. The other members of the Panel represented organizations whose membership has an interest or involvement in vital registration or vital statistics. Therefore, the individual organizations were contacted and asked to name someone to represent them on the Panel.

### **Evaluation Participants' Roles**

Much of the deliberation about certificate content was conducted in the Subgroups. The Birth, Death, Fetal Death, and Standards and Design Subgroups were charged with:

- Reviewing published literature, suggestions and recommendations;
- Conducting detailed reviews of the current certificates and report; and
- Making recommendations to the Parent Group.

In addition to the practical expertise they brought to the meetings, the members reviewed the questionnaire responses, heard testimony, and discussed in detail specific potential items. Each Subgroup chairperson summarized the group's recommendations and rationales in the meeting minutes and during the individual presentations to the Parent Group.

The Parent Group's task was to determine the final recommendations about individual items, the document format, and the worksheets. The group evaluated the recommendations from each group to ensure consistency among the Subgroup recommendations and provided oversight and coordination of the entire evaluation process. Lastly, the Parent Group determined the inclusion or deletion in the standard documents of each of the Subgroup's recommendations.

The Division of Vital Statistics (DVS), NCHS, furnished staff support for the Parent Group and Subgroups and also provided the national level perspective on vital statistics data needs. Before the Panel assembled, NCHS staff designed the questionnaire, conducted data analyses, and provided administrative activities. NCHS also initiated contact with professional associations regarding representation on the Panel. During Panel deliberations, NCHS staff recorded Subgroup minutes, conducted special data analyses, and provided background information regarding use of vital statistics data.

### **Criteria for Reviewing the Certificates and Reports**

The purpose of the certificate evaluation was to develop appropriate data collection documents and to recommend means to meet the vital statistics needs of the States and NCHS. The focus of the Panel recommendations was to modify the existing certificates, emphasizing the use of electronic reporting systems. Through the Subgroups, the Panel reviewed each existing item; considered suggestions for changes, additions, and deletions; and documented the reasons for its conclusions. The following three criteria guided the Panel's decisions:

- Is the item needed for legal, research, statistical, or public health programs?
- Is the item collectible with reasonable completeness and accuracy?
- Is the vital statistics system the best source for this information?

### ***Major Decisions***

#### **U. S. Standard Certificate of Live Birth**

The Subgroup evaluating the U.S. Standard Certificate of Live Birth, chaired by Dorothy S. Harshbarger, recommended substantial changes to the birth certificate, particularly to the medical portion. Suggested changes included section names and the addition or deletion of check box items designed to elicit more specific responses from data providers. Group members recommended revision of the Medical Risk Factors, Obstetric Procedures, Complications of Labor and/or Delivery, Method of Delivery, Abnormal Conditions of the Newborn, and Congenital Anomalies sections.

In addition, the Birth Subgroup recommended the addition of specific items to the certificate to address data collection needs and to facilitate the linkage of data sets. Among other items, the Subgroup added questions about maternal morbidity, mother's height and prepregnancy weight, WIC participation, principal source of payment for delivery, infections present, breast feeding status, and whether infant is living.

Other key recommendations included the addition of an "administrative use" section, which contains items needed to fulfill statutory mandates other than those directly

related to establishing the permanent, legal record of a person's birth. This section includes the items on mother's mailing address, marital status, social security number requested for child, facility identification, mother's social security number, and father's social security number.

Furthermore, standardized separate worksheets for the mother and hospital staff were developed. These worksheets include clear, unambiguous questions, definitions, instructions, and preferred data sources. The recommended changes are designed to improve the completeness and quality of birth data. Lastly, the Panel advised testing the certificate and worksheets before final release to the States. NCHS carried this out under contract; the panel made minor modifications based on the results of these tests.

### **U. S. Standard Report of Fetal Death**

The Subgroup to Evaluate the U.S. Standard Report of Fetal Death, chaired first by Lorne A. Phillips, Ph.D., and then by Michael R. Lavoie, recommended four major changes. First, the cause-of-fetal-death section was revised and expanded to include items on histological examination of the placenta and autopsy. Second, the cause-of-fetal-death section was changed to a check-box format to improve the quality of reporting the cause-of-fetal-death. Space to specify additional detail about the cause is also included. Third, the applicable changes from the birth certificate were integrated into the fetal death report. Fourth, a new item on place where delivery occurred was added.

As with the Birth Certificate Subgroup, the Fetal Death Subgroup developed worksheets about the patient and the delivery that are to be completed by the patient and facility staff. These worksheets include clear, unambiguous questions, definitions, instructions, and information on preferred sources of the data and where in the records that information is most likely to be found. The Panel recommended that the worksheets be tested prior to implementation and then refined, if necessary. Again, the testing was carried out under contract. These changes should lead to improvements in the quality of data on fetal death.

### **U. S. Standard Certificate of Death**

The Subgroup to evaluate the U.S. Standard Certificate of Death, chaired by Alvin T. Onaka, Ph.D., recommended the addition of items to the certificate to help meet public health information needs, to facilitate ICD-10 coding, and to improve the quality of cause-of-death data. This includes questions about the relationship of tobacco, pregnancy, and traffic factors to the cause of death.

The Death Subgroup and Standards and Design Subgroup collaborated on developing a format that integrated two pages of instructions with the death certificate. Extensive instructions for the physician and funeral director were added as detachable pages to



the Certificate. The first page has instructions for the medical certifier, the second page is the certificate, and the third page has instructions for the funeral director. Instructions for the physician and funeral director will be included in appropriate sections of the electronic death certificate.

### **Standards and Design Subgroup**

The Standards and Design Subgroup, chaired by Steven Schwartz, Ph.D., was responsible for reviewing the U.S. Standard Certificates of Live Birth, Death, and the Report of Fetal Death. They determined how these documents should be designed as paper records and for use as guides for electronic registration. The Subgroup's goal was to develop a complete "package" of new certificates, worksheets, instructions, and recommendations for an implementation plan.

Much of this Subgroup's work focused on examining the process by which certificates are completed in various registration areas, surveying current state work processes, and examining current worksheets. The Subgroup also worked on standardizing record content to facilitate data compatibility and comparability. The Standards and Design Subgroup made recommendations that apply to the overall implementation process for the certificates and worksheets, including automation, education, and training.

## Introduction

This report describes the evaluation of the U.S. Standard Certificate of Birth, the Standard Certificate of Death, and the Standard Report of Fetal Death. It describes the work of the Panel to Evaluate the U.S. Standard Certificates, brought together by the National Center for Health Statistics (NCHS), and presents the Panel's recommendations.

Before the Panel began its deliberations, the Division of Vital Statistics (DVS), NCHS initiated the revision process with a set of three questionnaires on needed improvements, including additions, modifications, and deletions to the 1989 Standard Certificates. The more than 400 responses for each questionnaire provided valuable input for the Panel.

This final report of the 2003 evaluation draws together the work of the Panel. A chapter is devoted to the work of each of the Panel's four Subgroups (Birth; Death; Fetal Death; and Standards and Design). A Parent Group oversaw the work of the Subgroups and made the final recommendations of the Panel. Other chapters provide historical background and a description of the evaluation process.

Chapter 2, History of the Vital Statistics System, outlines the history of vital statistics collection in the United States.

Chapter 3, Overview of the Evaluation Process, describes the revision process and schedule for the 2003 certificates and lists the members of the Panel.

Chapter 4, Information Gathering, is an account of the process for gathering information for the Panel through the questionnaires and written and in-person testimony.

Chapter 5, Race and Ethnicity, contains the recommendations of the Panel for the design of questions on race and Hispanic origin for each certificate. The recommendations are consistent with those of the Federal Office of Management and Budget and the collection and tabulation procedures of the U.S. Bureau of the Census.

Chapter 6, Education, includes the Panel's recommendation on the education question, designed to be consistent with the U.S. Bureau of the Census collection and tabulation methods.

Chapter 7, Recommendations for the 2003 Revision of the U.S. Standard Certificate of Live Birth, summarizes the major decisions, details the items recommended for inclusion, and action on other items. A side-by-side, item-by-item table compares the 1989 Standard Birth Certificate with the proposed standard for 2003.

Chapter 8, Recommendations for the 2003 Revision of the U.S. Standard Certificate of Death, summarizes the major decisions, details the items recommended for inclusion, and action on other items. A side-by-side, item-by-item table compares the 1989

Standard Death Certificate with the proposed standard for 2003.

Chapter 9, Recommendations for the 2003 Revision of the U.S. Standard Report of Fetal Death, summarizes the major decisions, details the items recommended for inclusion, and action on other items. A side-by-side, item-by-item table compares the 1989 Report of Fetal Death with the proposed report for 2003.

Chapter 10, Recommendations from the Standards and Design Subgroup, provides certificate and worksheet-specific recommendations, and formatting proposals for all three certificates.

Chapter 11, Supplemental Recommendations, goes beyond specific items to suggestions for improving the quality of vital statistics data collection.

Chapter 12, Recommendations Related to the 1992 Model State Vital Statistics Act and Regulations, identifies areas where State laws or regulations may need to change before implementation of the 2003 revision.

Chapter 13, Secondary Data Items, provides a uniform question or procedure for States that choose to include selected items not recommended for the national standard certificates.

The Addenda contains explains what changes were made after the initial recommendations of the panel.

## History of the Vital Statistics System

The vital statistics of the United States are collected and published through a decentralized, cooperative system. Responsibility for registration of births, deaths, fetal deaths, marriages, divorces and annulments, and induced terminations of pregnancy is vested in the individual States and certain independent registration areas. The registration system comprises 57 registration areas: Each State, the District of Columbia, New York City, American Samoa, Guam, Northern Mariana Islands, Puerto Rico, and the Virgin Islands. The degree of uniformity necessary for national statistics has been achieved by periodic issuance of recommended standards from the responsible national agency and the cooperative adoption of these standards by the individual registration areas. These standards take the form of recommended laws and regulations (Model State Vital Statistics Act and Regulations), definitions and reporting requirements (such as live birth and fetal death), and reporting forms (U.S. Standard Certificates and Reports).

The standard certificates have been the principal means for achieving the uniformity in information upon which national vital statistics are based. To ensure that the standard certificates and reports meet current data needs, it is essential that they be reviewed and revised periodically. This has normally been done on approximately a 10-15 year cycle. Prior to this revision there have been 11 revisions of the Standard Certificate of Live Birth, 10 revisions of the Standard Certificate of Death, 7 revisions of the Standard Report of Fetal Death (formerly Stillbirth), 4 revisions of the Standard Certificate of Marriage, 4 revisions of the Standard Certificate of Divorce or Annulment, and 2 revisions of the Standard Report of Induced Termination of Pregnancy.

The first standard certificates for the registration of vital events were developed in 1900 by the U.S. Bureau of the Census. These certificates were used for the registration of live births and deaths. The 1902 Act of Congress that established the Bureau of Census as a permanent agency of the Federal Government included a provision giving the agency statutory authority for the development of registration areas for births and deaths. The Bureau of the Census undertook to develop a system for the annual collection of vital statistics that would produce nationally comparable data. The overall objective was to develop and maintain a registration system uniform in such matters as law, forms, procedures, and statistical methodology. Maintaining such a system meant periodic reviews of recommended standards and revisions to reflect changing social conditions and user demands for data.

The Bureau of the Census retained the authority for producing national vital statistics until 1946, when the function was transferred to the U.S. Public Health Service. It is presently assigned to the Division of Vital Statistics of the National Center for Health Statistics (NCHS). Authority for this activity by the NCHS is found in the Public Health Service Act, 42 USC 242k. This law requires that NCHS collect data annually from vital records of the States and provide assistance to the States in achieving comparability of data.

Since the production of national vital statistics is dependent upon cooperation between the Federal agency and the individual registration areas, the development of the standard certificates must be a cooperative effort. In the revision process, opinions are solicited from persons involved in preparation, registration, and tabulation of the records and from consumers of the data to determine whether changes need to be made and, if so, where. This revision process is designed to ensure that the standard certificates meet, as nearly as possible, the uses for which they are intended not only at the national level but also at the State and local levels.

The standard certificates are an integral part of the Vital Statistics Cooperative Program (VSCP) through which the NCHS obtains the data to produce national vital statistics. This program is an endeavor of NCHS to cooperate with the States to improve the quality, timeliness, and utility of health data. The standard certificates represent the minimum basic data set necessary for the collection and publication of comparable national, State, and local vital statistics data.

The U.S. Standard Certificates and Reports are used as models in the development of State forms for the registration of vital events. Because the State certificates and reports have multiple uses, many factors must be considered and evaluated in deciding what should be included in the recommended standards. Examples of uses are:

The records serve as legal and personal identification. This requires information regarding name, age, and date and place of occurrence; signatures; and addresses. The individual and numerous public agencies - schools, welfare departments, Passport Services, Social Security Administration, and Veterans Administration - have a direct interest in the information for legal purposes.

The records provide the statistical information needed by State and local government agencies, particularly health departments, to plan and evaluate their programs.

The records provide vital statistics for the entire country. These statistics are numerous, varied, and in many cases related to major public programs. Statistics of births, deaths, marriages, or divorces are frequently used in public health research and administration to measure and analyze rates of population growth and changes in population composition, to study social problems (for example, children affected by divorce and births to unwed mothers), and to measure actual or potential consumers for numerous products and services.

Faced with the many uses of vital records, NCHS and the vital statistics office of each State must make choices regarding the inclusion or exclusion of data elements for each revision of the standard certificates.

The 2003 revision process evaluated only the live birth and death certificates and the fetal death report. Prior to initiating the revision, NCHS surveyed the States to

determine which certificates, if any, they felt should be reviewed and revised. The consensus was that the marriage, divorce, and induced termination of pregnancy forms did not need revision at this time. However, the mid 1990's saw the emerging use of medical procedures to perform induced abortions in the United States. Therefore, In 1996, the Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, convened a working group of experts to review the 1989 revision of the Standard Report of Induced Termination of Pregnancy (ITOP) to determine what revisions would be needed to accommodate this change. As a result, a new revision of the ITOP form was recommended to the States in December, 1997.

## Overview of the Evaluation Process

### *The Evaluation Process*

The standard certificates, which are models for States to use in developing their own vital records, are an integral part of the Vital Statistics Cooperative Program through which the NCHS obtains the data to produce national vital statistics. This program is an undertaking of NCHS to work with the States to improve the quality, timeliness, and utility of health data. The standard certificates represent the minimum basic data set necessary for the collection and publication of comparable national, State, and local vital statistics data.

Vital records have many uses, and because of this, NCHS and the vital statistics office of each State need to make determinations as to what data elements are included or excluded each time the standard certificates are revised. To ensure that the standard certificates and report meet current data needs, it is essential that they be reviewed and revised periodically.

Since the production of national vital statistics is dependent upon cooperation between NCHS and the individual registration areas, the development of the standard certificates must be a cooperative effort. In the revision process, opinions are solicited from persons involved in preparation, registration, and tabulation of the records and from consumers of the data to determine whether changes need to be made and, if so, what those changes should be. This revision process is designed to ensure that the standard certificates meet, as nearly as possible, the uses for which they are intended at the Federal, State, and local levels.

The revision process for the 2003 certificates was similar to that used with past revisions. NCHS assembled a panel of expert consultants, listed at the back of this chapter, to evaluate the 1989 Standard Certificates and to recommend revisions. The Panel included State vital records registration and vital statistics executives, as well as representatives of data provider and user organizations. The main Panel was composed of a "Parent Group" which oversaw the process, and four subgroups which individually focused on birth, death, fetal death, and standards and design. With the exception of the Chairperson, each Parent Group member was also part of the Birth, Death, Fetal Death, and/or Standards and Design Subgroup. These Subgroups were responsible for reviewing the birth certificate, death certificate, and report of fetal death. The Standards and Design Subgroup was responsible for working on design issues, building on the opportunities presented by new certificates and electronic systems. Panel members served on two Subgroups—either the Birth or Death Subgroup and either the Fetal Death or Standards and Design Subgroup.

The standard certificates and report that the Panel evaluated are intended to promote uniformity in the vital statistics system. Past evaluations have focused on the standard certificates as a piece of paper; however, due to the opportunities presented by

increasing automation, this evaluation focused on the data set rather than just the paper document. The panel coordinated the evaluation process with two existing complementary efforts. The first effort was that of the American College of Obstetricians and Gynecologists (ACOG), which has been working to develop a computerized record for obstetrics. The second was the effort to automate the death registration process and the work of the Oversight Committee for Electronic Death Registration.

The U.S. Standard Certificates and Report are used as models in the development of State forms for the registration of vital events. Because the State certificates and report have many uses, a number of factors must be considered when deciding what should be included in the recommended standards. With this in mind, the Panel to Evaluate the U.S. Standard Certificates was charged with making recommendations for revisions to the Certificate of Live Birth, the Certificate of Death, and the Report of Fetal Death, as well as for national automation standards. The Panel's objectives were to:

- Review the current certificates and report to assess the usefulness of the existing data items, and determine how the quality of the data can be improved and collected for statistical and legal purposes;
- Identify unmet data needs and determine if the standard certificates are the most appropriate place to collect such data. This included attempting to identify future data needs for the next 15 to 20 years; and
- Make recommendations for the content, format, and standard definitions of the proposed 2003 standard certificates. This task was to be accomplished with the understanding that a certificate is no longer represented by the piece of paper on which the data are collected, but rather a standard vital statistics data base with a strong emphasis on electronic, automated data collection.

As the Panel members worked toward meeting these objectives, they attempted to address the following related goals:

- Educate both data users and data providers about the U.S. system, stating what its strengths and limitations are, and suggest alternative data sources if the standard certificates are not the most appropriate data collection mechanism;
- Be aware that data needs are different at State, Federal, and local levels; and
- Identify the users for each data item recommended. Also, offer to provide explanations when deciding not to include a data item.

The purpose of the 2003 certificate review was to develop appropriate data collection documents and recommend means to meet the vital statistic needs of the States and



NCHS. The focus of the Panel recommendations was to modify the existing certificates and report and emphasize the use of electronic reporting systems . Through the Subgroups, the Panel reviewed each existing item, considered suggestions for changes, additions, and deletions, and documented the reasons for its conclusions. The following three criteria guided the Panel's decisions:

- Is the item needed for legal, research, statistical, or public health programs?
- Is the item collectible with reasonable completeness and accuracy?
- Is the vital statistics system the best source for this information?

To assist in the evaluation process, Subgroup members were provided the results of a survey (see Chapter 4, Information Gathering) that was conducted by NCHS to elicit the opinions of respondents regarding possible additions, deletions, and modifications to the existing standard certificates and report. The questionnaires that were used were mailed to persons associated with vital registration and statistics, data sources, and data users at the State and national levels, as well as to persons who responded to notices regarding the questionnaires that were placed in selected professional journals and publications. The Panel members received an analysis of the responses of those who completed and returned the questionnaires. The analysis package received by each of the Panel members contained copies of the questionnaires, an analysis of the mailing and responses, and verbatim comments that respondents made. The intent was that the information contained in the packets would provide the Panel members with additional information during the evaluation process of the standard certificates and report.

The Panel met according to the following schedule:

#### **January 7-9, 1998**

Parent Group, January 7, 1998 and January 9, 1998

Subgroups, January 7-8, 1998

- Discussed the background and objectives of the evaluation process;
- Identified objectives of the Panel;
- Established the criteria for reviewing the standard certificates;
- Discussed the time line for the evaluation;
- Defined the relationships between the Parent Group and Subgroups;
- Examined the analysis of the questionnaire responses; and
- Discussed the need for testimony from outside individuals/organizations.

#### **May 18-21, 1998**

Parent Group, May 18-19, 1998 and May 21, 1998

Subgroups, May 19-20, 1998

- Heard testimony from invited persons/organizations;
- Completed review of questionnaire results;

- Identified issues to survey States; and
- Continued deliberations.

### **July 20-23, 1998**

Parent Group, July 20-21, 1998 and July 23, 1998

Subgroups, July 20-22, 1998

- Heard testimony from invited persons/organizations;
- Continued Subgroup deliberations; and
- Heard reports from Subgroup Chairpersons.

### **October 13-16, 1998**

Parent Group, October 13-14, 1998 and October 16, 1998

Subgroups, October 13-15, 1998

- Discussed Panel Member concerns/issues;
- Subgroups submitted draft recommendations for revised birth and death certificates to Parent Group;
- Voted on Subgroup recommendations;
- Fetal Death Subgroup reviewed recommendations from Birth and Death Subgroups;
- Standards and Design Subgroup began deliberations; and
- Heard reports from Subgroup Chairpersons.

### **January 5-8, 1999**

Parent Group, January 5, 1999 and January 8, 1999

Subgroups, January 5-7, 1999

- Birth and Death Subgroups finalized recommendations to Parent Group on content of birth and death certificates;
- Fetal Death Subgroup finalized recommendations to Parent Group;
- Standards and Design Subgroup continued deliberations; and
- Parent Group heard reports from Subgroup Chairpersons.

### **March 10-12, 1999**

Standards and Design Subgroup, March 10-12, 1999

- Reviewed findings from pilot testing and focus groups regarding medical items on the birth certificate and fetal death report;
- Divided into birth and death breakout groups to review and refine drafts of all forms, worksheets, and instructions;
- Discussed time line for implementation and specification requirements for electronic systems; and
- Prepared final draft recommendations for all forms, worksheets and instructions to Parent Group.

### **April 12-16, 1999**

Parent Group, April 12-13, 1999 and April 15-16, 1999

Subgroups, April 12-14, 1999

- Discussed medical items on Birth and Fetal Death Certificates;
- Discussed Education and Race/Ethnicity items;
- Reviewed B-list items;
- Heard reports from Subgroup Chairpersons;
- Standards and Design Subgroup made recommendations to Parent Group; and
- Parent Group made final recommendations to NCHS.

**Panel to Evaluate the U.S. Standard Certificates and Report  
Parent Group**

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Kansas Department of Health and  
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\*Note: Dr. Phillips served as Fetal Death Subgroup Chairperson for the first four meetings. As the result of Dr. Phillips being appointed Acting Health Director, Mr. Lavoie served as Chairperson for the last two meetings.

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## **Information Gathering**

### ***Questionnaire Process***

Preparation and development of the questionnaires for the 2003 revision of the U.S. Standard Certificates and Report proceeded somewhat differently than the 1989 revision. Unlike the 1989 revision, the revision panel was not responsible for developing the questionnaires. It was decided that the process, preparation, and development of the questionnaires would be done within the Division of Vital Statistics (DVS). In 1994, while working closely with the National Association for Public Health Statistics and Information Systems (NAPHSIS-formerly the Association for Vital Records and Health Statistics), DVS surveyed the state vital registration and statistics executives. This survey was conducted to determine if there was a need or interest in revising all or some of the 1989 U.S. Standard Certificates and Reports. The survey was also used to solicit comments from States about the data collected on state vital records forms that are not included on the standard certificates, but should be considered for inclusion on the standards. The survey was instrumental in the decision to revise the standards and in the development of the questionnaires.

### ***Questionnaire Development***

One of the major recommendations from the 1994 survey was that the U.S. Standard Certificates of Live Birth and Death and Report of Fetal Death be revised. Three questionnaires (listed below) were developed in May 1996 that would be used to obtain input for the revision of the certificates.

- Questionnaire to Evaluate the U.S. Standard Certificate of Live Birth
- Questionnaire to Evaluate the U.S. Standard Certificate of Death
- Questionnaire to Evaluate the U.S. Standard Report of Fetal Death

In November of 1996, DVS mailed draft copies of the questionnaires to evaluate the U.S. Standard Certificates of Live Birth, Death, and Report of Fetal Death to a number of state vital registration and statistics executives for their review and comment. In January 1997, comments were received and incorporated into the final draft questionnaires. Subsequently, National Center for Health Statistics (NCHS) staff reviewed the final draft questionnaires and submitted the final versions to the Office of Management and Budget (OMB) to begin the clearance process in March 1997.

## ***Questionnaire Content***

There was much discussion about the content of the questionnaires and how to design them to achieve a maximum response rate. The emphasis was to ensure that the content would include questions that were concise, uncomplicated, and easy to respond to.

In final form, each of the three questionnaires followed a similar format divided into five parts:

- A cover sheet providing instructions about the questionnaire and requesting information about the respondent (name, organization, address, etc....).
- A copy of the 1989 U.S. Standard Certificate corresponding to the questionnaire
- A section requesting opinions regarding specific items that should possibly be added to the U.S. Standard Certificate or Report.
- A section requesting opinions regarding specific items currently on the U.S. Standard Certificate or Report that should possibly be modified.
- A section requesting opinions regarding specific items currently on the U.S. Standard Certificate or Report that may need to be deleted.

## ***Office of Management and Budget (OMB) Clearance Process***

The clearance package for the three questionnaires to evaluate the U.S. Standard Certificates and Reports was submitted to the Centers for Disease Control (CDC) on March 21, 1997. CDC forwarded it to the Department of Health and Human Services (DHHS) on March 31, 1997. DHHS sent it to OMB on April 4, 1997 and notified CDC to publish the required 30-day Federal Register notice. The notice appeared in the Federal Register on April 15, 1997. OMB granted final approval of the questionnaires on June 13, 1997.

## ***Automation of Questionnaires***

With the assistance of a programmer from DVS, electronic questionnaires were created in three components in an attempt to make responding to and analyzing the responses easier. The first component was the automated questionnaires created for individuals who had the capability to respond electronically. The second component was the tracking system which allowed DVS staff to track which questionnaires were mailed out and which were returned or responded to. The third and final component was the

analysis module which enabled reports to be generated based on the responses entered on the returned diskettes.

### ***Mailing List***

The list of respondents to receive the questionnaires was developed by DVS with the assistance of State vital registration and statistics executives, representatives from various health associations, and organizations involved in vital registration and statistics. DVS staff also compiled a list of national organizations and data users and data providers of vital statistics data who would be sent the questionnaires.

Each State Registrar provided addresses for persons or organizations within their state that they thought should be sent one or more questionnaires. For analysis and tabulation purposes, individuals who were sent the questionnaires were classified into the following categories:

State Registrars/State Executives	Schools of Public Health
State Health Officers	Federal Agencies
Medical and Health Services	County and City Officials
Associations	Local Registrars
Coroners and Medical Examiners	Other State and Local Officials
Funeral Directors	NCHS Staff
Researchers	Other
Research Organizations	

The objective in compiling this mailing list was to provide opportunities for all persons and organizations involved in preparing or using vital records to respond to the questionnaires. DVS staff took several other steps to ensure this objective. First, they sent a request to the editors of a number of journals asking that they include a notice about the questionnaires in their organizations' publication. Second, a notice about the questionnaires was included on the NCHS homepage and third, an electronic mailbox was created to allow individuals to request copies of the questionnaires via electronic mail.



The editors of the following publications were asked to include the notice:

American Demographics	Journal of the American Health
American Journal of Epidemiology	Information Management Association
American Journal of Law and Medicine	Journal of Perinatology
American Journal of Public Health	Maternal and Child Health Journal
American Journal of Obstetrics and Gynecology	Morbidity and Mortality Weekly Report
American Statistical News	The Nation's Health
Birth	Obstetrics and Gynecology
County News	PAA Affairs
Epidemiology	Pediatrics
Family Planning Perspectives	Pediatric and Perinatal Epidemiology
Hospital Week	Public Health Reports
	Science

### ***Mailing of Questionnaires***

For the first time in a revision of the U.S. Standard Certificates, the questionnaires were sent out in an electronic format. The mail-out included a cover letter which briefly outlined the revision process and indicated where responses should be returned. An option to request paper versions of the questionnaires was included in the cover letter. The mail-out also included a diskette containing electronic copies of the three questionnaires, a mailer for returning the diskette, and instructions for completing the questionnaires electronically. The questionnaires were mailed in August 1997, and respondents were asked to reply by September 15, 1997. The mailing list included approximately 1600 individuals and organizations throughout the country.

Because the response rate lagged leading up to September 15, the deadline for responses was extended to November, 1997. Follow-up efforts were made to specific health organizations and associations, state vital records and statistics offices, and to other selected individuals involved in vital records and statistics. Such follow-up efforts were done by use of electronic mail, telephone, and letter.

### ***Receipt and Control of Questionnaires***

Quality control procedures were developed for receipt of the questionnaires. A log-in process or receipt control program (RCP) was created to link the diskette that was mailed to the respondent to the mailing list. In addition, a manual log-in program was set in place whereby all responses received were recorded in a log-sheet. Each diskette mailed was electronically assigned a code that corresponded to the respondent who was included in the mailing list. Upon receipt of the diskettes, the responses were electronically copied into a database for analysis. Responses from paper versions of the questionnaires that were received were also manually entered in the RCP and database.

The total number of questionnaires received and the response rate for each questionnaire are shown on the following pages.

# VITAL STATISTICS EVALUATION SURVEY

Total Responses to Questionnaires on the Evaluation of the U.S. Standard Certificates and Report

Respondent	Total Sent	Total Returned		Box Checked Satisfied		Some Questions Answered		Disk Returned No Qx. Answered		Total Not Returned	
	Number	Number	%	Number	%	Number	%	Number	%	Number	%
<b>Total</b>	<b>4508</b>	<b>1267</b>	<b>28.1</b>	<b>220</b>	<b>4.9</b>	<b>769</b>	<b>17.1</b>	<b>278</b>	<b>6.2</b>	<b>3241</b>	<b>71.9</b>
St Reg/Stat Exe	366	175	47.8	21	5.7	144	39.3	10	2.7	191	52.2
St Hlth Ofcr	177	45	25.4	6	3.4	31	17.5	8	4.5	132	74.6
Med/Hlth Svc	1398	252	18.0	51	3.6	139	9.9	62	4.4	1146	82.0
Coroner/ME	161	53	32.9	14	8.7	26	16.1	13	8.1	108	67.1
Funeral Dir	178	44	24.7	18	10.1	14	7.9	12	6.7	134	75.3
Researchers	216	82	38.0	11	5.1	57	26.4	14	6.5	134	62.0
Research Org	147	28	19.0	5	3.4	15	10.2	8	5.4	119	81.0
Sch Pub Health	598	130	21.7	9	1.5	87	14.5	34	5.7	468	78.3
Fed Agencies	294	120	40.8	19	6.5	58	19.7	43	14.6	174	59.2
Co/City Ofcls	127	42	33.1	21	16.5	12	9.4	9	7.1	85	66.9
Loc Registrars	187	52	27.8	16	8.6	27	14.4	9	4.8	135	72.2
Other St/Loc	489	187	38.2	18	3.7	135	27.6	34	7.0	302	61.8
NCHS Staff	123	33	26.8	6	4.9	19	15.4	8	6.5	90	73.2
Other	47	24	51.1	5	10.6	5	10.6	14	29.8	23	48.9

# VITAL STATISTICS EVALUATION SURVEY

Responses to Questionnaires on the Evaluation of the U.S. Standard Certificate of Live Birth

Respondent	Total Sent	Total Returned		Box Checked Satisfied		Some Questions Answered		Disk Returned No Qx. Answered		Total Not Returned	
	Number	Number	%	Number	%	Number	%	Number	%	Number	%
<b>Total</b>	<b>1455</b>	<b>418</b>	<b>28.7</b>	<b>73</b>	<b>5.0</b>	<b>286</b>	<b>19.7</b>	<b>59</b>	<b>4.1</b>	<b>1037</b>	<b>71.3</b>
St Reg/Stat Exe	123	59	48.0	6	4.9	49	39.8	4	3.3	64	52.0
St Hlth Ofcr	59	15	25.4	1	1.7	11	18.6	3	5.1	44	74.6
Med/Hlth Svc	475	87	18.3	21	4.4	55	11.6	11	2.3	388	81.7
Coroner/ME	9	4	44.4	1	11.1	1	11.1	2	22.2	5	55.6
Funeral Dir	9	4	44.4	1	11.1	1	11.1	2	22.2	5	55.6
Researchers	76	31	40.8	4	5.3	24	31.6	3	3.9	45	59.2
Research Org	49	9	18.4	3	6.1	3	6.1	3	6.1	40	81.6
Sch Pub Health	204	47	23.0	3	1.5	40	19.6	4	2.0	157	77.0
Fed Agencies	102	42	41.2	8	7.8	22	21.6	12	11.8	60	58.8
Co/City Ofcls	46	15	32.6	6	13.0	5	10.9	4	8.7	31	67.4
Loc Registrars	64	17	26.6	5	7.8	10	15.6	2	3.1	47	73.4
Other St/Loc	181	68	37.6	8	4.4	54	29.8	6	3.3	113	62.4
NCHS Staff	44	14	31.8	3	6.8	9	20.5	2	4.5	30	68.2
Other	14	6	42.9	3	21.4	2	14.3	1	7.1	8	57.1

# VITAL STATISTICS EVALUATION SURVEY

Responses to Questionnaires on the Evaluation of the U.S. Standard Certificate of Death

Respondent	Total Sent	Total Returned		Box Checked Satisfied		Some Questions Answered		Disk Returned No Qx. Answered		Total Not Returned	
	Number	Number	%	Number	%	Number	%	Number	%	Number	%
<b>Total</b>	<b>1609</b>	<b>444</b>	<b>27.6</b>	<b>81</b>	<b>5.0</b>	<b>278</b>	<b>17.3</b>	<b>85</b>	<b>5.3</b>	<b>1165</b>	<b>72.4</b>
St Reg/Stat Exe	122	58	47.5	5	4.1	51	41.8	2	1.6	64	52.5
St Hlth Ofcr	59	15	25.4	3	5.1	10	16.9	2	3.4	44	74.6
Med/Hlth Svc	467	83	17.8	18	3.9	44	9.4	21	4.5	384	82.2
Coroner/ME	82	27	32.9	9	11.0	16	19.5	2	2.4	55	67.1
Funeral Dir	91	20	22.0	7	7.7	12	13.2	1	1.1	71	78.0
Researchers	87	29	33.3	4	4.6	21	24.1	4	4.6	58	66.7
Research Org	54	12	22.2	1	1.9	10	18.5	1	1.9	42	77.8
Sch Pub Health	204	42	20.6	5	2.5	24	11.8	13	6.4	162	79.4
Fed Agencies	109	43	39.4	9	8.3	22	20.2	12	11.0	66	60.6
Co/City Ofcls	41	10	24.4	5	12.2	4	9.8	1	2.4	31	75.6
Loc Registrars	65	18	27.7	5	7.7	11	16.9	2	3.1	47	72.3
Other St/Loc	164	63	38.4	8	4.9	44	26.8	11	6.7	101	61.6
NCHS Staff	39	9	23.1	1	2.6	7	17.9	1	2.6	30	76.9
Other	25	15	60.0	1	4.0	2	8.0	12	48.0	10	40.0

# VITAL STATISTICS EVALUATION SURVEY

Responses to Questionnaires on the Evaluation of the U.S. Standard Report of Fetal Death

Respondent	Total Sent		Total Returned		Box Checked Satisfied		Some Questions Answered		Disk Returned No Qx. Answered		Total Not Returned	
	Number	Number	%	Number	%	Number	%	Number	%	Number	%	
<b>Total</b>	<b>1444</b>	<b>405</b>	<b>28.0</b>	<b>66</b>	<b>4.6</b>	<b>205</b>	<b>14.2</b>	<b>134</b>	<b>9.3</b>	<b>1039</b>	<b>72.0</b>	
St Reg/Stat Exe	121	58	47.9	10	8.3	44	36.4	4	3.3	63	52.1	
St Hlth Ofcr	59	15	25.4	2	3.4	10	16.9	3	5.1	44	74.6	
Med/Hlth Svc	456	82	18.0	12	2.6	40	8.8	30	6.6	374	82.0	
Coroner/ME	70	22	31.4	4	5.7	9	12.9	9	12.9	48	68.6	
Funeral Dir	78	20	25.6	10	12.8	1	1.3	9	11.5	58	74.4	
Researchers	53	22	41.5	3	5.7	12	22.6	7	13.2	31	58.5	
Research Org	44	7	15.9	1	2.3	2	4.5	4	9.1	37	84.1	
Sch Pub Health	190	41	21.6	1	0.5	23	12.1	17	8.9	149	78.4	
Fed Agencies	83	35	42.2	2	2.4	14	16.9	19	22.9	48	57.8	
Co/City Ofcls	40	17	42.5	10	25.0	3	7.5	4	10.0	23	57.5	
Loc Registrars	58	17	29.3	6	10.3	6	10.3	5	8.6	41	70.7	
Other St/Loc	144	56	38.9	2	1.4	37	25.7	17	11.8	88	61.1	
NCHS Staff	40	10	25.0	2	5.0	3	7.5	5	12.5	30	75.0	
Other	8	3	37.5	1	12.5	1	12.5	1	12.5	5	62.5	

## ***Analysis of the Questionnaires***

The analyses of the three questionnaires were based on the type of responses received regarding additions, modifications, or deletions. An electronic program was developed for storing the responses and allowing DVS staff to generate analysis tables. The analysis tables consisted of the total number of responses and response rates to questions included on each of the questionnaires. The tables also consisted of the type of responses included on each of the questionnaires. The analysis tables regarding the response rate for each questionnaire are included at the end of this chapter. Information from these tables were instrumental in assisting the evaluation panel in making decisions about content and format of the certificates and reports.

## ***Recommendations for Future Questionnaire Development***

When NCHS staff plan the next revision of the U.S. Standard Certificates and Reports, questionnaires should be used for soliciting opinions regarding possible changes. The distribution of questionnaires has proven to be an excellent means of obtaining a wide range of opinions regarding ways of improving the U.S. Standard Certificates and Reports. The analysis of the questionnaire responses gave an understanding of the divergent interests of data collectors as compared with data users.

For this evaluation process, emphasis was placed on the use of electronic medium to distribute and publicize the questionnaires. E-mail use was just emerging, Internet use was in its' infancy, and technology was changing rapidly, even during the course of the revision. Efforts were made to increase the response rate by developing the questionnaire in electronic form and creating an electronic mailbox for individuals who had the capability of communicating electronically. The publicizing of the questionnaires did generate interest, but the response rate was much lower than that achieved during the last revision. The low response rate was very unexpected despite the following efforts to encourage responses:

- Questionnaires were designed to be as precise and brief as possible.
- A cover letter was provided to emphasize the importance of the revision process and how the questionnaires would be utilized to obtain responses that would impact the development of the standard certificates and reports.
- An option was provided for respondents to communicate their opinions regarding the questionnaires electronically or by paper.

The following recommendations for the next revision are intended to improve the response rate:

- Use forms design software instead of word processing software when developing the questionnaires electronically.
- Allow the use of electronic mail to respond to questionnaires.
- Make questionnaire available through the Internet.
- Allow respondents to duplicate or copy questionnaires.
- Do more extensive and intensive follow up if responses are not received within the specified time frame.
- Develop a mechanism whereby multiple persons are identified if their collective responses are in the name of one individual.

### ***Panel In-Person Testimony***

Panel members requested expert testimony to enable them to make informed and knowledgeable recommendations for additions, changes, and deletions to the standard certificates and report. The following summarizes in-person testimony provided at Panel meetings.

### **Followback Surveys**

It was determined during the first meeting that not all members of the Panel were familiar with the 1988 National Maternal and Infant Health Survey, the 1991 Longitudinal Followup to that survey, or the 1993 Mortality Followback Survey. In order to rectify this, Drs. Kenneth Keppel and Harry Rosenberg offered brief overviews of these surveys. The Panel was informed that these surveys are used to gather supplemental information to that collected on the certificates, as well as to:

- provide an effective method for obtaining information on a variety of health-related topics useful in the study of the etiology of disease, or of birth outcomes;
- provide national estimates for maternal and child health outcomes for a number of Federal agencies and programmatic purposes;
- assist in monitoring progress in achieving maternal and child health objectives (e.g., year 2000 objectives), and as a basis for longitudinal surveys; and
- provide a means for assessing the comparability of data items.

Drs. Keppel and Rosenberg also discussed the strengths and limitations of the surveys.



## **HIPAA**

The Panel heard testimony regarding the Health Insurance Portability and Accountability Act, also known as HIPAA. This bill contains two main provisions. The first provision is to improve the efficiency and effectiveness of the health care system by standardizing electronic interchange of certain administrative and financial transactions, and the second is to protect the security and privacy of information transmitted in those transactions.

The first presenter, Dr. William R. Braithwaite, Senior Advisor on Health Information Policy, Department of Health and Human Services, spoke about the National Provider Identifier (NPI), the health plan identifier (PAYERID), and the employer identification number (EIN), as well as the use of individuals' social security numbers as identifiers. He also examined privacy and accountability issues related to these identifiers.

Dr. Kathleen Frawley, Vice President, American Health Information Management Association, and member of the National Committee on Vital and Health Statistics (NCVHS) focused her presentation on NCVHS' role in HIPAA. She discussed NCVHS' efforts to fulfill its obligations under HIPAA with relation to data standards, privacy, and population specific-issues. The presentation also outlined NCVHS' recommendations regarding transaction standards, clinical code sets, unique health identifiers, unique individual identifiers, information security, health information privacy, and Federal privacy law.

The final presenter discussing HIPAA was Ms. Marjorie Greenberg, Chief, Data Policy and Standards Staff, NCHS. Ms. Greenberg noted the relevance of HIPAA to public health and stressed the importance of getting the public health community more involved in the standard setting process, and not simply examining how to be exempt from these standards. She also discussed NCHS' planning meeting for a workshop on the implications of HIPAA for public health and health services research.

## **Education**

Ms. Jennifer Day, Chief, Education and Social Stratification Branch, U.S. Bureau of the Census, was asked to speak to the Panel regarding the collection of education data on the census, decennial census, and other surveys, as well as on the standardization of the education question. Ms. Day explained the history of the education question and the specific issues that led the Census Bureau to alter the question. She noted that the previous question measured the time in school as opposed to the degrees earned by the respondent. Ms. Day explained that since the Census Bureau considers education to be the best variable for projecting socioeconomic status due to the positive correlation between earnings and education, it is important to attempt to accurately identify the education level of those responding to the survey. Ms. Day did acknowledge that there are shortcomings and potential problems with the changes

made by the Census Bureau. However, it is believed that data needs are better addressed with the change in the educational attainment question.

### **Cause-of-Death Evaluation Study**

Dr. Fred Smith, Assistant Professor of Psychology, Cleveland State University, and Dr. James A. Weed, Deputy Director, Division of Vital Statistics, NCHS, reported on a study that was an outgrowth of the 1989 Panel to Evaluate the U.S. Standard Certificates. The previous Panel urged NCHS to conduct research on possible changes in the format of the cause-of-death section of the death certificate—in particular, the effect of a “reversal” of the causal sequence in Part I. The rationale behind this proposal was that physicians are accustomed to recording the principal diagnosis first, followed by other diagnoses, and, therefore, it made sense to ask for the underlying cause of death first. Study findings indicate that reversing the sequencing order would not elicit better underlying cause-of-death information. However, it was determined that reversing the sequencing order might elicit more information for multiple cause-of-death analysis.

### **Information Standards**

Dr. Ronald R. Fichtner, Chair, Health Information and Surveillance Systems Board (HISSB) Standards Committee, National Center for HIV, STD, and TB Prevention, Centers for Disease Control and Prevention, discussed common data elements and efforts to move toward an integrated approach to standardizing public health data collection and dissemination. Dr. Fichtner noted that one objective of having information standards is to ensure compatibility and comparability across as many public health data systems as possible. The goal is to develop an integrated software system that would allow various data to be entered, managed, and disseminated in a common way. He further explained some of the existing problems due to systems not being compatible and how this makes data collection and research more difficult.

### **Report of the Working Group to Improve the Quality of Birth Data**

Ms. Dorothy Harshbarger gave an overview of the Working Group to Improve the Quality of Birth Data. This working group was composed of representatives from NCHS and NAPHSIS. Electronic birth certificates were developed in the States in the early 1980's, and more States began to use them. NCHS began receiving data electronically from the States, and started seeing inconsistencies in the data over time. They wondered whether or not the electronic birth certificates were causing some of these inconsistencies, and whether there were some issues regarding the electronic birth certificates that the working group needed to look at. The working group was formed in 1996 to address some of these inconsistencies. The working group's charge was to recommend ways to improve the quality of health information on birth certificates. The working group considered the charge very

broadly, going well beyond the birth certificates. They looked at some of the electronic systems that were currently being used in the States, and saw that there were aspects of electronic birth certificate systems that could lead to errors in collection of data. Many of the problems were inherent in the way the data system was set up, the way the screens were designed, and the way pick lists were set up. Electronic birth certificates are thought of as beneficial, as far as editing is concerned, but it was shown that this can also lead to problems.

The recommendations made by the working group apply across the board to a variety of systems, not just birth systems. These are valuable recommendations for any system. The recommendations are grouped, some for immediate implementation, enabling States to get better birth quality data.

### **OMB Directive 15 Revision - Race and Ethnicity Data**

The Parent Group prepared specific questions for the OMB and Census representatives to address during their presentations on race and ethnicity. The questions were based on how data on race should be collected and tabulated, as well as the format of the question regarding race.

Ms. Kathy Wallman, Chief Statistician, Office of Management and Budget (OMB), provided a brief history of the Race and Ethnicity Standard, which emerged in the 1970s out of the need to have data that are comparable across agencies. OMB initiated an interagency committee and a research program to address the concerns as to whether the Standard is still relevant and effective in capturing the growing diversity of the population. The results of these efforts were published in 1997 and led to changes in the Standard on Race and Ethnicity. Among the changes were 1) respondents are able to report more than one race, 2) the category of Asian or Pacific Islander was broken into two categories - one for Asian, and one for Native Hawaiian or Other Pacific Islander, and 3) changes with respect to terminology. Ms. Wallman added that the ability to bridge the information over time is a key consideration in OMB's development of race and ethnicity guidelines.

Dr. Nancy Gordon, Associate Director for Demographic Programs, U.S. Bureau of the Census, explained current tabulation methodologies and reviewed the Census 2000 Dress Rehearsal questions. She assured the Panel that when tabulating data, the Census Bureau makes every effort to preserve each respondent's confidentiality and maintain the principle of self-identification. Dr. Gordon expressed the Bureau's desire to develop a consistent set of rules for tabulation, noting that the rules, in part, are derived from guidelines developed by OMB. She further noted that it would be useful for the Panel to examine the same data as the Census Bureau so that the data will be comparable across agencies.

The Census Bureau and OMB suggested that the Panel add a "race of child" category to the birth certificate and provide more geographic detail regarding births and deaths.

They felt that this information would aid the agencies in collecting the most accurate population estimates data. (See Chapter 5, Race and Ethnicity)

### **Recommendations for the Collection of Congenital Anomaly/Birth Defect Data**

Mr. Larry Edmonds, Associate Chief for State Services, Birth Defects and Genetic Diseases Branch, Division of Birth Defects and Developmental Disabilities, National Center for Environmental Health, presented his agency's views on the collection of congenital anomaly/birth defect data. Mr. Edmonds discussed case ascertainment methods for identifying infants with birth defects and outlined the rates of major birth defects identified through each of these methods. Mr. Edmonds also noted the strengths and weaknesses in using birth and death certificate information in data collection efforts, noting that although the birth certificate may not always be the best source of information, it is necessary for birth defects research because at least 20 States are not conducting any type of surveillance program and the birth certificate is the only source for birth defects information in those States. He added that fetal death reports also account for a small percentage of birth defects cases reported. Mr. Edmonds indicated that CDC primarily recommends syntactic changes to the U.S. Certificate of Live Birth, as well as the adoption of a birth certificate worksheet for congenital anomalies. He explained that the rationale for the suggested additions to the certificate is that the anomalies are easily identifiable at birth.

#### **Birth Certificate Content**

Ms. Kim London spoke to the Subgroup regarding her perception of the birth certificate as sexist. The item on the birth certificate she was most concerned about was "maiden surname" of the mother. She requested that the Subgroup examine the terminology to ensure that it is "non-sexist."

The following testimony was solicited internally by the Subgroups:

#### ***Birth Subgroup Testimony***

##### **Occupation and Industry of Mother and Father**

Dr. Keppel reported on his conversations with Ms. Mary Peoples-Shepps, who was formerly at the University of North Carolina (UNC) and now resides in Tennessee. He indicated that Ms. Peoples-Shepps is not enthusiastic about adding occupation and industry items to the birth certificate because not a lot is known about risk factors associated with occupation/industry. Dr. Keppel stated that Mr. David Savitz from UNC is not willing to recommend these items either. This is because not enough is known about exposures associated with certain occupations/industries, and, therefore, inference regarding exposures cannot be made.

## **Medical Items**

Dr. Lillian Blackmon led a medical workgroup comprising experts in the field to explore the existing and potential medical items on the birth certificate. The members of the workgroup were Dr. Michael Greene, Dr. David Nagey, Dr. Maureen Edwards, and Dr. Henry Thiede. Dr. Blackmon summarized the group's discussions and conveyed its viewpoint regarding medical items on the birth certificate. This group's input was used to help the Subgroup determine which items would elicit the best data and enhance the national data set. The workgroup made recommendations for the following new and revised items:

- Date of First Prenatal Visit (previously Month of Pregnancy Prenatal Care Began)
- Total Number of Prenatal Care Visits for This Pregnancy (previously Prenatal Visits-Total number)
- Obstetric Estimate of Gestation (previously Clinical Estimate of Gestation)
- Apgar Score
- Mother Transferred for Maternal Medical or Fetal Indications for Delivery (previously Mother Transferred Prior to Delivery)
- Infant Transferred within 24 Hours of Delivery (previously Infant Transferred)
- Risk Factors in this Pregnancy (previously Medical Risk Factors for this Pregnancy)
- Other Risk Factors for this Pregnancy
- Infections Present and/or Treated During This Pregnancy
- Obstetric Procedures
- Characteristics of Labor and Delivery (previously Complications of Labor and Delivery)
- Method of Delivery
- Abnormal Conditions of the Newborn
- Congenital Anomalies of the Newborn (previously Congenital Anomalies of the Child)
- Maternal Morbidity

## **Social Indicators**

The Birth Subgroup established a social indicators workgroup that included Dr. Greg Alexander, Dr. Lorne Phillips, and Ms. Stephanie Ventura. The social indicators workgroup conferred with experts regarding social indicator items on the birth certificate and conveyed feedback that assisted the Subgroup in formulating its recommendations. Dr. Alexander solicited comments from researchers through the social science list server and consulted other experts and researchers at National Institute for Child Health and Development and Maternal and Child Health directors. Dr. Phillips received input from the staff at the Center for Health and Environmental Statistics, Kansas Department of Health and Environment. The workgroup's mandate was to provide expert opinion and recommendations with supportive evidence for the following items:

- English as a Primary Language
- Changed Residency During Pregnancy
- WIC Participation
- Domestic Violence
- Functional Homelessness
- Intendedness of Pregnancy
- Mother Worked Part/Full Time During Pregnancy
- Mother Living Alone During Pregnancy

Based on the deliberations of the social indicators working group, the following social indicators received a positive consensus for inclusion: English as primary language, Changed residence during pregnancy, and WIC participation.

The working group reached a negative consensus on the following social indicators: Living in public housing, Living in current residence less than two years, Intendedness of pregnancy, Homelessness, Identified pediatric home, and Observed violence during pregnancy.

A consensus was not reached by the working group on the following social indicators: Mother worked part or full-time during pregnancy, Mother using contraception prior to pregnancy, and Mother living alone during pregnancy.

See Chapter 7, Recommendations for the 2003 Revision of the U.S. Standard Certificate of Live Birth, for final decisions regarding these items.

### **Focus Group Reports**

Various focus groups were conducted to obtain feedback about the birth certificate from persons charged with completing the document. The focus group members were able to offer oral and written comments on the items of the certificate. Focus groups were convened in:

- Alabama - Ms. Dorothy Harshbarger conducted focus groups with staff members of seven hospitals in Alabama.
- New York City - Dr. Steven Schwartz conducted focus groups with nine hospital staff from three members hospitals in New York City.
- District of Columbia and Maryland - Ms. Patricia Brown, Ms. Joyce Martin, and Ms. Susan Schechter conducted focus groups with staff members at four hospitals in the DC Metropolitan area.

### **Persons Asked to Respond to Specific Questions**

Dr. Keppel reported on written testimonies of experts who responded to specific questions. Listed are the individuals who responded and the specific issues/questions they were asked to address.

Individuals	Issues/Questions
Thomas C. Hulse, Sc.D.	Need for standard definitions of obstetric terminology, the accuracy of information on medical risk factors and complications of pregnancy, and anthropometric measurement.
Michael S. Kramer, M.D.	Reliable measurement of premature delivery and risk factors for prematurity and low birth weight.
Marilee C. Allen, M.D. Jeanne L. Ballard, M.D.	Measurement of gestational age. What is the “gold standard” source, and is the clinical estimate useful without additional information about basis or timing?
Ronald L. Williams, Ph.D.	Need for standard definitions of maternal risk factors, obstetric procedures, and complications of labor and delivery; and the need for additional information about prenatal care.
Milton Kotelchuck, Ph.D.	Need for additional information on measurement and content of prenatal care.
Drucilla J. Roberts, M.D.	Use of fetal autopsies in determining cause of fetal death and gestational age.
Dave Gagnon Rachel M. Schwartz	Information available from hospital records and information about maternal and infant transfers.

Letters supporting the addition of a question about prenatal participation in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) to the U.S. Standard Certificate of Live Birth were received from the United States Department of Agriculture, the National Center for Chronic Disease Prevention and Health Promotion, the National Association of WIC Directors, persons associated with WIC programs, and individual researchers.

### ***Death Subgroup Testimony***

#### **Tobacco**

Dr. Jonathan VanGeest reported on AMA’s position on the addition of tobacco-related questions to the death certificate. AMA advocates the addition of this question because tobacco use can contribute to the death of a person, and the death certificate is the most

appropriate place to collect this information. AMA proposes the question “Did tobacco use contribute to the death?”

Dr. Rosenberg gave an overview of *An Evaluation of the Smoking Item on the Death Certificate*, a study conducted by NCHS to evaluate the data for the States that collect information on tobacco. The research explored how the smoking question would affect the other parts of the death certificate. The results for each of the States studied were provided to the Subgroup members. The Subgroup members also discussed their rationale for the decision made regarding the inclusion of a tobacco item on the standard death certificate with NCHS Director Dr. Ed Sondik

### ***Fetal Death Subgroup Testimony***

#### **Autopsy**

Dr. Randy Hanzlick presented testimony on the determination of whether a delivered fetus is considered a live birth or a fetal death. He also discussed the use of autopsies for determining cause and manner of fetal death. During Dr. Hanzlick’s presentation, he stressed that: 1) better quality data are needed; 2) the timeliness of reporting must be improved; and 3) training is needed for the persons responsible for completing the report of fetal death.

#### **Frequency of Autopsy Reported on Fetal Deaths**

Ms. Joyce Martin distributed two handouts to the Subgroup regarding the frequency of autopsy reporting in cases of fetal death. The handouts indicate that 33 States include an autopsy item on their fetal death report. The percentage of records with autopsy performed ranged from 26 percent to 51 percent. The percentage of records that did not state whether an autopsy was performed ranged from 3 percent to 27 percent.

Ms. Julie Kowaleski summarized why the autopsy item was not included on the 1989 U.S. Standard Report of Fetal Death, explaining that the 1989 Fetal Death Subgroup recommended the autopsy item be deleted and replaced with an item to provide information about whether the cause of fetal death was based on gross or microscopic examination. The Parent Group accepted that Subgroup’s recommendation to delete the autopsy item; however, the Parent Group did not accept the recommendation that an item be added about whether the cause of fetal death was based on gross or microscopic examination.

Ms. Kowaleski reported on fetal death data published by several large States—Alabama, Georgia, Kansas, Michigan, Missouri, New York, Pennsylvania, and Texas. Ms. Kowaleski observed that the State annual reports do not contain extensive data regarding fetal deaths. She noted that data are typically shown by total numbers by year and location—county, selected municipalities, public health districts, or cities of 25,000+. Some of the States that were examined published fetal deaths by cause of fetal death.



Ms. Kowaleski also observed that most States published fetal deaths and fetal death ratios, and that several States published data by race and/or age of mother. Ms. Kowaleski offered information regarding Kansas' annual report as an example of State recording. The Kansas annual report published several bar graphs by weight of fetus, gestational age, birth order, plurality, marital status, and race of child in reference to the 179 fetal deaths reported in Kansas in 1996.

### **Uses of Fetal Death Data**

Ms. Martin distributed a bibliography prepared by herself, Ms. Susan Hawk, and Dr. Donna Hoyert on published research that utilized either the national or State fetal death data. While preparing the bibliography, it was discovered that the number of reports and articles using fetal death data is small compared to that of published research using natality data.

Dr. Blackmon offered testimony regarding the literature search she performed on the definition of live birth. Due to the limited literature on this subject, she was only able to research the World Health Organization (WHO) definition of live birth from 1950. Dr. Blackmon reported that higher gestational age has more of an impact on the survival rate of infants than does the weight of the fetus.

Dr. Henry Thiede presented a literature review on ectopic pregnancy, noting that there has been an increase in this phenomenon. Dr. Thiede informed the Subgroup that there have been five studies conducted on ectopic pregnancy using claims data and explained that since so few States collect all products of conception, information on ectopic pregnancy is sparse. In addition, reference was made to the Hospitals' and Physicians' Handbook on Birth Registration and Fetal Death Reporting, which indicates that ectopic pregnancy should be included in "other terminations" in the pregnancy history section of the fetal death report.

Mr. Michael Lavoie provided an overview of the implementation of the electronic fetal death reporting systems, pointing out that discussions regarding automated fetal death reporting began after software for electronic birth reporting was developed. Mr. Lavoie noted that these systems are not practical for many States—particularly those with a small number of fetal deaths.

### **Status of Automated Fetal Death Reporting Systems in Other States**

Dr. Thiede reported on the New York State/New York City electronic death reporting system. He noted that New York State revised and beta tested its perinatal system.

Mr. Jack Smith, Division of Reproductive Health, CDC, prepared written testimony on reporting of fetal reductions. He explained that the procedure is not an induced termination of pregnancy and, therefore, should not be defined as such. Mr. Smith

remarked that fetal reduction could be included in the risk factor section of the birth certificate and fetal death report. It was also noted that there is a risk to the other fetuses within the gestational period of 8 to 12 weeks when a fetal reduction is performed.

### **Cause of Fetal Death**

Drs. Rosenberg and Hoyert discussed ICD-10 and its impact on collecting cause of fetal death information. Dr. Rosenberg presented background information on this section of the fetal death report, and stated that the design of the report does not differ greatly from the previous standard report. He reported that the linked birth/infant death file is better because information from both records can be produced for analysis, e.g., birthweight data for infant deaths. Compliance with WHO guidelines from a statistical point of view is also possible. Dr. Rosenberg noted that ICD-10 has twice as many categories as ICD-9 and that this is having a major impact on cause of death classification. ICD-10 coding has a much higher level of detail because of efforts to adapt the classification system to morbidity applications. Still, from the point of view of perinatal mortality statistics, coding is not going to be dramatically different from what it was in the past.

### **Medical Items**

Dr. Lillian Blackmon led a medical workgroup comprising experts in the field to explore the existing and potential medical items on the fetal death report. The members of the workgroup were Dr. Michael Greene, Dr. David Nagey, and Dr. Drucilla Roberts. Dr. Blackmon summarized the group's discussions and conveyed its viewpoint regarding medical items on the fetal death report. This group's input was used to help the Subgroup determine which items would elicit the best data and enhance the national data set. The workgroup made recommendations for the following new and revised items:

- Cause of Fetal Death
- Risk Factors in this Pregnancy (previously Medical Risk Factors for this Pregnancy)
- Obstetric Procedures
- Characteristics of Labor and Delivery (previously Complications of Labor and Delivery)
- Fetal Appearance at Delivery
- Placenta Appearance
- Previous Adverse Pregnancy Outcomes

See Chapter 9, Recommendations for the 2003 Revision of the U.S. Standard Report of Fetal Death, for final decisions regarding these items.

## Race and Ethnicity

The Panel to Evaluate the U.S. Standard Certificates and Report had a number of goals in its redesign of the vital statistics system. The Panel wanted to promote uniformity in this system and to ensure that its work complemented efforts toward standardizing national data sets for public health use. One of the Panel's areas of focus was race and ethnicity. The Panel voiced concerns about possible discontinuity in the collection and tabulation of race data in the vital statistics system with changes introduced in the Office of Management and Budget (OMB) directive, and invited Dr. Nancy Gordon from the Bureau of the Census and Ms. Kathy Wallman of OMB to address some of its concerns. Dr. Gordon and Ms. Wallman provided an overview of their agencies' previous recommendations on collecting race and ethnicity information and discussed how revisions to OMB's Statistical Policy Directive No. 15 would impact data collection methodologies.

Ms. Wallman provided a brief history of the Standard on Race and Ethnicity, which emerged in 1977 out of the need to have race data that are comparable across agencies. She conveyed to the Panel concerns that had been voiced as to whether the Standard is still relevant and whether it has been effective in capturing the growing diversity of the population, e.g., children of mixed race. To address these matters, OMB initiated an outreach program involving Federal Register notices and a series of public hearings, developed an interagency committee comprising users of race and ethnicity data, and implemented a research program testing alternatives offered to OMB. The resulting OMB recommendations were published in the October 30, 1997 Federal Register, and information on the research that led to the decisions was reported in the July 9, 1997 Federal Register. Among other changes, the Standard on Race and Ethnicity allows for respondents to report more than one race and divides the Asian or Pacific Islander grouping into two categories—one for Asian, and one for Native Hawaiian or Other Pacific Islander.

Dr. Gordon explained current tabulation methodologies and reported on the Census Bureau's Year 2000 Dress Rehearsal, a practice Census intended to discern how to obtain the best information using census forms. She assured the Panel that when tabulating data, the Census Bureau makes every effort to preserve each respondent's confidentiality and maintain the principle of self-identification.

One tabulation option considered by the Bureau is the all-inclusive approach, whereby persons of more than one race are included in all applicable race categories. For example, a person who is both black and white could be counted as black or African American in combination with one or more other races, or as white or as white in combination with one or more other races. This approach can be problematic because people are counted more than once—in this case, the person is counted twice. Consequently, when adding up the number of people from each race alone or in combination, the sum of the people in the various major race groups exceed the total number of people who were reported. Still, the all-inclusive approach is useful in that the data will reveal the maximum number of people who identify in some way with being a certain race alone or in combination.

Dr. Gordon also reported that the Bureau assessed the use of check boxes versus open-ended questions—particularly as they relate to issues of race and ethnicity. The Bureau tested nine race categories and found that check boxes yield more responses and are the best format to get better reporting for those opting to select more than one race on the Census form. The increase in the number of race categories listed on the form is due, in part, to an initiative to have various Asian races listed as separate check box items. The Bureau felt that a general Asian category check box with a line for persons to specify their Asian group was preferred. The Panel questioned whether it was acceptable to include a separate question for those who indicate that they are more than one race to give them the opportunity to identify more than one race similar to the way it is done in the Health Interview Survey. Ms. Wallman responded that Census studies indicate people may be offended by this additional question. Dr. Gordon added that research shows that a follow-up question such as this could influence respondents to change answers to questions asked earlier on the survey. Thus, OMB and the Bureau did not recommend adding a follow-up question regarding preferred race. However, the Parent Group of the Panel did bring forward a recommendation to ask a follow-up race question as a secondary data item. This information is important in bridging information between single and multiple race data collection and is consistent with the way the National Health Interview Survey collects data.

Dr. Gordon also discussed the Census Bureau's Intercensal Estimates Program, which is geared toward fine tuning characteristics and information collected between the censuses. She explained the process of estimating the population—start with the most recent Census, add births, subtract deaths, and deal with net international and domestic migration in the United States—and identified problems the Bureau has had with its estimates. Part of the problem is that the census is constrained by the information that is provided on the birth and death certificates.

The Bureau and OMB suggested that the Panel add a “race of child” category to the birth certificates and provide more geographic detail regarding births and deaths. Dr. Gordon and Ms. Wallman explained that this information will aid the agencies in collecting the most accurate population estimates data. Additionally, Dr. Gordon explained, the race of child category allows the parents to identify the child's race rather than tasking the Bureau with doing so. Dr. Gordon and Ms. Wallman agreed that in the absence of a “race of child” category, the next best information would be the race of the mother and father so that agencies can determine the child's race.

In light of this advice, the Birth Subgroup discussed the issue of child's race at great length. The Subgroup decided not to recommend that this item be added to the birth certificate, noting that there are ethical issues of deciding what a child's race is at infant status. The Subgroup felt that it is not appropriate for the child's race to be assigned—even by the parents—and that the child should decide the race for himself/herself. In addition, the Subgroup noted, the mother's/father's race can be combined to use as a surrogate for race of child. Therefore, the race of child item is not needed.

For its final recommendation, the Panel decided that the race of mother and father would be collected on the birth certificate and fetal death report and that the race of the decedent would be collected on the death certificate. The Panel further decided that the Hispanic ethnicity question would precede the race item, an approach devised by the Census Bureau after it found that the placement of the ethnicity question after race was problematic in the 1980 and 1990 censuses. Among other issues, the Census Bureau found, for example, that many Hispanic individuals indicated Cuban, Mexican, or Puerto Rican in response to the race question, then also checked Hispanic as their ethnicity. Because Cuban, Mexican, and Puerto Rican are not considered races, the Census Bureau imputed race for these individuals. Hispanics accounted for 90 percent of the individuals who did not complete the race question correctly. While the Census Bureau thought that reversing the order of the questions would resolve this issue, this scenario created another problem in the pretest. The Census Bureau found that individuals checked Hispanic for ethnicity, and many either skipped the race question or wrote in a specific origin. Census, again, had to impute race for many Hispanics. Panel members noted that part of the problem may be the lack of instructions on the Census form to ensure that people understand the term “race.”

In deciding the remaining items of race and ethnicity, the Panel weighed input from the Birth and Death Subgroups. The Birth Subgroup’s recommendation on race was consistent with the OMB standard of five race categories with a specify line for the Asian and Native Hawaiian or other Pacific Islander categories. The Death Subgroup recommendation went beyond the OMB standard and was more consistent with the Census Bureau breakdown for race categories. It was decided that the same question would be used on all certificates and reports; and ultimately, the Panel recommended a format similar to that of the Census Bureau, with the exception of deleting Negro and spelling out American in African American. The check boxes recommended are as follows:

- 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) \_\_\_\_\_

There was considerable discussion around whether to add the “other (specify)” check box. Some were concerned that Arab and Hispanic persons, for example, might mark “other,” resulting in the loss of data. However, the category provides an option for persons who do not feel that their race matches any of the categories listed. Moreover, it was noted that an “other” category on vital records would make vital statistics data collection consistent with the Census Bureau’s 2000 decennial census questionnaire, and compatibility between vital statistics and decennial census data is important for both post-censal population estimates and the calculation of birth and death rates. Recognizing the importance of this compatibility, OMB has given an informal approval to NCHS for this variance. Finally, it was further noted that the inclusion of an “other (specify)” category should improve the quality of data on race.

## Education

In its effort to promote uniformity in the vital statistics system and complement efforts toward standardizing national data sets, the Panel to Evaluate the U.S. Standard Certificates and Report examined issues around education. As with the issue of race and ethnicity, there are differences in how education information is collected by the Bureau of the Census and various other agencies. The Panel invited Ms. Jennifer Day, Chief, Education and Social Stratification Branch, Bureau of the Census, to address some of its concerns. Ms. Day provided an historical context for the education question and explained why the Bureau changed the format of the question after 50 years. She also described how the amended question has impacted data analyses and noted some of the shortcomings of this change.

The education question was first asked on the 1850 Census to glean information on illiteracy levels. Various literacy questions appeared on the Census throughout the late 1800s and early 1900s; and in 1940, the Bureau began to ask more focused questions about education. It was in 1940 that the Bureau first asked for the highest grade of school completed. Over the years, the scope of educational attainment questions has broadened considerably and now includes queries on specific levels and degrees. The most recent change in the Bureau's education question came in 1990. Amendments were driven by the growing importance of post-secondary education and the decreased importance of the exact measurement of the elementary years, society's view of education as a credential and indicator of a person's socioeconomic status, and changing patterns of enrollment for post-secondary education.

In conducting analyses of data collected under the old and new questions, the Bureau found an 85 percent consistency rate. In the lower grades, below college level, most of the inconsistency was only one grade off. One of the most notable inconsistencies was for high school attainment. Because 4 years of high school was previously equated with a high school diploma, there was over reporting in this category. There are now persons in the 12<sup>th</sup> grade, no diploma category. Conversely, there was under reporting of educational attainment in the absence of a category to capture information on people with some college, but no degree. They, too, were lumped in the 4 years of high school category under the old question.

While the revised question has improved reporting in some respects, there are some drawbacks. The revision has resulted in a loss of continuity with the time series dating back 50 years, and there is a loss of continuum with data collection from the Bureau of Labor Statistics, which is more concerned with the number of years of schooling. In addition, the amended question has resulted in the loss of related statistics, such as median years of schooling. Finally, this revised question fails to measure education outside the traditional collegiate series, i.e., adult education classes, vocational/technical classes and diplomas, and other speciality schools are not queried. Having heard testimony and discussed the education issue at length, each Subgroup formulated recommendations on how the education item should be collected. As was the

case with many of its recommendations, the Fetal Death Subgroup agreed to format fetal death report items consistently with those outlined in decisions from the Birth or Death Subgroup, as appropriate. The Birth Subgroup initially recommended the following:

What is the highest degree or level of school (you have/the mother has) completed at time of delivery? Mark [X] one box. If currently enrolled, mark the previous grade or highest degree received.

- No schooling completed
- Nursery school to 4<sup>th</sup> grade
- 5<sup>th</sup> grade
- 6<sup>th</sup> grade
- 7<sup>th</sup> grade
- 8<sup>th</sup> grade
- 9<sup>th</sup> grade
- 10<sup>th</sup> grade
- 11<sup>th</sup> grade
- 12<sup>th</sup> grade, NO DIPLOMA
- HIGH SCHOOL GRADUATE (high school DIPLOMA or equivalent, for example: GED)
- Some college credit, but less than 1 year
- 1 or more years of college, no degree
- Associate degree (for example: AA, AS (academic, occupational, vocational))
- Bachelor's degree (for example: BA, AB, BS)
- Master's degree (for example: MA, MS, MEng, Med, MSW, MBA)
- Professional School degree (for example: MD, DDS, DVM, LLB, JD)
- Doctorate degree (for example: PhD, EdD)

The Birth Subgroup wanted information collected on the birth certificate to be as consistent as possible with data collected by the Census Bureau, thereby promoting comparability between Census and vital statistics data, which is essential in the calculation of education-specific rates. In addition, education information collected on the birth certificate is used for statistical purposes as an indicator of socioeconomic status. It is also highly related to fertility, health practices, and birth outcome. While the data are comparable, there are differences between the Birth Subgroup's recommendation and the question from the Census. The Birth Subgroup's recommendation provided separate check boxes for grades 5 through 12, while the Census Bureau groups grades 5 and 6, 7 and 8, and 9 through 12. In addition, the Birth Subgroup's recommendation included additional prompts for academic, occupational, and vocational as part of the Associate Degree category.

The Parent Group raised a number of concerns regarding this recommendation, questioning the need for such extensive breakdowns of the education levels. The Birth Subgroup voiced its sentiment that more information is needed for younger women. The Parent Group then asked the Birth Subgroup to revisit the item, stressing that they were trying to reach consensus on the level of detail that should be collected on all certificates.



The Death Subgroup recommended the following:

What is the highest degree or level of school this person has COMPLETED?

- 8<sup>th</sup> grade or less
- 9<sup>th</sup> through 12<sup>th</sup> grade (no diploma)
- High School Graduate - high school diploma or equivalent (e.g., GED)
- Associate Degree (e.g., AA, AS (academic, occupational, vocational)) or some college credit or other training (no degree)
- Bachelor's degree (e.g., BA, AB, BS)
- Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA)
- Professional (MD, DDS, DVM, LLB, JD) or doctoral (PhD, EdD) degree

This recommendation asked for far less detail than did the proposal from the Birth Subgroup. Still, the Death Subgroup's proposed groupings are consistent with Census categories. As is the case with the birth certificate, education information on the death certificate provides an indicator of socioeconomic status. In addition, education items on the death certificate are used in studies of the relationship between education and mortality. This information is valuable in medical studies of causes of death and in prevention programs. After some discussion, the Parent Group decided that the Death Subgroup's education categories may not need to be the same as those recommended by the Birth Subgroup and approved this recommendation as presented.

During its final meeting, the Parent Group received additional input on this issue from Dr. James Weed of NCHS. Dr. Weed provided information on the Census education item, noting that it measures schooling, not training. The inconsistency in the original Birth and Death Subgroup's recommendations was again noted. The Birth Subgroup modified their original recommendation to be consistent with the Death Subgroup's recommendation, with the exception of adding "one or more years of college, no degree." Representatives from the two Subgroups agreed that education plays a different role on the birth and death certificates and noted that those differing roles determine the level of detail in each Subgroup's recommendation. After considerable discussion, the Parent Group voted to include the Birth Subgroup's modified education question on the birth and death certificates and report of fetal death. The Group concluded that there could be considerable costs associated with having different questions on the certificates. Moreover, it was noted that different questions could be confusing for those using the data and that States may have to spend a great deal of time explaining why the information on the certificates is not the same. The Group decided that the following check box items would be used for the education question.

- 8<sup>th</sup> grade or less
- 9<sup>th</sup> to 12<sup>th</sup> grade; no diploma
- High School Graduate or GED completed
- One or more years of college, 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)

A minor modification was made in the wording of the education question from what was recommended by the revision panel. An NCHS staff member who served on the Interagency Committee on Measures of Educational Attainment to the Interagency Council on Statistical Policy was provided a copy of the recommended wording. She wanted to make sure that the item on the standard certificates was comparable to the one that the Census Bureau would be using.

After reviewing the recommended item she indicated that the two items were not entirely comparable. She noted that Census will include more categories below the 8<sup>th</sup> grade and more categories for high school but that the collapsed categories on the standard certificates were comparable. However, for the college categories Census includes "Some college credit, but less than 1 year" which was not included on the standard certificates. She felt that this could not accurately be collapsed into the "High school graduate" category.

This concern was presented to the Parent Group of the revision committee for discussion and resolution. They agreed with the assessment that the standard certificate question was not entirely comparable to the Census question. They considered 2 alternatives for resolving the issue: (1) Add another category to the question - "Some college credit, but less than 1 year"; or (2) change the existing category of "One or more years of college, no degree" to "Some college credit, but no degree." Both of these options would make the question comparable to the Census question. After discussion the Parent Group voted to recommend the second option. Therefore, the revised wording of the education question on all certificates will be:

Check the box that best describes the highest degree or level of school completed:

- 8<sup>th</sup> grade or less
- 9<sup>th</sup> to 12<sup>th</sup> 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)

## Recommendations for the 2003 Revision of the U.S. Standard Certificate of Live Birth

### Organization of the Birth Subgroup

The Birth Subgroup of the Panel to Evaluate the U.S. Standard Certificates and Report was responsible for reviewing the U.S. Standard Certificate of Live Birth, last revised in 1989, and making recommendations for the Parent Group's consideration. The Birth Subgroup members were as follows:

Dorothy S. Harshbarger, Chairperson  
State Registrar and Director  
Center for Health Statistics  
Alabama Department of Public Health

Greg R. Alexander, Sc.D., MPH  
Professor  
Department of Maternal and Child Health  
University of Alabama at Birmingham  
(Researcher)

W. Sundin Applegate, M.D., MPH  
Medical Director  
Community and Family Health Services  
Arizona Department of Health Services  
(Maternal and Child Health Affiliate of  
ASTHO)

Donald Berry  
Manager  
Health Statistics and Research  
Bureau of Health Planning and Resource  
Management (Delaware)

Lillian Blackmon, M.D.  
Associate Professor  
Department of Pediatrics  
University of Maryland Medical Systems  
(American Academy of Pediatrics)

Patricia Brown  
Senior Director, HIS Division, Middle  
Atlantic Region, QuadraMed Corporation  
(American Health Information  
Management Association)

Carol V. Getts  
State Registrar and Director  
Division for Vital Records and Health  
Statistics  
Michigan Department of Community Health

Lorne A. Phillips, Ph.D.  
State Registrar and Director  
Center for Health and Environmental  
Statistics  
Kansas Department of Health and  
Environment

Barry Nangle, Ph.D.  
Director, Bureau of Vital Records  
Utah Department of Health

Henry A. Thiede, M.D.  
Fellow of American College of  
Obstetricians and Gynecologists  
(American College of Obstetricians and  
Gynecologists)

Minta Uzodinma  
Chief Nurse Consultant  
Mississippi State Department of Health  
(American College of Nurse Midwives)

The following staff from the National Center for Health Statistics also attended part of or all the Subgroup meetings:

Stephanie J. Ventura, Rapporteur  
Joyce A. Martin, Rapporteur  
T. J. Mathews  
Michael D. Kogan, Ph.D.  
Marian F. MacDorman, Ph.D.

Jonnae O. Atkinson  
Sally C. Curtin  
Kenneth G. Keppel, Ph.D.  
Julia L. Kowaleski  
Judy M. Barnes

The Birth Subgroup met in conjunction with each of the six meetings of the Panel to Evaluate the U.S. Standard Certificates, beginning in January 1998. The Subgroup's initial meeting entailed reviewing the existing certificate of birth and beginning discussion on which items should be retained as on the 1989 standard; retained, but modified; or deleted. In addition, the Subgroup discussed what new items should be considered for the certificate to enhance the data collected, and the Subgroup identified a number of topics for which outside expert testimony would be needed.

During its May 1998 meeting, the Birth Subgroup identified possible invitees to provide expert testimony on topics of concern. In addition, the Subgroup discussed maternal and child health issues collected as part of the Centers for Disease Control and Prevention's Pregnancy Risk Assessment Monitoring System (PRAMS). The Subgroup also had a brief discussion on the proposed rules outlined in the Health Insurance Portability and Accountability Act (HIPAA) and how these guidelines could potentially limit the use of personal identifiers. Finally, the Birth Subgroup began discussing demographic items on the birth certificate.

The Birth Subgroup continued discussing items on the existing standard during its third meeting, held in July 1998, and considered issues of race, Hispanic origin, and ancestry/ethnicity. Subgroup members also had additional discussions regarding HIPAA and began preparing draft recommendations for the Parent Group's consideration.

The primary focus of the Birth Subgroup's fourth convening in October 1998 was medical items on the birth certificate, as presented by the Medical Items Working Group headed by Dr. Lillian Blackmon. Among other concerns, the Subgroup addressed the formatting of medical questions and the feasibility of collecting proposed data. In addition, the Subgroup began addressing maternal social indicators, such as English as the primary language, WIC participation, and living arrangements during pregnancy.

This Subgroup further explored medical items during its January 1999 meeting. In addition, Subgroup members discussed the use of worksheets to collect data on the standard birth certificate and addressed the need for cognitive field testing to provide guidance on the value and feasibility of proposed certificate items.

In April 1999, the Birth Subgroup held its final meeting. During this convening, Subgroup members reviewed information pertaining to pilot testing at hospitals and focus groups convened to discuss medical items on the Certificate of Live Birth. The Subgroup also revisited items sent back by the Parent Group and finalized outstanding recommendations for the Parent Group's consideration.

### **Summary of Major Decisions**

The Subgroup to Evaluate the U.S. Standard Certificate of Live Birth made a number of recommendations that substantially changed the standard birth certificate. Many of the changes were made to the medical portion of the document. The Subgroup revamped the Medical Risk Factors, Obstetric Procedures, Complications of Labor and/or Delivery, Method of Delivery, Abnormal Conditions of the Newborn, and Congenital Anomalies sections. In some cases, the section names were changed, and a number of check box items were added, deleted, or amended, as appropriate, to elicit more specific and/or attainable information regarding medical items.

In addition, the Birth Subgroup added items to the certificate to address data collection needs and facilitate the linkage of data sets. Among other items, the Subgroup added a question to collect information on maternal morbidity, mother's height and weight, WIC participation, principal source of payment for delivery, infections present, and breast feeding status.

Other key decisions included the addition of an Administrative Use section to the certificate. This section includes the Mother's Mailing Address, Marital Status, Social Security Number requested for child, Facility ID, Mother's Social Security Number and Father's Social Security Number.

Finally, standardized individual worksheets for the mother and hospital staff were developed. These worksheets include clear, unambiguous questions, definitions, instructions, and information on preferred sources of the data and where in the records that information is most likely to be found. The worksheets will be tested prior to implementation and refined based on test results. These changes should lead to improvements in the quantity and, most importantly, the quality of birth data.

## **Items Recommended for the 2003 U.S. Standard Certificate of Live Birth**

The following items were recommended by the Birth Subgroup and approved by the Parent Group for inclusion on the 2003 U.S. Standard Certificate of Live Birth. The rationale for including each item is noted. Please note that the item numbers correspond to the proposed 2003 certificate provided in Appendix A. The 1989 standard certificate of birth is provided in Appendix B.

### **1. CHILD'S NAME (First, Middle, Last, Suffix)**

The Subgroup recommended that this item be retained but modified to include all names and accommodate various needs related to different ethnic naming conventions. This item identifies the individual for whom the certificate is being prepared, and it is needed for legal purposes.

### **2. TIME OF BIRTH (24hr)**

The Subgroup recommended that this item be retained, using a 24-hour clock format for both the paper and electronic data files. This item documents the exact time of birth for legal purposes and for the order of birth in the case of plural deliveries. This item should be collected for legal and statistical purposes.

### **3. SEX**

The Subgroup recommended that this item be retained and recorded as either male or female. This item is used to measure sex differentials in health-related characteristics and to make population estimates and projections. This item should be collected for legal and statistical purposes. The Subgroup further recommended that a placeholder be added in the data file for "not yet determined" and that the item remain blank on paper documents until the child's sex is determined. When determined, the child's sex will be added to the data set. This should aid in ensuring that no child's permanent file lists "not yet determined" for the sex, even if that infant dies soon after birth.

### **4. DATE OF BIRTH (Mo/Day/Yr)**

The Subgroup recommended that this item be retained, as it is important to establish the age of the person named on the birth certificate for such purposes as school entrance, obtaining a driver's license, requesting a passport, or for Social Security benefits. The information is used in conjunction with the date of the last normal menses to calculate the length of gestation and is important in the study of survivorship of low birth weight and pre-term babies. This is a legal and statistical item.

5. FACILITY NAME (If not institution, give street and number)

The Subgroup recommended that this item be retained and that the National Provider Identifier (NPI) of the facility where the birth occurred be collected. The NPI is collected separately in the “Information for Administrative Use” section. The Subgroup further recommended that the street and number be provided when an NPI is not available. This item is needed for follow-up and query programs in State vital statistics offices and has historical value to parents and the child. It is also used for public health purposes and statistical research.

6. CITY, TOWN, OR LOCATION OF BIRTH

7. COUNTY OF BIRTH

The Subgroup recommended that these items be retained because the information is needed for follow-up and query programs in State vital statistics offices and has historical value to parents and the child. These items are important for legal and statistical purposes, and to determine U.S. citizenship.

8a. MOTHER’S CURRENT LEGAL NAME (First, Middle, Last, Suffix)

The Subgroup recommended that this item be retained, but modified to more clearly define what is requested. The item is needed for identification and as documentary evidence of parentage, and is important for legal purposes.

8b. DATE OF BIRTH (Mo/Day/Yr) (Mother)

The Subgroup recommended that this item be retained. This information is needed to calculate the age of the mother and will be useful for record linkage and genealogy research. This information is essential for legal and statistical purposes. Mother’s age is one of the most important factors in the study of childbearing patterns and population change. Studies have shown a relationship between the health of the child and the mother’s age.

8c. MOTHER’S NAME PRIOR TO FIRST MARRIAGE (First, Middle, Last, Suffix)

The Subgroup recommended that this item, previously “Maiden Surname,” be retained, but modified to address concerns raised regarding the use of the term “maiden.” The item is needed for identification and as documentary evidence of parentage. The mother’s name given at birth (except in cases of adoption) is important because it remains constant throughout her life, in contrast to other names that may change due to changes in marital status and other reasons. The surname given at birth is necessary for indexing birth records and issuance of copies of certificates. This item is important for legal purposes.

8d. BIRTHPLACE (State, Territory, or Foreign Country) (Mother)

The Subgroup recommended that this item be retained. This item provides essential information on the fertility and growth of immigrant populations and can be used for tracing family histories. In conjunction with Census population data, this item can be used to compare childbearing patterns of U.S.- and non-U.S.-born women. This information is used for legal and statistical purposes.

- 9a. RESIDENCE OF MOTHER-STATE
- 9b. COUNTY
- 9c. CITY, TOWN, OR LOCATION
- 9d. STREET AND NUMBER
- 9e. APT. NO.
- 9f. ZIP CODE
- 9g. INSIDE CITY LIMITS? Yes No

The Subgroup recommendation was to retain current wording with the addition of Apartment Number and Zip Code and the deletion of Inside City Limits. As a result of Parent Group discussion, the Subgroup agreed to retain the Inside City Limits question for consistency with the Death Subgroup's recommendation. This information is needed for legal and statistical purposes. It makes it possible to compute birth rates specific to the population residing in a given area; to develop population estimates and projections; and to place and evaluate community health, school, and other services and programs.

- 10a. FATHER'S CURRENT LEGAL NAME (First, Middle, Last, Suffix)

The Subgroup recommended that this item be retained and acknowledged that this item may not be available for all births, as some State laws preclude inclusion of the father's name on the birth certificate if the parents are not married and a paternity acknowledgment has not been signed. This item is used for identification and as documentary evidence of parentage. This item is collected for legal purposes.

- 10b. DATE OF BIRTH (Mo/Day/Yr) (Father)

The Subgroup recommended that this item be retained. This information is needed to calculate the age of the father and is useful for record linkage and genealogy research. This information is essential for legal and statistical purposes.

- 10c. BIRTHPLACE (State, Territory, or Foreign Country) (Father)

The Subgroup recommended that this item be retained. This item provides essential information on the fertility and growth of immigrant populations and can be used for tracing family histories. This information is used for legal and statistical purposes.

- 11. CERTIFIER'S NAME:



TITLE:

- MD
- DO
- HOSPITAL ADMIN.

- CNM/CM
- OTHER MIDWIFE
- OTHER  
(Specify)\_\_\_\_\_

The Subgroup recommended that these items be retained with the addition of CM as an option. The Subgroup initially recommended separate check box items for CM and CNM. However, the American College of Nurse Midwives requested that these check box items be combined into one check box titled “CNM/CM because the licensing is the same for both groups of midwives. This information identifies the certifier, who may need to be contacted at a later date for querying of information. The Subgroup acknowledged that for electronic transmission, an electronic authentication may be used as permitted by State law and, therefore, deleted the Certifier’s Signature. This information is also collected for legal purposes.

12. DATE CERTIFIED

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
MM DD YYYY

The Subgroup recommended that this item, previously “Date Signed,” be retained, but slightly modified. This was also changed to a MM/DD/YYYY format. This information validates the accuracy of the date, time, and place of birth of the child recorded on the birth certificate.

13. DATE FILED BY REGISTRAR

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
MM DD YYYY

The Subgroup recommended that this item be retained, but modified to use the MM/DD/YYYY format rather than Month, Day, Year. This information documents whether the certificate was filed within the time period specified by law. In addition, the information is used administratively by the Passport Agency and the Social Security Administration and it is used for issuing certified copies. This item is collected for legal purposes.

### ***Information for Administrative Use***

The Subgroup recommended that a new section be included in the certificate titled “Information for Administrative Use.” This section contains items needed to fulfill statutory mandates other than those directly related to establishing the permanent, legal record of a person’s birth. It also contains items collected because of agreements with other programs.

14. MOTHER’S MAILING ADDRESS  Same as residence, or:

STATE:

CITY, TOWN, OR LOCATION:

STREET & NUMBER:

APARTMENT NO.:

ZIP CODE:

The Subgroup recommended that this item be retained as a question separate from Mother’s Residence, with the addition of Apartment Number. The mother’s mailing address includes State, City, Town, or Location; Street and Number; Apartment Number; and Zip Code. This information is necessary to mail a birth notification record and the child’s Social Security card to the mother. It is also necessary to query missing information and to facilitate follow-back studies. This item is needed for administrative purposes. This information is necessary because the mother’s residence and mailing address are not necessarily the same.

15. MOTHER MARRIED? (At birth, conception, or any time between) Yes No  
IF NO, HAS PATERNITY ACKNOWLEDGEMENT BEEN SIGNED IN THE  
HOSPITAL? Yes No

The Subgroup recommended that “Mother Married” be retained and that a follow-up question regarding paternity acknowledgment be added. Information regarding marital status is used to monitor the substantial differences in fertility patterns and birth outcomes for married and unmarried women. This provides information on family and social relationships, household composition, and mother’s social support. This information can help to identify the need for additional supportive public health and other services for unmarried women and their children. This item is collected for legal and statistical purposes. Information on paternity acknowledgment will be a check on whether any information on the father should be included on the birth certificate. This item also provides information on the in-hospital acknowledgments for child support enforcement tracking.

16. SOCIAL SECURITY NUMBER REQUESTED FOR CHILD? Yes No

The Subgroup recommended that this item be added to the standard because many States collect this item in some manner in order to facilitate the enumeration at birth process.

17. FACILITY ID (NPI)

The Subgroup recommended that this item be collected, when possible, to provide information for follow-up and query programs in State vital statistics offices. It is also used to link information from the birth certificate to other public health data bases.

18. MOTHER'S SOCIAL SECURITY NUMBER:

19. FATHER'S SOCIAL SECURITY NUMBER:

The Subgroup recommended that these items be added to the standard, noting that Federal law requires States to collect this information. In addition, the Birth Subgroup recommended that Federal law be amended to allow for the use of social security numbers for public health and linking purposes which would allow for linkages of public health databases.

***Information for Medical and Health Purposes Only***

The Subgroup recommended that a section "Information for Medical and Health Purposes Only" be included on the certificate. This section includes items which are not required for legal or administrative purposes, but which are deemed vital for medical and public health purposes.

20. MOTHER'S EDUCATION (Check the box that best describes the highest degree or level of school completed at the time of delivery)

- 8<sup>th</sup> grade or less
- 9<sup>th</sup> to 12<sup>th</sup> 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)

*The Birth Subgroup recommended that this item be retained on the birth certificate. However, it has been modified to a check box format to collect more specific data on degrees obtained. Education is highly related to fertility, health practices, and birth*

*outcome. It is also used as an indicator of socioeconomic status. Please see the “Education” chapter of this report for additional information.*

21. MOTHER OF HISPANIC ORIGIN? (Check the box that best describes whether the mother is Spanish/Hispanic/Latino. Check the “No” box if mother is not Spanish/Hispanic/Latino.)
- No, not Spanish/Hispanic/Latino
  - Yes, Puerto Rican
  - Yes, Mexican, Mexican American, Chicano
  - Yes, Cuban
  - Yes, other Spanish/Hispanic/Latino-(Specify) \_\_\_\_\_

*The Subgroup recommended that this item be retained on the birth certificate. However, it has been changed to a check box item to elicit more specific information and follow the format of the Census question. This item will make it possible to compare variations in child-bearing patterns and birth outcomes of Hispanics. This information is also important for population estimates and projections. Please see the “Race and Ethnicity” chapter of this report for additional information.*

22. MOTHER’S RACE (Check one or more races to indicate what the mother considers herself to be)
- 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) \_\_\_\_\_

*The Subgroup recommended that this item be retained on the birth certificate. However, it has been changed to a check box item to elicit more specific information. This information is used to study racial variations in childbearing, access to health care, and variations in pregnancy and birth outcome. This information is also critical for population estimates and projections. Please see the “Race and Ethnicity” chapter of this report for additional information.*

23. FATHER'S EDUCATION (Check the box that best describes the highest degree or level of school completed at the time of delivery)

- 8<sup>th</sup> grade or less
- 9<sup>th</sup> to 12<sup>th</sup> 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)

*The Subgroup recommended that this item be retained on the birth certificate. However, it has been modified to a check box format to collect more specific data on degrees obtained. Education is highly related to fertility, health practices, and birth outcome. It is also used as an indicator of socioeconomic status. Please see the "Education" chapter of this report for additional information.*

24. FATHER OF HISPANIC ORIGIN? (Check the box that best describes whether the father is Spanish/Hispanic/Latino. Check the "No" box if father is not Spanish/Hispanic/Latino.)

- No, not Spanish/Hispanic/Latino
- Yes, Puerto Rican
- Yes, Mexican, Mexican American, Chicano
- Yes, Cuban
- Yes, other Spanish/Hispanic/Latino-(Specify) \_\_\_\_\_

*The Subgroup recommended that this item be retained on the birth certificate. However, it has been changed to a check box item to elicit more specific information and follow the format of the Census question. This item will make it possible to compare variations in child-bearing patterns and birth outcomes. This information is also important for population estimates and projections. Please see the "Race and Ethnicity" chapter of this report for additional information.*

25. FATHER'S RACE (Check one or more races to indicate what the father considers himself to be)

- 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) \_\_\_\_\_

*The Subgroup recommended that this item be retained on the birth certificate. However, it has been changed to a check box item to elicit more specific information. This item is used to study racial differences in childbearing, access to health care, and variations in pregnancy and birth outcomes. This information is also critical for population estimates and projections. Please see the “Race and Ethnicity” chapter of this report for additional information.*

26. PLACE WHERE BIRTH OCCURRED (Check one)

- Hospital
- Freestanding Birthing Center
- Home Birth: Planned to deliver at home? Yes No
- Clinic/Doctor’s Office
- Other (Specify)\_\_\_\_\_

The Subgroup recommended retaining this item with a slight modification to more clearly define a home delivery and obtain more specific information regarding whether the home delivery was planned. A freestanding birthing center is defined as one which has no direct physical connection with an operative delivery facility. Home is defined as any private residence. A suggestion to identify levels of hospitals was not adopted because there is no standardized system for collecting this information among the States. This item can be used to produce statistical data on the number and characteristics of births by type of facility.

27. ATTENDANT’S NAME, TITLE, AND NPI

- NAME: \_\_\_\_\_ NPI: \_\_\_\_\_
- TITLE:
- MD
  - DO
  - CNM/CM
  - OTHER MIDWIFE
  - OTHER(Specify)\_\_\_\_\_

The Subgroup recommended that these items be retained with the addition of NPI and CM as an option. The Subgroup initially recommended separate check box items for CM and CNM; however, the American College of Nurse Midwives requested that these check box items be combined into one, “CNM/CM,” because the licensing is the same for both groups of midwives. This information is important for querying and for assessment of services rendered. It will permit separate identification of deliveries attended by certified nurse midwives/certified midwives,

lay midwives, and other persons. This item is important for statistical and public health purposes.

28. MOTHER TRANSFERRED FOR MATERNAL MEDICAL OR FETAL INDICATIONS FOR DELIVERY? Yes No  
IF YES, ENTER NAME OF FACILITY MOTHER TRANSFERRED FROM:

\_\_\_\_\_

The Subgroup recommended that this item be retained. The wording of the question was slightly altered to clarify the intent to reflect transfer for a higher level of care. This information will help determine the appropriateness of care, which can improve outcomes. This information is very useful when combined with principal source of payment information.

29. WAS THE PRENATAL RECORD AVAILABLE FOR COMPLETION OF THE BIRTH CERTIFICATE? Yes No

The Subgroup recommended that this item be added because it provides an indication of whether the prenatal medical record was available when the birth certificate was completed, which may also be related to the quality of care.

30. DATE OF FIRST PRENATAL CARE VISIT  
\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
MM DD YYYY No Prenatal Care

The Subgroup recommended that this item, previously “Month of Pregnancy Prenatal Care Began (First, Second, Third, etc.),” be retained but modified to collect the actual date of the first prenatal visit. The Subgroup felt this would yield more accurate data. This item identifies when during the pregnancy the woman entered prenatal care. This item is needed as the basis for measures of how soon women initiate prenatal care and for measures of the appropriate utilization of services. The Subgroup defined prenatal care as when a physician or other health professional first examines and/or counsels the pregnant woman as part of an on-going program of care for the pregnancy.

31. TOTAL NUMBER OF PRENATAL VISITS FOR THIS PREGNANCY (If none, enter '0')

The Subgroup recommended that this item, previously “Prenatal Visits–Total Number,” be retained but slightly modified. This item indicates how many prenatal care visits the woman made during the pregnancy. This item is needed as the basis for measures of utilization of prenatal care services.

32. MOTHER’S HEIGHT  
\_\_\_\_\_ (inches)
33. MOTHER’S PREPREGNANCY WEIGHT  
\_\_\_\_\_ (pounds)  
(or weight at first prenatal visit)
34. MOTHER’S WEIGHT AT DELIVERY  
\_\_\_\_\_ (pounds)  
(or weight at last prenatal visit)

The Subgroup recommended items 33 and 34 be added to replace the previous “Weight gained during pregnancy” item in an effort to gain more accurate information on weight gained during pregnancy. Height and prepregnancy weight are needed to calculate maternal body mass index (BMI). Maternal weight gain without knowledge of maternal BMI is of little value. Maternal BMI alone and in combination with maternal weight gain during pregnancy is associated with pregnancy outcome and maternal morbidity and mortality.

35. DID MOTHER GET WIC FOOD FOR HERSELF DURING THIS PREGNANCY?  
Yes      No

The Subgroup recommended that this item be added to the certificate. WIC is the Department of Agriculture nutrition program for Women, Infants, and Children. WIC gives pregnant women and/or their children food, checks, or vouchers for food. The Subgroup recommended the addition of this as an indicator of program participation as well as socioeconomic status. The Subgroup considered asking a more general question, such as, “Is mother in any program,” but was concerned that women may not understand the question without more specific examples.

36. NUMBER OF PREVIOUS LIVE BIRTHS  
(Do not include this child)
- 36a. Now Living  
Number \_\_\_\_\_  
None
- 36b. Now Dead  
Number \_\_\_\_\_  
None



36c. DATE OF LAST LIVE BIRTH

\_\_\_\_\_/\_\_\_\_\_  
MM            YYYY

37. NUMBER OF OTHER PREGNANCY OUTCOMES

(spontaneous or induced losses or ectopic pregnancies)

(include previous fetal losses if this was a multiple pregnancy)

37a. OTHER OUTCOMES

Number \_\_\_\_\_

None

37b. DATE OF LAST OTHER PREGNANCY OUTCOME

\_\_\_\_\_/\_\_\_\_\_  
MM            YYYY

The Subgroup recommended these items be retained but modified. The heading "Live Births" was modified to "Number of Previous Live Births" to emphasize that this birth should not be included. The "Other Terminations" section was changed to "Number of Other Pregnancy Outcomes," which is defined to include ectopic pregnancies. The dates of last live birth and last other pregnancy outcome were modified to collect the dates in a numerical format, rather than spelling out the month. This information is essential for determining live-birth and total-birth order, which are important in studying trends in childbearing and child spacing. It is useful in studying health problems associated with birth order, e.g., first births to older women, and determining the relationship of birth order to infant and perinatal mortality. The dates of last live birth and last other pregnancy outcome permit the calculation of intervals. This information allows researchers to analyze the relationship of various maternal characteristics and pregnancy outcomes with birth and pregnancy intervals.

38. CIGARETTE SMOKING BEFORE AND DURING PREGNANCY

Please answer for each time period listed.

(If none, enter "0." 1 pack = 20 cigarettes)

Average number of cigarettes per day:

Three Months Before Pregnancy \_\_\_\_\_

First Three Months of Pregnancy \_\_\_\_\_

Second Three Months of Pregnancy \_\_\_\_\_

Last Three Months of Pregnancy \_\_\_\_\_

The Subgroup recommended to retain this item, previously "Tobacco use during pregnancy, yes/no, and Average number of cigarettes per day," but modify to obtain information on maternal smoking usage before and during pregnancy. The Subgroup felt that higher quality data may be obtained if smoking status were collected by trimester. This information will also be helpful in evaluating smoking cessation programs and in evaluating the health impact of changes in smoking status at different points in the pregnancy.

39. PRINCIPAL SOURCE OF PAYMENT FOR THIS DELIVERY

- Private Insurance
- Medicaid
- Self-pay
- Other (Specify) \_\_\_\_\_

The Subgroup recommended that this item be added to the Standard because it provides important public health information for low-income women and their children and is strongly associated with pregnancy outcomes. The information reported should be for the insurance coverage at the time of delivery. There are important differences in maternal characteristics, such as socio-economic status and birth outcomes among payment categories. This information is used for public health purposes.

40. DATE LAST NORMAL MENSES BEGAN

\_\_\_\_/\_\_\_\_/\_\_\_\_  
MM DD YYYY

The Subgroup recommended that this item be retained but modified to the MM/DD/YYYY format. It provides information on the length of gestation, which can be associated with birth weight to determine the maturity of the child at birth. It is also associated with infant morbidity and mortality and is important in medical research. The Subgroup also recommended that if the day is unknown, it may be left blank, but the month and year, if known, should be given.

41. MOTHER'S MEDICAL RECORD NUMBER

The Subgroup recommended that this item be added in addition to the UHI because this information, combined with the hospital identifier, will enable linkage of public health data sets and matching for sets of multiple births/fetal deaths.

42. RISK FACTORS IN THIS PREGNANCY (Check all that apply)

Diabetes

- Prepregnancy (Diagnosis prior to pregnancy)
- Gestational (Diagnosis in this pregnancy)

Hypertension

- Prepregnancy (Chronic)
- Gestational (PIH, preeclampsia, eclampsia)
- Previous preterm birth
- Other previous poor pregnancy outcome (Includes perinatal death, small-for-gestational age/intrauterine growth restricted birth)
- Vaginal bleeding during this pregnancy prior to the onset of labor
- Pregnancy resulted from infertility treatment
- None of the above

The Subgroup recommended the retention of this item, previously “Medical Risk Factors for This Pregnancy.” However, the Subgroup recommended that a number of items be deleted, items with more clinical significance be added, and that some of the existing items be modified to glean more specific information.

The Subgroup recommended a group of items with more clinical significance than the previous “Medical Risk Factors for this Pregnancy.” It sought the advice of a national panel of medical and health experts and based its recommendations for specific factors on the following criteria: 1) clearly defined clinically, 2) collectable at least 90 percent of the time, 3) evidence-based, 4) useful for research (public health and clinical) purposes, 5) potential to effect pregnancy outcome, and 6) required by legal statute. Some existing factors were deleted from this item because they did not meet these criteria.

The risk factors proposed for collection allow for the identification of specific maternal conditions that are oftentimes predictors of poor maternal and infant outcome. The information is useful for research and planning intervention strategies.

43. INFECTIONS PRESENT AND/OR TREATED DURING THIS PREGNANCY (Check all that apply)
- Gonorrhea
  - Syphilis
  - Herpes Simplex Virus (HSV)
  - Chlamydia
  - Hepatitis B
  - Hepatitis C
  - None of the above

The Subgroup recommended adding this item to the standard because all of the listed infections are known to cause concomitant fetal and/or subsequent neonatal infection and thus have significant public health implications. In addition, there is no current national reporting system for these infections that focuses on the prevalence of perinatal transmission. The Subgroup discussed whether to include HIV and recommended to allow States to decide on an individual basis because many States have confidentiality restrictions on reporting HIV status. Also, the Subgroup felt that quality data on this item could not be collected from this source because of the sensitivity of HIV status. (see “Other Items Considered by Subgroup, but Rejected” section for more detailed discussion)

44. OBSTETRIC PROCEDURES (Check all that apply)
- Cervical cerclage
  - Tocolysis
  - External cephalic version

- Successful
- Failed
- None of the above

The Subgroup recommended that this item be retained with modification. A number of options from the 1989 certificate were eliminated because they were not thought to be performed with enough frequency to identify populations with particular concerns. Amniocentesis was dropped because most tests are done before 20 weeks of gestation and the risks associated with this procedure are well established. The items selected have an impact on the live-born child and are performed 20 weeks after gestation; procedures performed prior to 20 weeks gestation are less strongly associated with outcome. Induction of labor has been shifted to the "Characteristics of Labor and/or Delivery" section of the certificate. All of the items selected for inclusion are manipulative procedures that carry risk to the fetus. Cervical cerclage data are needed to monitor effectiveness of procedures in relation to preterm delivery. Tocolysis data are needed to assess frequency of use and to correlate use with pregnancy outcome. The external cephalic version procedure is being employed with increasing frequency to reduce the need for cesarean delivery because of fetal malpresentation. There are associated risks both for the mother and the fetus that should be monitored. The Subgroup considered adding "multi-fetal or selective reduction" to the list, but did not add it because of the sensitivity around abortions.

45. CHRONOLOGY OF LABOR AND DELIVERY

A. Facility admission that included delivery:

\_\_\_\_/\_\_\_\_/\_\_\_\_ at \_\_\_\_\_  
 MM            DD            YYYY            24 hour clock

Delivery not in facility

B. Rupture of membranes occurred on:

\_\_\_\_/\_\_\_\_/\_\_\_\_ at \_\_\_\_\_  
 MM            DD            YYYY            24 hour clock

Not Applicable       Unknown date and time

C. Onset of labor occurred on:

\_\_\_\_/\_\_\_\_/\_\_\_\_ at \_\_\_\_\_  
 MM            DD            YYYY            24 hour clock

Not Applicable       Unknown date and time

D. Full cervical dilatation occurred on:

\_\_\_\_/\_\_\_\_/\_\_\_\_ at \_\_\_\_\_  
 MM            DD            YYYY            24 hour clock

Not Applicable       Unknown date and time

The Subgroup recommended that this item be added to the standard. Provision of the exact times of occurrence should result in more objective, accurate data than if the clerk is asked to make a judgement call, for example, as to whether the labor was "prolonged" or "precipitous." This information will allow the calculation of

intervals, such as length of labor, length of second stage of labor, and length of period to rupture of membranes. These intervals provide information to assess the appropriateness of transfer for women with a low birth weight infant and can be used as a clinical quality indicator and a regional planning tool. This information will aid in researching the etiology of preterm birth. Reporting of hospital admission that included delivery will allow for more precise determination of duration-dependent risk factors.

#### 46. CHARACTERISTICS OF LABOR AND/OR DELIVERY

- |   |  |
|---|--|
| Induction of labor  | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Augmentation of labor   | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Non-vertex presentation   | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Steroids (glucocorticoids) for fetal lung maturation received by the mother prior to delivery   | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Antibiotics received by the mother during labor   | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Clinical chorioamnionitis diagnosed during labor or maternal temperature $\geq 38^{\circ}$ C (100.4 $^{\circ}$ F)   | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Moderate/heavy meconium staining of the amniotic fluid  | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Fetal intolerance of labor such that one or more of the following actions was taken: in-utero resuscitative measures, further fetal assessment, or operative delivery | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Epidural or spinal anesthesia during labor  | <input type="checkbox"/> Yes <input type="checkbox"/> No |

The Subgroup recommended retaining, but significantly modifying this item, previously “Complications of Labor and/or Delivery.” The Subgroup initially placed induction of labor and augmentation of labor in the “Obstetric Procedures” section. However, the Subgroup decided that it would be more appropriate to include these as part of the “Characteristics of Labor and/or Delivery” item. The change in the title was intended to elicit more descriptive information for very specific types of data and remove any negative connotations of the term “complications.”

The frequency of medical induction of labor is increasing. Monitoring is needed to assess its effect on cesarean delivery rates and perinatal and maternal outcomes. Non-vertex presentation is a risk factor that may be an indication for cesarean delivery.

Information on steroids (glucocorticoids) for fetal lung maturation supports their use in threatened preterm delivery prior to 34 weeks gestation to reduce risk for multiple adverse neonatal outcomes. No current national data system is collecting information on the implementation of the NICHD recommendation for the use of steroids when preterm delivery is threatened/anticipated. The question on antibiotics is responsive to current CDC/ACOG/AAP guidelines recommending antibiotic treatment for 20 percent of women in labor who experience group B strep, prophylaxis, or premature rupture of membranes. There is no national reporting

system for tracing implementation and outcomes of these public health recommendations.

Clinical chorioamnionitis information is needed to correlate with antibiotic use and preterm delivery, as there is an increasing body of information suggesting infection as a major precipitating factor for preterm labor and also causation of cerebral palsy. Although moderate/heavy meconium is a frequently occurring finding during labor, the frequency of associated neonatal morbidity is in dispute. There is a known association with neonatal respiratory illness ranging from mild to life threatening. Correlation of the occurrence with frequency of neonatal transfer and/or NICU admission will provide more complete information than currently available.

Fetal intolerance of labor data are needed in the analysis of indications for cesarean delivery, correlation of intrapartum management with neonatal outcomes, and assessment of the prevalence of fetal intolerance of labor with other obstetric and medical risk factors. Information on epidural or spinal anesthesia during labor data are needed for analysis of their relationship to labor management, duration, operative delivery, and neonatal outcomes as there are current reports of adverse associations with each of these issues.

#### 47. METHOD OF DELIVERY

A. Was delivery attempted with forceps and/or vacuum extraction?

Attempted forceps Yes No

Attempted vacuum Yes No

B. Fetal presentation at birth

Cephalic

Breech

Other

C. Final route and method of delivery (Check one)

Vaginal:

Spontaneous

Forceps

Vacuum

Or:

Cesarean

If cesarean, was a trial of labor attempted?

Yes No

D. Has the mother had a previous cesarean delivery?

Yes If Yes, how many\_\_\_\_\_

No

The Subgroup recommended retaining this item. However, the data elements have been completely restructured to provide information that is more representative of current practices and more readily analyzed with birth outcomes. Attempted forceps/attempted vacuum data are needed to evaluate indications for cesarean

delivery and for correlation with reported adverse neonatal outcomes. The proposed organization of the final route and method of delivery portion will allow for a more complete report of the obstetric intervention used to effect delivery. Cesarean data are needed to evaluate the impact of the current emphasis on vaginal delivery in pregnancies subsequent to a cesarean delivery.

48. MATERNAL MORBIDITY (Check all that apply)  
(Occurring 24 hours before delivery or within 24 hours of delivery)
- Maternal transfusion
  - Third or fourth degree perineal laceration
  - Ruptured uterus
  - Unplanned hysterectomy
  - Admission to intensive care unit
  - Unplanned operating room procedure following delivery
  - None of the above

The Subgroup recommended the addition of this item because there is currently no national system of data collection on maternal morbidity and thus no easy mechanism for correlating pregnancy factors on a national basis. Several of the elements included are currently used as clinical quality indicators in various accreditation systems. Having a national database will expand the information for assessing perinatal health care delivery systems. A national data set is needed to evaluate/monitor this concern. Third or fourth degree perineal laceration information may have implications for future problems with incontinence—especially for older mothers. Ruptured uterus data could indicate whether there are increases in incidences related to vaginal birth after c-section. Unplanned hysterectomy, admission to intensive care unit, and unplanned or procedure following delivery data are useful for quality assurance purposes.

49. NEWBORN MEDICAL RECORD NUMBER

The Subgroup recommended adding this item because this information, combined with the hospital identifier, will enable linkage of public health data bases and matching for sets of multiple births/fetal deaths. This information is also used for follow back for quality control.

50. BIRTH WEIGHT  
\_\_\_\_\_ (grams)

The Subgroup recommended that this item be retained, but reported only in grams. This is the single most important characteristic associated with infant mortality. It is also related to prenatal care, maternal age, socioeconomic status, and other factors associated with the birth. It is useful in evaluating the effectiveness of health care.

51. OBSTETRIC ESTIMATE OF GESTATION (completed weeks)

The Subgroup recommended that this item, previously “Clinical Estimate of Gestation,” be retained. The title of this item was changed to “Obstetric” from “Clinical” to underscore that it be based on the obstetric , not the pediatric estimate. This item is intended to provide an alternate estimate of gestational length when the date of last menstrual period is missing or apparently incompatible with birth weight.

52. APGAR SCORE

Score at 5 minutes \_\_\_\_\_

If 5 minute score is less than 6, Score at 10 minutes \_\_\_\_\_

The Subgroup had initially recommended that this item be removed from the certificate because it was felt that the item is subjective and should not be used as a predictor of infant risk. However, at the request of pediatricians and researchers, the Subgroup revisited this issue. The Subgroup determined that when used in conjunction with other risk factors, the 5-minute Apgar score is found to be very useful and that a persistently low Apgar score at 10 minutes indicates that the infant is at significant risk. Thus, the Subgroup recommended the retention of this item.

53. PLURALITY - Single, Twin, Triplet, etc.

(Specify) \_\_\_\_\_

The Subgroup recommended that this item be retained, but include some additional prompts—quadruplet, quintuplet, sextuplet, and septuplet. The Parent Group recommended that the item be retained as it currently is—with three prompts only. This information is used to study plural deliveries and patterns shown to be related to birth weight and may help identify infants with future medical needs.

54. IF NOT SINGLE Birth–Born First, Second, Third, etc.

(Specify) \_\_\_\_\_

The Subgroup recommended that this item be retained, but include some additional prompts—fourth, fifth, sixth, and seventh. The Parent Group recommended that the item be retained as it currently is—with three prompts only. This information is used to study higher order plural deliveries and patterns of risk status of these infants. The order of birth for plural births is useful for studies of birth outcome, has been shown to be related to birth weight, and may help identify infants with future medical needs.

55. ABNORMAL CONDITIONS OF THE NEWBORN

(Occurring within 24 hours of delivery)

Assisted ventilation required immediately following delivery

Yes No

Assisted ventilation required for more than six hours

Yes No

NICU admission

Yes No



Newborn given surfactant replacement therapy	<input type="checkbox"/> Yes <input type="checkbox"/> No
Antibiotics received by the newborn for suspected neonatal sepsis	<input type="checkbox"/> Yes <input type="checkbox"/> No
Seizure or serious neurologic dysfunction	<input type="checkbox"/> Yes <input type="checkbox"/> No
Significant birth injury (skeletal fracture(s), peripheral nerve injury, soft tissue or solid organ hemorrhage which requires intervention)	<input type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, Specify _____	

The Subgroup recommended retaining this section. The list includes the most common abnormal conditions that are easily diagnosable within the first 24 hours following delivery, have high associations with adverse neonatal and long-term outcomes, are markers for utilization of costly technological resources, and can serve as proxies for access to tertiary resources.

The proposed language for assisted ventilation better indicates the severity of the condition at birth than either the Apgar Score at 1 minute or the previous assisted ventilation questions. Assisted ventilation for more than 6 hours targets a different group of infants that are at very high risk. The assisted ventilation required for more than 6 hours item is intended to identify infants with severe and persistent respiratory failure following birth. Correlation between this element and other maternal and neonatal risk factors will improve the evaluation of appropriate utilization of costly resources.

NICU admission is not currently collected, and national data are not available through any other reporting system. The majority of NICU admissions occur within the first 24 hours. Appropriateness of use of a costly resource can be studied through correlation with other data elements from the birth and death databases.

Clinical trial reports indicate significantly improved survival of extremely preterm infants following surfactant therapy. There is no national reporting system for utilization of this therapy for at-risk infants. The increased survival of extremely low birth weight infants may result in higher total costs because of increased hospital days of survivors, for example.

Information on antibiotics received by the newborn for suspected neonatal sepsis is needed to assess implementation of CDC/AAP guidelines for antibiotic use in suspected sepsis in the immediate neonatal period. Correlation with other reported risk factors will be helpful in analyzing appropriateness of use.

Significant birth injuries listed, though of very low occurrence, are highly correlated with potential for adverse short- and long-term outcomes. Information from large birth populations is needed for more reliable correlation with maternal obstetric and medical risk factors, complications, and management of labor and delivery.

56. CONGENITAL ANOMALIES OF THE NEWBORN  
(Observed within 24 hours of birth) (Check all that apply)

- |   |  |
|---|--|
| <input type="checkbox"/> Neural tube defect   | <input type="checkbox"/> Orofacial defect/cleft                              |
| <input type="checkbox"/> Cyanotic congenital heart disease  | <input type="checkbox"/> Suspected chromosomal disorder                      |
| <input type="checkbox"/> Congenital diaphragmatic hernia  | Karyotype confirmed <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Anterior abdominal wall defect  | Karyotype pending <input type="checkbox"/> Yes <input type="checkbox"/> No   |
| <input type="checkbox"/> Omphalocele  | <input type="checkbox"/> Hypospadias   |
| <input type="checkbox"/> Gastroschisis  | <input type="checkbox"/> None of the anomalies listed above                  |
| <input type="checkbox"/> Limb reduction defect (excluding congenital amputation and dwarfing syndromes) |  |

The Subgroup recommended retaining this section, previously titled “Congenital Anomalies of the Child.” Each item fulfills one or more of the following criteria: the anomaly is diagnosable within the first 24 hours following birth using widely available conventional diagnostic techniques; occurrence will indicate the need for a specific public health initiative; occurrence serves as a potential marker for teratogen exposure; occurrence in live borns is affected by prenatal diagnosis or management; and postnatal outcome is heavily impacted by access to tertiary or quaternary care resources. Hypospadias is a marker and the only urogenital malformation on the list. A category for “Other, specify” was not included because it would not result in useful data and would not be coded by the States. This information is intended to be an alert for further follow-up for States having birth defect registries.

57. WAS INFANT TRANSFERRED WITHIN 24 HOURS OF DELIVERY? Yes No  
IF YES, NAME OF FACILITY INFANT TRANSFERRED TO:

\_\_\_\_\_

The Subgroup recommended that this item be retained, but modified to include infants transferred within 24 hours of delivery as a more sensitive indicator of risk status and appropriateness of care. The characteristics of infants transferred within 24 hours differ from those transferred later.

58. IS INFANT LIVING AT TIME OF REPORT?  
Yes No Transferred

The Subgroup recommended adding this question to the standard because the information can be used as a flag for checking that both birth and death certificates are filed, thereby enhancing birth/death record linkage. In addition, this information can save work and embarrassment for birth notification and immunization programs and can be useful for newborn screening.

59. IS INFANT BEING BREAST FED?  
Yes No

The Subgroup recommended adding this question to the standard because the information is important for the Maternal and Child Health program to track breast feeding levels and better target funding. The Subgroup originally proposed a question regarding the mother's intent to breast feed, but later decided to include the more objective question regarding whether the infant is being breast fed. However, the Subgroup voted unanimously to revert to the intention to breast feed question if field testing showed that the recommended wording is impractical. The Parent Group agreed to field test the item and revert to the original wording if the recommended wording is not feasible. This is an important public health issue of interest at national, State, and local levels. This indicator is a Healthy People 2010 objective.

- MOTHER'S NAME (left margin)  
MOTHER'S MEDICAL RECORD NUMBER (left margin)

The Subgroup recommended that these items be added to the left hand margin to help identify the record.

## Secondary Data Items

Throughout their deliberations, the Birth, Death, and Fetal Death Subgroups pondered whether to propose the collection of various items intended to enhance the national data set. Part of the charge of each Subgroup was to determine which questions should be included on the standard certificates to elicit the best possible information. This process resulted in the discussion of a number of topics of national health interest. There were some data that the Subgroups wanted to obtain, but did not believe collection was warranted on a national basis as part of the standard certificate. However, the Parent Group thought that it would be helpful to provide a uniform question or procedure for those States that choose to include such items/procedures on their certificates. The list of items was referred to as “secondary or B-list items.” The Parent Group also thought that secondary data items would be useful for the next revision of the standard certificates because they would be items not part of the national data set, but items that had been tested in some States. All items rejected by the Parent Group for inclusion on the standard certificates were also considered for secondary data items for states to select if they wish to include the item on the state certificate.

The secondary data items recommended for the birth certificate by the Parent Group include:

- ***Enter the exact month, day, and year that the mother/father was born. Age of mother/father \_\_\_\_\_ (years).***
- Collect the age of the mother on the Parent’s worksheet in addition to obtaining the mother’s date of birth for the certificate. This would be used as a consistency check on date of birth.
- Obtain the date of birth of the father whenever possible or collect age of father if the date of birth is not available, even when the mother is unmarried
- ***Mother/Father - usual occupation worked during last year.*** This information was considered important, but it was felt that the funds were not available in most states to code the information. Therefore, it was recommended as a B-list item for those states that have the funding available to collect and code the information. This information is useful in studying job-related risk areas.
- ***Type of practitioner providing prenatal care.*** This information is needed to examine the appropriateness of care and for quality assurance
- As a follow-up to the Race item, ask, ***Which of these groups would you say best describes your race?*** This information is important in bridging information

between single and multiple race data collection and is consistent with the way the National Health Interview Survey collects data.

## Items Recommended for Deletion from the U.S. Standard Certificate of Live Birth

The Birth Subgroup recommended and the Parent Group approved the removal of the following items from the U.S. Standard Certificate of Live Birth. The rationale for excluding each item is noted.

### REGISTRAR'S SIGNATURE

The Subgroup recommended deleting this item because the signature is not required by the Model Law, and most States stamp the signature. This was also deleted in an effort to promote electronic registration.

### CERTIFICATION STATEMENT WITH SIGNATURE

I certify that this child was born alive at the place and time and on the date stated.

Signature \_\_\_\_\_

The Subgroup acknowledged that with electronic transmission, an electronic authentication may be used as permitted by Model Law and, therefore, recommended deleting the signature.

### ATTENDANT'S MAILING ADDRESS (Street and Number or Rural Route Number, City or Town, State, Zip Code)

The Subgroup recommended that this item be deleted because the information would be available with the NPI.

### INFORMANT

I certify that the personal information provided on this certificate is correct to the best of my knowledge and belief.

*Signature of Parent or Other Informant:* \_\_\_\_\_

The Subgroup recommended that this item be deleted in an effort to promote electronic registration. The name of the person providing the personal information is obtained on the mother's worksheet.

### OTHER RISK FACTORS FOR THIS PREGNANCY

Alcohol Use During Pregnancy Yes No

Average number drinks per week \_\_\_\_\_

The Subgroup recommended that this item be deleted because the group determined that it is not feasible to get quality data on the birth certificate because of the stigma attached to alcohol use during pregnancy. Alcohol use as collected on the 1989 birth certificate has been found to be substantially under reported. Reporting completeness had deteriorated over the period these data have been available, 1989-1997. More over, surveys such as the National Pregnancy and

Health Survey and PRAMS have collected and published data on alcohol which appear to be more complete and reliable.

The birth subgroup considered the extensive published research based on a variety of surveys which has found a much higher rate of alcohol use during pregnancy than the rate reported on birth certificates. The National Maternal and Infant Health Survey, the National Pregnancy and Health Survey - Drug Use Among Women Delivering Livebirths, the Pregnancy Risk Assessment Monitoring System, and the Behavioral Risk Factor Surveillance System are some of the surveys reporting this information on alcohol use.

The birth subgroup concluded that the alcohol item did not meet the criteria used in making decisions on retaining and/or adding specific items, including: (1) item must be necessary for legal, research, or statistical purposes, or public health programs; (2) the item must be collectible with reasonable completeness and accuracy; and (3) the vital statistics system should be the best data source. The subgroup agreed that alcohol is an important risk factor for poor pregnancy outcome, thus meeting the first criterion, but they concluded that the second and third criteria are not met by the alcohol item on the birth certificate.

The subgroup also considered comments received in the 1997 Vital Statistics Evaluation Survey from state registrars, researchers, and others, such as that alcohol use is drastically under-reported on the birth certificate and the data only serve to communicate misinformation about the prevalence of drinking during pregnancy and that the data are highly unreliable.

Data on this risk factor can and should be collected, but the birth certificate is not the appropriate source. The strong social stigma against drinking during pregnancy is believed to be the key factor interfering with accurate and complete reporting on the birth certificate. It was noted that this information is substantially under reported on the birth certificate and that the reporting completeness has actually deteriorated during the period for which data are available, 1989-98.

In reaching its conclusions, the birth subgroup noted that individual states are free, if they choose, to include this item or any other item in their own state's certificate. In its deliberations, the birth subgroup as well as the full panel carefully considered the data quality and completeness of the items. If a single item is poorly reported, then the credibility of the entire certificate and the statistics drawn from the vital statistics system is jeopardized.

### **Other Items Considered by Subgroup, but Rejected**

The following are items the Birth Subgroup considered as possible additions to the U.S. Standard Certificate of Live Birth, but ultimately decided not to bring before the Parent Group. The Subgroup's deliberations for each item are noted.

#### ***Race of Child***

OMB and the Census Bureau asked that the Birth Subgroup add a race of child item to the birth certificate. The Subgroup discussed the merits of including this data item on the recommended birth certificate. Several members argued in support of this item, and indicated that the respondent—usually the mother—is the best source of this information and that her determination should be acceptable. This item could be useful for data linkage, e.g., immunization registries. Moreover, it was noted that asking the mother or father to provide the child's race is preferable to the government imputing race, which would necessarily be done on a standard basis.

Some Subgroup members pointed out that parents may not agree on child's race. In addition, it was noted, there are some ethical issues of deciding what the child's race is at the time of birth. The child may very well later choose a different race than what the parents chose. It was noted that the ideal source of race information is that which is self reported. In addition, the hospital clerk may make a determination of the child's race, even though race should be based on self-report. For these reasons, the Subgroup did not recommend adding child's race to the birth certificate.

#### ***Length of Residence/Homelessness***

The group discussed the concept of usual residence and the need for clarity. It was noted that this might be very clear for people with a usual or regular place of residence, but not so for homeless or transient persons or migrants. There was support for the idea that data be collected to identify at least the State or county of residence so that there is a place noted. It was further noted that collecting information on people with no usual residence may be appropriate to collect as part of a section capturing stress-related information.

A proposal of a series of questions was discussed at length, and other issues—including how to collect information on incarcerated or institutionalized women who give birth—were noted. Concerns were raised as to the need for this level of detail, how the data would be used, data quality problems, whether there are sufficient numbers of homeless women giving birth to produce reliable data, and the analytic value of information for persons living in large cities on State borders.

A follow-up discussion on this item revealed that homelessness is not a predictor of risk as are other measures such as socioeconomic status and education. Ultimately, the Subgroup determined that, because of the long series of detailed questions necessary to answer the question of homelessness, the birth certificate is not the appropriate place to collect this type of data.



### ***Changed Residence During Pregnancy–Did mother change residence during pregnancy?***

The Birth Subgroup had initially brought a recommendation before the Parent Group to add a question to the certificate regarding whether the mother changed residence during her pregnancy, noting that this item is an indicator of life stress during the pregnancy and can be useful for program planning. Parent Group members pointed out, however, that moving may have a positive influence and expressed concern that the time frame is limited to during pregnancy. Parent Group members noted that this may not be the best predictive indicator and that precision would dictate that other stressors be asked. The Parent Group vote was split on this item, and Subgroup members were asked to develop more convincing information for the addition of the item. After additional consideration, out of concern that this item may not be a good indication of stress for the reasons noted above, the Birth Subgroup opted to withdraw this question from consideration.

### ***Domestic Violence***

The Subgroup felt it important to ask a question regarding domestic violence, but expressed uncertainty regarding how to ask the question to obtain reliable data. The Subgroup determined that it is impractical to collect these data as part of the birth registration process.

### ***Street Drug Use***

The Medical and Social Indicators Working Groups convened by the Birth Subgroup agreed that information regarding street drug use is important. However, both groups indicated that it would be difficult to get valid data regarding this item because of the illegality of the activity and the social stigma attached. Subgroup members discussed the possibility of adding street drug use as a check box item for maternal toxicology screening. However, it was noted that maternal toxicology screening is not uniformly practiced and that there is likely severe bias associated with the testing.

### ***Intendedness of Pregnancy***

The Subgroup discussed the possible addition of a question about the intent to become pregnant. The Social Indicators Working Group did not seek the addition of this item because of concerns about measurement. It was noted that there is a question regarding intendedness of pregnancy on PRAMS and that this may be a better source than the birth certificate for collection of this item. One Subgroup member, having reviewed literature on pregnancy intendedness information, pointed out that there are a variety of issues with how this information is collected. It was noted that the PRAMS approach, which includes five possible answers, is rather complex, and that a simpler question may be offensive. After considerable discussion regarding additional concerns, the Subgroup opted not to propose this item.

### ***Mother Worked Part/Full Time During Pregnancy***

An acceptable definition of “work” could not be agreed upon, and the consensus of the social indicators working group was not to recommend this item.

### ***HIV/AIDS***

The Subgroup considered whether to add HIV/AIDS to the infections list on the birth certificate. It was noted that there are States with laws that do not allow information on HIV/AIDS to be collected by name. Although there is already some reporting of HIV by name because it is a communicable disease, the majority of States do not identify HIV cases by name. According to CDC, about 300-400 infants born each year are infected with HIV; about 6,000 women giving birth are infected with HIV . HIV/AIDS is indisputably a major public health issue. The Subgroup agreed that the debate is not on its importance, but whether the birth certificate is a good source for these data. The Subgroup determined that this item may need to be moved to a worksheet for States that cannot report this information by name. Four states currently collect this item separately, and four lump HIV/AIDS in with other sexually transmitted diseases (STDs)

Some Subgroup members argued against collecting HIV/AIDS as a separate item on the birth certificate and felt that there would be a negative public response due to concerns about privacy. They expressed a great deal of concern about confidentiality because the birth certificate includes the name of the mother. Subgroup members in favor of collecting the item separately on the certificate indicated that the intent is to maximize the likelihood that the woman receives proper treatment and to obtain national data on the prevalence of HIV/AIDS among pregnant women. Subgroup members also noted that there are interventions for HIV that can be used to alter its incidence and severity for the newborn and questioned if there were other sources for these data. It was noted that a more accurate source for HIV seroprevalence among pregnant women may be the newborn screening program. After considerable discussion, the Subgroup had agreed that States that could collect HIV/AIDS information on the birth certificate should do so.

Amid continued concerns regarding privacy, the Birth Subgroup revisited the issue of combining all STD infections versus splitting them into individual conditions. Subgroup members stated that despite promises of maintaining confidentiality, the reality is that detailed data regarding sensitive conditions are available to a lot of people. It was noted that all of the proposed STDs are reportable conditions. Still, Subgroup members argued, reportable data are treated with great confidentiality. Ultimately, the group agreed to collect the following infections present and/or treated during the pregnancy: Gonorrhea, Syphilis, Herpes Simplex Virus, Chlamydia, Hepatitis B, and Hepatitis C. It was agreed that HIV/AIDS information would be considered as a secondary or “B-list” data item for States opting to do so.

### ***Infection at Time of Delivery***

It was proposed that an item on infection at time of delivery for group B streptococcus, active herpes, and bacterial vaginosis be added to the birth certificate. Up until about 5 years ago, group B streptococcus was the most serious critical infection for a newborn. ACOG established guidelines offering two options: a historical screen to identify women at high risk of group B streptococcus or a culture on all women in the 35<sup>th</sup> to 36<sup>th</sup> week of pregnancy. If the culture is positive or with high historical risk, it is recommended that the woman go on a specific antibiotic when in labor. There was some concern that this approach would not identify all at-risk women. In addition, the medical risk factors workgroup felt that numbers of group B streptococcus cases would be so small as not to be useful. There are approximately 7,000 neonatal group B strep infections per year, and the current mortality rate for this infection is about 10 to 20 percent. Active herpes at the time of delivery, although once a growing problem, is now a diminishing problem. In addition, the Subgroup noted, information is readily known about herpes at the time of delivery and medication is readily available. Infants who are infected at delivery are more commonly born to women with no previous history of herpes. Bacterial vaginosis is associated with higher rate of preterm delivery. Upon concluding discussion of these items, because of concerns with accuracy of identification of risk and the small numbers of infants at risk, the Subgroup decided not to recommend the addition of these specific infections at the time of delivery to the birth certificate.

#### ***Parent's Income***

It was proposed that a question regarding parent's income be added to the certificate. Subgroup members noted that PRAMS asks for income using broad categories. It was also noted that on the 1988 NMIHS, there was a 10 to 15 percent non-response rate for the income question. Subgroup members remarked that questions on income are associated with considerable anxiety and that hospitals are not likely to be supportive of such a question. It was further noted that if the interest is in identifying low-income women, the question on participation in WIC would be helpful in providing the needed information.

#### ***Payment for Prenatal Care***

It was noted that very few States currently collect information regarding payment for prenatal care and that it would be difficult to obtain.

### ***Family History of Hearing Loss or Deafness***

It was noted that there will soon be newborn screening for hearing loss and, therefore, a question on family history of hearing loss or deafness is not necessary. Subgroup members also remarked that States that have this question rarely receive requests for the information.

### ***Was there a pregnancy-related hospitalization for the mother during this pregnancy?***

A question regarding pregnancy-related hospitalization was proposed. However, the Subgroup determined that this information might not be available from the medical record. No action was taken by the Subgroup.

### ***Birth Occurred as Part of a Professional Training Program***

A Birth Subgroup member proposed the addition of a question regarding whether the delivery occurred as part of a professional training program. This proposed secondary data item (see Chapter 13, Secondary Data Items) would allow for the collection of the name of the person in the training program, as well as the official attendant and his/her license number. The information would be used to monitor the delivery room experience of the trainee/training program. Subgroup members expressed a number of concerns about this proposal. Ultimately there was consensus that this item should not be added.

### ***Newborn Screening Item–Did mother undergo prenatal blood screening for syphilis/hepatitis?***

The Birth Subgroup debated whether to add a newborn screening item to the standard certificate. One question would involve whether there was blood drawn for newborn screening. Subgroup members expressed concern that this item is not as useful as it might appear, noting that early blood draw is worthless for certain disorders. It was further noted that this information may be difficult to locate and that those providing assistance for infants cannot access it quickly. The Subgroup did not further develop a proposal for this item.

### ***Immunization Registry***

The Birth Subgroup considered whether to add to the standard a question on participation in the immunization registry. There was concern expressed with making collection of this information mandatory. The Subgroup agreed that this should not be included as part of the standard, but that individual states should collect this information as appropriate for their circumstances.

### ***Intent to Place Child for Adoption***

While some States collect information on the intent to place a child for adoption, this item is not currently on the standard certificate. The Subgroup agreed that this should not be included as part of the standard, but that individual States should collect this information as appropriate for their circumstances. While the Subgroup

did mention this recommendation to the Parent Group, no action was taken on this item.

***Relationship of Informant***

The Subgroup considered if it was important to know who the informant is if the signature of the informant was deleted. However, the Subgroup decided against including a question on the relationship of the informant.

***Ultrasound Performed Less Than 20 Weeks***

The Subgroup considered adding a question regarding ultrasound performed at less than 20 weeks in the pregnancy. Subgroup members indicated that it is important to know the number of women who get ultrasound for early dating, which differs from the 60 percent who have it done later in the pregnancy for other reasons. Subgroup members noted the importance of performing early ultrasound to detect multiple fetuses, certain anomalies, and gestational age dating. Although early ultrasound is preferable, there can be problems of physician reimbursement for the procedure. In addition, the Subgroup decided, there are other data sources that can provide better data on multiple fetuses, certain anomalies, and gestational age dating than the birth certificate. Thus, the Subgroup agreed not to recommend the addition of this item to the certificate.

***Newborn Estimate of Gestational Age***

A Birth Subgroup member proposed that a newborn estimate of gestational age item be added to the birth certificate. The majority of infants have this examination done. No other Subgroup member seconded the motion to include this as a new item because it was felt that it could not be supported as an independent question.

***Was certifier also the prenatal care provider?***

No action was taken by the Subgroup.

***Infant's Head Circumference and Crown-heel Length***

The Subgroup considered whether to add items on infant head circumference and crown-heel length. Some Birth Subgroup members noted that this information is of research interest, especially to those interested in characterizing infants that are small-for-gestational-age. However, it is hard to justify collecting this information for all babies. No action was taken by the Subgroup.

***Infant Immunization/Hepatitis B Vaccine***

The Subgroup considered adding an item on infant immunization/Hepatitis B vaccine. However, it was determined that this information is not appropriate for the birth certificate because it is unlikely the information would be available in the short interval between delivery and completion of information for the birth certificate. No action was taken by the Subgroup.

## Items Recommended by Subgroup, but Rejected by Parent Group

The following items were recommended by the Birth Subgroup, but rejected by the Parent Group for inclusion on the 2003 U.S. Standard Certificate of Live Birth. The Subgroup's rationale for including the item is noted, as are Parent Group concerns regarding the addition of the item.

*Is lack of English language understanding a barrier to communication?*

Yes

No

The Subgroup recommended adding this item to help determine if the inability to speak English impacts whether someone is able to receive health care. It can be useful as a measure of difficulty in accessing health care, as well as a measure of needs and access to services. Parent Group members noted that such a question may require that follow-up questions be asked and that a lack of English may not be a barrier in hospitals that have diverse staff able to communicate with patients speaking other languages. Since the Parent Group rejected this recommendation as part of the standard, it was considered for addition as a secondary data item.

*Living arrangement during this pregnancy:*

\_\_\_ *Husband, parent(s) or other adult(s) usually present.*

\_\_\_ *Lived alone or with no other adult(s) usually present.*

The Subgroup sought to add this question to ascertain whether there was any adult support during the pregnancy. In addition, the Subgroup felt that the question would remove the concerns about the child support enforcement because it groups living with an adult and that it would provide national data and data for specific populations. Parent Group members disagreed and were concerned that the question may be intrusive. There was concern that by including more intrusive questions we risk alienating the mother and accordingly, the accuracy and completeness of other items would be jeopardized.

## Conclusion

In its deliberations, the Birth Subgroup made every effort to develop a birth certificate which is as up-to-date as possible in terms of medical and obstetric technology and practice. The Subgroup also recognized the need for an entire package to make the standard certificate successful, including standardized worksheets for the hospital and the parents, and uniform standards for the collection, editing, and processing of all data recorded on the birth certificate.

<p align="center"><b>U.S. Standard Birth Certificate 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Standard Birth Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>1. <b>Child's Name</b> (First, Middle, Last)</p>	<p><b>Same:</b> Add additional fields for middle names and for suffix. (First, Middle, Last, <i>Suffix</i>)  <b>Source:</b> Parent's Worksheet</p>
<p>2. <b>Date of Birth</b> (Month, Day, Year)</p>	<p><b>Same</b>  <b>Source:</b> Hospital Record</p>
<p>3. <b>Time of Birth</b>      <b>M</b></p>	<p><b>Same:</b> Change to 24-hour clock.  <b>Source:</b> Hospital Record</p>
<p>4. <b>Sex</b></p>	<p><b>Same:</b> Include a placeholder for sex unknown—to be entered at a later time.  <b>Source:</b> Hospital Record</p>
<p>5. <b>City, Town or Location of Birth</b></p>	<p><b>Same</b>  <b>Source:</b> Hospital Record</p>
<p>6. <b>County of Birth</b></p>	<p><b>Same</b>  <b>Source:</b> Hospital Record</p>
<p>7. <b>Place of Birth</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <u>Hospital</u></li> <li><input type="checkbox"/> <u>Freestanding birthing center</u></li> <li><input type="checkbox"/> <u>Clinic/Doctor's office</u></li> <li><input type="checkbox"/> <u>Residence</u></li> <li><input type="checkbox"/> <u>Other (Specify) _____</u></li> </ul>	<p><b>PLACE WHERE BIRTH OCCURRED</b>  (Choose one)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Hospital</li> <li><input type="checkbox"/> Freestanding birthing center</li> <li><input type="checkbox"/> <i>Home Birth: Planned to deliver at home?   <input type="checkbox"/>Yes   <input type="checkbox"/>No</i></li> <li><input type="checkbox"/> Clinic/Doctor's office</li> <li><input type="checkbox"/> Other (Specify) _____</li> </ul> <p><b>Action:</b> Modify this item to 1) define free standing birthing center as having no direct physical connection with an operative delivery facility, 2) change "residence" to "home" defined as any private residence, and 3) add check boxes to indicate whether the home birth was planned. This item is also moved to the section labeled "Information for Medical and Health Purposes Only."</p> <p><b>Source:</b> Facility or Attendant at Birth</p>
<p>8. <b>Facility Name</b> (if not institution, give street and number)</p>	<p><b>Same</b>  <b>Source:</b> Hospital Record</p>

<p align="center"><b>U.S. Standard Birth Certificate 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Standard Birth Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>9. <b>I certify that this child was born alive at the place and time and on the date stated.</b> Signature _____</p>	<p><b>Deleted:</b> The Certifier's signature is no longer an essential element in the registration process.</p>
<p>10. <b>Date Signed</b> (Month, Day, Year)</p>	<p><b>DATE CERTIFIED</b> _____/_____/_____ <i>MMDDYYYY</i></p>
<p>11. <b>Attendant's Name and Title</b> (If other than certifier) (Type/Print) Name _____  <input type="checkbox"/> <u>M.D.</u>  <input type="checkbox"/> <u>D.O.</u>  <input type="checkbox"/> <u>C.N.M.</u>  <input type="checkbox"/> <u>Other Midwife</u>  <input type="checkbox"/> <u>Other (specify)</u> _____</p>	<p><b>ATTENDANT'S NAME, TITLE, AND NPI</b> NAME: _____ _____ NPI: _____ TITLE: _____  <input type="checkbox"/> MD  <input type="checkbox"/> DO  <input type="checkbox"/> CNM/CM  <input type="checkbox"/> Other Midwife  <input type="checkbox"/> Other (Specify) _____</p> <p><b>Action:</b> Move this item from the upper portion of the certificate to the section labeled "Information for Medical and Health Purposes Only." Change check box category from CNM to CNM/CM.</p> <p><b>Source:</b> Hospital Record</p>
<p>12. <b>Certifier's Name and Title</b> (Type/Print) Name _____  <input type="checkbox"/> <u>M.D.</u>  <input type="checkbox"/> <u>D.O.</u>  <input type="checkbox"/> <u>Hospital Admin.</u>  <input type="checkbox"/> <u>C.N.M.</u>  <input type="checkbox"/> <u>Other Midwife</u>  <input type="checkbox"/> <u>Other (specify)</u> _____</p>	<p><b>CERTIFIER'S</b> NAME: _____ _____ TITLE: _____  <input type="checkbox"/> MD  <input type="checkbox"/> DO  <input type="checkbox"/> Hospital Administrator  <input type="checkbox"/> CNM/CM  <input type="checkbox"/> Other Midwife  <input type="checkbox"/> Other (Specify) _____</p> <p><b>Action:</b> Change check box from "CNM" to "CNM/CM."</p> <p><b>Source:</b> Hospital Record</p>



<p align="center"><b>U.S. Standard Birth Certificate 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Standard Birth Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>13. <b>Attendant's Mailing Address</b> (Street and Number or Rural Route Number, City or Town, State, Zip Code)</p>	<p><b>Deleted:</b> It is not necessary to obtain the address of the attendant at the delivery.</p>
<p>14. <b>Registrar's Signature</b></p> <p>_____</p>	<p><b>Deleted:</b> The Registrar's signature is no longer an essential element in the registration process. The Model State Vital Statistics Act deleted all references to signatures except when related to paternity affidavits.</p>
<p>15. <b>Date Filed by Registrar</b> (Month, Day, Year)</p>	<p><b>DATE FILED BY REGISTRAR</b></p> <p align="center">____/____/____ <i>MM DD YYYY</i></p> <p><b>Action:</b> Collect information using MM/DD/YYYY format.</p> <p><b>Source:</b> State Registration Office</p>
<p>16a. <b>Mother's Name</b> (First, Middle, Last)</p>	<p><b>MOTHER'S CURRENT LEGAL NAME</b> (First, Middle, Last, <i>Suffix</i>)</p> <p><b>Source:</b> Parent's Worksheet</p>
<p>16b. <b>Maiden Surname</b></p>	<p><b>MOTHER'S NAME PRIOR TO FIRST MARRIAGE</b> (<i>First, Middle, Last, Suffix</i>)</p> <p><b>Action:</b> Obtain first, middle, and last names and suffix. This change would eliminate the use of the term "maiden name."</p> <p><b>Source:</b> Parent's Worksheet</p>
<p>17. <b>Date of Birth</b> [Mother] (Month, Day, Year)</p>	<p><b>Same</b></p> <p><b>Source:</b> Parent's Worksheet</p>
<p>18. <b>Birthplace</b> (Mother) (State or Foreign Country)</p>	<p><b>BIRTHPLACE (Mother)</b> (State, <i>Territory</i>, or Foreign Country)</p> <p><b>Action:</b> Add Territory to the prompt.</p> <p><b>Source:</b> Parent's Worksheet</p>

<p align="center"><b>U.S. Standard Birth Certificate 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Standard Birth Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p><b>Mother</b></p> <p>19a. Residence-State 19b. County 19c. City, Town, or Location 19d. Street and Number</p> <p>19e. Inside City Limits? (Yes or No)</p>	<p><b><i>RESIDENCE OF MOTHER-STATE</i></b></p> <p><b>Same</b> <b>Same</b> <b>Same</b> <b><i>APT. NO.</i></b> <b>Same:</b> Changed to check box format <input type="checkbox"/>Yes <input type="checkbox"/>No <b><i>ZIP CODE</i></b></p> <p><b>Source:</b> Parent's Worksheet</p>
<p>20. <b>Mother's Mailing Address</b> (If same as residence, enter Zip Code only)</p>	<p><b>MOTHER'S MAILING ADDRESS:</b> <b><i>☐Same as residence, or:</i></b> <b><i>STATE:</i></b> <b><i>CITY, TOWN, OR LOCATION:</i></b> <b><i>STREET &amp; NUMBER:</i></b> <b><i>APARTMENT NUMBER:</i></b> <b><i>ZIP CODE:</i></b></p> <p><b>Action:</b> Move this item from the upper portion of the certificate to the section labeled "Information for Administrative Use." Include each address component. This address is used for sending out copies of certificates, child's Social Security numbers, and for follow-up purposes.</p> <p><b>Source:</b> Parent's Worksheet</p>
<p>21. <b>Father's Name</b> (First, Middle, Last)</p>	<p><b>FATHER'S <i>CURRENT LEGAL NAME</i></b> (First, Middle, Last, <i>Suffix</i>)</p> <p><b>Source:</b> Parent's Worksheet</p>
<p>22. <b>Date of Birth</b> [Father] (Month, Day, Year)</p>	<p><b>Same</b> <b>Source:</b> Parent's Worksheet</p>
<p>23. <b>Birthplace</b> (Father) (State or Foreign Country)</p>	<p><b>BIRTHPLACE (Father)</b> (State, <i>Territory</i>, or Foreign Country)</p> <p><b>Action:</b> Add Territory to the prompt.</p> <p><b>Source:</b> Parent's Worksheet</p>

<p align="center"><b>U.S. Standard Birth Certificate 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Standard Birth Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>24. <b>I certify that the personal information provided on this certificate is correct to the best of my knowledge and belief.</b> Signature of Parent or Other Informant _____</p>	<p><b>Deleted:</b> The name of the person providing parents' information should be recorded on the Parent's Worksheet; however, there is no reason to include it on the certificate. Each State should decide how this information should be recorded for registration purposes.</p>
<p>25. a. <b>Of Hispanic Origin</b> (Mother)? 25. b. <b>Of Hispanic Origin</b> (Father)? (Specify No or Yes–If yes specify Cuban, Mexican, Puerto Rico, etc.) <input type="checkbox"/>No <input type="checkbox"/>Yes (Specify)_____</p>	<p><b><i>MOTHER OF HISPANIC ORIGIN? FATHER OF HISPANIC ORIGIN?</i></b> <i>(Check the box that best describes whether the mother/father is Spanish/Hispanic/Latino. Check the "No" box if mother/father is not Spanish/Hispanic/Latino.)</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>No, not Spanish/Hispanic/Latino</i></li> <li><input type="checkbox"/> <i>Yes, Puerto Rican</i></li> <li><input type="checkbox"/> <i>Yes, Mexican, Mexican American, Chicano</i></li> <li><input type="checkbox"/> <i>Yes, Cuban</i></li> <li><input type="checkbox"/> <i>Yes, other Spanish/Hispanic/Latino- (Specify) _____</i></li> </ul> <p><b>Action:</b> Change the wording and response categories for these items to make them comparable with new Census questions.</p> <p><b>Source:</b> Parent's Worksheet</p>

<p align="center"><b>U.S. Standard Birth Certificate 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Standard Birth Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>26. a. <b>Race</b> (Mother)</p> <p>26. b. <b>Race</b> (Father)  American Indian, Black, White, etc.  (Specify below)</p>	<p><b><i>MOTHER'S RACE</i></b>  <b><i>FATHER'S RACE</i></b> <i>(Check one or more races to indicate what the mother/father considers herself/himself to be.)</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>White</i></li> <li><input type="checkbox"/> <i>Black or African American</i></li> <li><input type="checkbox"/> <i>American Indian or Alaska Native</i>  <i>(Name of the enrolled or principal tribe)</i></li> </ul> <hr/> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Asian Indian</i></li> <li><input type="checkbox"/> <i>Chinese</i></li> <li><input type="checkbox"/> <i>Filipino</i></li> <li><input type="checkbox"/> <i>Japanese</i></li> <li><input type="checkbox"/> <i>Korean</i></li> <li><input type="checkbox"/> <i>Vietnamese</i></li> <li><input type="checkbox"/> <i>Other Asian-(Specify) _____</i></li> <li><input type="checkbox"/> <i>Native Hawaiian</i></li> <li><input type="checkbox"/> <i>Guamanian or Chamorro</i></li> <li><input type="checkbox"/> <i>Samoan</i></li> <li><input type="checkbox"/> <i>Other Pacific Islander-(Specify)</i></li> </ul> <hr/> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Other-(Specify) _____</i></li> </ul> <p><b>Action:</b> Change the wording and response categories for these items to make them comparable with Census questions.</p> <p><b>Source:</b> Parent's Worksheet</p>

<p align="center"><b>U.S. Standard Birth Certificate 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Standard Birth Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>27. a. <b>Education</b> (Mother)</p> <p>27. b. <b>Education</b> (Father)            (Specify only highest grade completed)            Elementary/Secondary (0-12)            College (1-4 or 5+)</p>	<p><b><i>MOTHER'S EDUCATION</i></b>  <b><i>FATHER'S EDUCATION</i></b> <i>(Check the box that best describes the highest degree or level of school completed at the time of delivery.)</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>8<sup>th</sup> grade or less</i></li> <li><input type="checkbox"/> <i>9<sup>th</sup> to 12<sup>th</sup> grade; no diploma</i></li> <li><input type="checkbox"/> <i>High School Graduate or GED completed</i></li> <li><input type="checkbox"/> <i>Some college credit, but no degree</i></li> <li><input type="checkbox"/> <i>Associate degree (e.g., AA, AS)</i></li> <li><input type="checkbox"/> <i>Bachelor's degree (e.g., BA, AB, BS)</i></li> <li><input type="checkbox"/> <i>Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA)</i></li> <li><input type="checkbox"/> <i>Doctorate (e.g., PhD, EdD) or Professional degree (e.g., MD, DDS, DVM, LLB, JD)</i></li> </ul> <p><b>Action:</b> Change the wording and response categories for these items so that they will be consistent with a collapsed set of Census categories.</p> <p><b>Source:</b> Parent's Worksheet</p>

<p align="center"><b>U.S. Standard Birth Certificate 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Standard Birth Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p><b>28. Pregnancy History</b> (Complete each section)</p> <p><b><u>Live Births</u></b> (Do not include this child)</p> <p>28. a. Now Living Number _____ <input type="checkbox"/>None</p> <p>28. b. Now Dead Number _____ <input type="checkbox"/>None</p> <p>28. c. Date of Last Live Birth (Month, Year)</p> <p><b><u>Other Terminations</u></b> (Spontaneous and induced at any time after conception)</p> <p>28. d. Number _____ <input type="checkbox"/>None</p> <p>28. e. Date of Last Other Termination (Month, Year)</p>	<p><b><i>NUMBER OF PREVIOUS LIVE BIRTHS</i></b> (Do not include this child)</p> <p><b>Same</b></p> <p><b>Same</b></p> <p><b>Same:</b> Changed to MM/YYYY date format.</p> <p><b><i>NUMBER OF OTHER PREGNANCY OUTCOMES</i></b> (Spontaneous <i>or</i> induced losses, <i>or</i> ectopic pregnancies) Number _____ <input type="checkbox"/>None</p> <p><b><i>DATE OF LAST OTHER PREGNANCY OUTCOME</i></b> _____/_____ MM YYYY</p> <p><b>Source:</b> Prenatal Care Record</p>
<p><b>29. Mother Married?</b> (At delivery, conception, or any time between) (Yes or No)</p>	<p><b>Same:</b> Changed to check box format <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p><b>Action:</b> Move this item from the “Information for Medical and Health Use Only” section of the Certificate to a new section labeled “Information for Administrative Use.”</p> <p><b>Source:</b> Parent’s Worksheet</p>
<p><b>30. Date Last Normal Menses Began</b> (Month, Day, Year)</p>	<p><b><i>DATE LAST NORMAL MENSES BEGAN</i></b> _____/_____/_____ MM DD YYYY</p> <p><b>Action:</b> Collect information using MM/DD/YYYY format.</p> <p><b>Source:</b> Prenatal Care Record</p>

<p align="center"><b>U.S. Standard Birth Certificate 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Standard Birth Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>31. <b>Month of Pregnancy Prenatal Care Began</b> First, Second, Third, etc. (Specify)</p>	<p><b><i>DATE OF FIRST PRENATAL CARE VISIT:</i></b>                    /      /      /                    MMDDYYYY  <input type="checkbox"/> <i>No Prenatal Care</i></p> <p><b>Source:</b> Prenatal Care Record</p> <p><b>Instructions:</b> Prenatal care begins when a physician or other health professional first examines and/or counsels the pregnant woman as part of an on-going program of care for the pregnancy. The date should provide a more precise indication of when care started.</p>
<p>32. <b>Prenatal Visits-</b> Total Number (If none, so state)</p>	<p><b><i>TOTAL NUMBER OF PRENATAL VISITS FOR THIS PREGNANCY:</i></b> _____ (If none, <i>enter 0</i>)</p> <p><b>Source:</b> Prenatal Care Record</p>
<p>33. <b>Birth Weight</b> (Specify unit)</p>	<p><b>BIRTHWEIGHT</b> (<i>grams</i>)</p> <p><b>Source:</b> Hospital Record</p>
<p>34. <b>Clinical Estimate of Gestation</b> (Weeks)</p>	<p><b><i>OBSTETRIC ESTIMATE OF GESTATION</i></b> (<i>completed weeks</i>)</p> <p><b>Source:</b> Hospital Record</p> <p><b>Instruction:</b> This information should be based on the birth attendant's final estimate of gestation based on all perinatal factors, but not on the neonatal exam.</p>
<p>35. a. <b>Plurality</b> -Single, Twin, Triplet, etc. (Specify): _____</p> <p>35. b. <b>If Not Single Birth</b>—Born first, second, third, etc (Specify): _____</p>	<p><b>Same</b></p> <p><b>Same</b></p> <p><b>Source:</b> Hospital Record</p>

<p align="center"><b>U.S. Standard Birth Certificate 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Standard Birth Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>36. <b>Apgar Score</b>  36. a. <b>1 Minute</b></p> <p>36. b. <b>5 Minutes</b></p>	<p><b>APGAR SCORE</b>  <b>Deleted:</b> The 1 minute Apgar score is subjective and not an adequate predictor of infant risk.  <b>Score at 5 Minutes:</b> _____  <i>If 5 minute score is less than 6</i>  <b>Score at 10 minutes:</b> _____</p> <p><b>Action:</b> The 10-minute Apgar score has been added for infants with 5 minute scores less than 6. The Apgar score at 10 minutes provides a better indication of infants in need of intensive care.</p> <p><b>Source:</b> Hospital Record</p>
<p>37. a. <b>Mother transferred prior to delivery?</b>  <input type="checkbox"/>No <input type="checkbox"/>Yes  If Yes, enter name of facility transferred from: _____</p> <p>37. b. <b>Infant transferred?</b> <input type="checkbox"/>No <input type="checkbox"/>Yes  If Yes, enter name of facility transferred to:</p>	<p><b>MOTHER TRANSFERRED FOR MATERNAL MEDICAL OR FETAL INDICATIONS FOR DELIVERY?</b>  <input type="checkbox"/>Yes <input type="checkbox"/>No  IF YES, ENTER NAME OF FACILITY TRANSFERRED FROM:  _____</p> <p><b>WAS INFANT TRANSFERRED WITHIN 24 HOURS OF DELIVERY?</b> <input type="checkbox"/>Yes <input type="checkbox"/>No  IF YES, ENTER NAME OF FACILITY INFANT TRANSFERRED TO:  _____</p> <p><b>Action:</b> Limit this question to transfers within 24 hours of delivery. Infants transferred within 24 hours are very different from those transferred later.</p> <p><b>Source:</b> Hospital Record</p>



<p align="center"><b>U.S. Standard Birth Certificate 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Standard Birth Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>38. a. <b>Medical Risk Factors for this Pregnancy</b> (Check all that apply)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Anemia (Hct.&lt;30/Hgb.&lt;10)</li> <li><input type="checkbox"/> Cardiac disease</li> <li><input type="checkbox"/> Acute or chronic lung disease</li> <li><input type="checkbox"/> <u>Diabetes</u></li> <li><input type="checkbox"/> <u>Genital herpes</u></li> <li><input type="checkbox"/> Hydramnios/Oligohydramnios</li> <li><input type="checkbox"/> Hemoglobinopathy</li> <li><input type="checkbox"/> <u>Hypertension, chronic</u></li> <li><input type="checkbox"/> <u>Hypertension, pregnancy-associated</u></li> <li><input type="checkbox"/> <u>Eclampsia</u></li> <li><input type="checkbox"/> Incompetent cervix</li> <li><input type="checkbox"/> Previous infant 4000+ grams</li> <li><input type="checkbox"/> <u>Previous preterm or small-for-gestational age infant</u></li> <li><input type="checkbox"/> Renal disease</li> <li><input type="checkbox"/> <u>Rh sensitization</u></li> <li><input type="checkbox"/> <u>Uterine bleeding</u></li> <li><input type="checkbox"/> None</li> <li><input type="checkbox"/> Other (Specify) _____</li> </ul>	<p><b><i>RISK FACTORS IN THIS PREGNANCY</i></b> (Check all that apply)</p> <ul style="list-style-type: none"> <li>Diabetes <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Prepregnancy (Diagnosis prior to this pregnancy)</i></li> <li><input type="checkbox"/> <i>Gestational (Diagnosis in this pregnancy)</i></li> </ul> </li> <li>Hypertension <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Prepregnancy (Chronic)</i></li> <li><input type="checkbox"/> <i>Gestational (PIH, preeclampsia, eclampsia)</i></li> </ul> </li> <li><input type="checkbox"/> Previous preterm birth</li> <li><input type="checkbox"/> <i>Other previous poor pregnancy outcome (Includes perinatal death, small-for-gestational age/intrauterine growth restricted birth)</i></li> <li><input type="checkbox"/> Vaginal bleeding during this pregnancy prior to the onset of labor <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Pregnancy resulted from infertility treatment</i></li> </ul> </li> <li><input type="checkbox"/> <i>None of the above</i></li> </ul> <p><b>Action:</b> This item seeks information about the most prevalent and serious risk factors during pregnancy.</p> <p><b>Source:</b> Prenatal Care Record</p>

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<p>38. b. <b>Other Risk Factors for this Pregnancy</b> (Complete all items)</p> <p>Tobacco use during pregnancy:  <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p>Average number cigarettes per day: _____</p>	<p><b><i>CIGARETTE SMOKING BEFORE AND DURING PREGNANCY</i></b></p> <p><i>Please answer for each time period. (If none, enter "0." 1 pack = 20 cigarettes)</i></p> <p><b>Average number of cigarettes smoked per day:</b></p> <p><i>Three Months Before Pregnancy</i> _____</p> <p><i>First Three Months of Pregnancy</i> _____</p> <p><i>Second Three Months of Pregnancy</i> _____</p> <p><i>Last Three Months of Pregnancy</i> _____</p> <p><b>Action:</b> This item should be retained and modified to obtain information about changes in maternal smoking before and during pregnancy.</p> <p><b>Source:</b> Parent's Worksheet</p>
<p><b>Alcohol use during pregnancy</b></p> <p><input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p>Average number drinks per week: _____</p>	<p><b>Deleted:</b> The quality of the information on alcohol use is suspect. There is little chance of improvement given the stigma attached to alcohol use during pregnancy.</p>

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<p><b>Weight gained during pregnancy:</b> _____ 1bs</p>	<p><b><i>MOTHER'S HEIGHT</i></b> _____ (<i>inches</i>)  <b>Source:</b> Prenatal Care Record</p> <p><b><i>MOTHER'S PREPREGNANCY WEIGHT</i></b>  _____ (<i>pounds</i>)  (<i>or weight at first prenatal visit</i>)</p> <p><b>Source:</b> Prenatal Care Record</p> <p><b><i>MOTHER'S WEIGHT AT DELIVERY</i></b>  _____ (<i>pounds</i>)  (<i>or weight at last prenatal visit</i>)</p> <p><b>Source:</b> Hospital Record or Prenatal Care Record</p> <p><b>Action:</b> Replace this item with three items that will provide a basis for calculating weight gain and determining body mass index.</p>
<p>39. <b>Obstetric Procedures</b> (Check all that apply)</p> <p><input type="checkbox"/> Amniocentesis</p> <p><input type="checkbox"/> Electronic fetal monitoring</p> <p><input type="checkbox"/> <u>Induction of labor</u></p> <p><input type="checkbox"/> <u>Stimulation of labor</u></p> <p><input type="checkbox"/> <u>Tocolysis</u></p> <p><input type="checkbox"/> Ultrasound</p> <p><input type="checkbox"/> None</p> <p><input type="checkbox"/> Other (Specify) _____</p>	<p><b>OBSTETRIC PROCEDURES</b> (Check all that apply)</p> <p><input type="checkbox"/> <i>Cervical cerclage</i></p> <p><input type="checkbox"/> <i>Tocolysis</i></p> <p><i>External cephalic version</i></p> <p><input type="checkbox"/> <i>Successful</i></p> <p><input type="checkbox"/> <i>Failed</i></p> <p><input type="checkbox"/> <i>None of the above</i></p> <p><b>Action:</b> A substantially different item is recommended to obtain information about procedures related to the timing of delivery and fetal presentation. Induction and stimulation of labor are included under <b>Characteristics of Labor and Delivery</b>.</p> <p><b>Source:</b> Prenatal Care Record and/or Hospital Record</p>

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<p><b>40. Complications of Labor and Delivery</b> (Check all that apply)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <u>Febrile (&gt;100° F, or 38° C)</u></li> <li><input type="checkbox"/> <u>Meconium, moderate/heavy</u></li> <li><input type="checkbox"/> <u>Premature rupture of membranes (&gt;12 hours)</u></li> <li><input type="checkbox"/> Abruptio placenta</li> <li><input type="checkbox"/> Placenta Previa</li> <li><input type="checkbox"/> Other excessive bleeding</li> <li><input type="checkbox"/> Seizures during labor</li> <li><input type="checkbox"/> <u>Precipitous labor (&lt;3 hours)</u></li> <li><input type="checkbox"/> <u>Prolonged labor (&gt;20 hours)</u></li> <li><input type="checkbox"/> <u>Dysfunctional labor</u></li> <li><input type="checkbox"/> <u>Breech/Malpresentation</u></li> <li><input type="checkbox"/> Cephalopelvic disproportion</li> <li><input type="checkbox"/> Cord prolapse</li> <li><input type="checkbox"/> Anesthetic complications</li> <li><input type="checkbox"/> <u>Fetal distress</u></li> <li><input type="checkbox"/> None</li> <li><input type="checkbox"/> Other, specify: _____</li> </ul>	<p><b><i>CHARACTERISTICS OF LABOR AND DELIVERY</i></b></p> <p>Induction of labor <span style="float: right;"><input type="checkbox"/>Yes <input type="checkbox"/>No</span></p> <p>Augmentation of labor <span style="float: right;"><input type="checkbox"/>Yes <input type="checkbox"/>No</span></p> <p>Non-vertex presentation <span style="float: right;"><input type="checkbox"/>Yes <input type="checkbox"/>No</span></p> <p><i>Steroids (glucocorticoids) for fetal lung maturation received by the mother prior to delivery</i> <span style="float: right;"><input type="checkbox"/>Yes <input type="checkbox"/>No</span></p> <p><i>Antibiotics received by the mother during labor</i> <span style="float: right;"><input type="checkbox"/>Yes <input type="checkbox"/>No</span></p> <p>Clinical chorioamnionitis diagnosed during labor or maternal temperature <math>\geq 38^{\circ} \text{C}</math> (100.4° F) <span style="float: right;"><input type="checkbox"/>Yes <input type="checkbox"/>No</span></p> <p>Moderate/heavy meconium staining of the amniotic fluid <span style="float: right;"><input type="checkbox"/>Yes <input type="checkbox"/>No</span></p> <p><i>Fetal intolerance of labor such that one or more of the following actions was taken: in-utero resuscitative measures, further fetal assessment, or operative delivery</i> <span style="float: right;"><input type="checkbox"/>Yes <input type="checkbox"/>No</span></p> <p><i>Epidural or spinal anesthesia during labor</i> <span style="float: right;"><input type="checkbox"/>Yes <input type="checkbox"/>No</span></p> <p><b>Action:</b> A new list of actions and conditions that may be present during labor and delivery has been developed. Induction and stimulation (augmentation) of labor were previously included under <b>Obstetric Procedures</b>.</p> <p><b>Source:</b> Hospital Record</p>

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<p align="right">(Addition)</p>	<p><b><i>CHRONOLOGY OF LABOR AND DELIVERY</i></b></p> <p><input type="checkbox"/> <i>Facility admission that included delivery:</i>  _____ / _____ / _____ at _____  <i>MM DD YYYY 24 hour clock</i></p> <p><input type="checkbox"/> <i>Delivery not in facility</i></p> <p><i>B. Rupture of membranes occurred on:</i>  _____ / _____ / _____ at _____  <i>MM DD YYYY 24 hour clock</i></p> <p><input type="checkbox"/> <i>Not Applicable</i>      <input type="checkbox"/> <i>Unknown date and time</i></p> <p><i>C. Onset of labor occurred on:</i>  _____ / _____ / _____ at _____  <i>MM DD YYYY 24 hour clock</i></p> <p><input type="checkbox"/> <i>Not Applicable</i>      <input type="checkbox"/> <i>Unknown date and time</i></p> <p><i>D. Full cervical dilation occurred on:</i>  _____ / _____ / _____ at _____  <i>MM DD YYYY 24 hour clock</i></p> <p><input type="checkbox"/> <i>Not Applicable</i>      <input type="checkbox"/> <i>Unknown date and time</i></p> <p><b>New Item:</b> These items will facilitate the calculation of the length of stay in the hospital prior to delivery, the length of labor, and the interval between rupture of membranes and delivery, as well as identify when full cervical dilation occurred.</p> <p><b>Source:</b> Hospital Record</p>

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<p>41. <b>Method of Delivery</b> (Check all that apply)</p> <p><input type="checkbox"/> <u>Vaginal</u></p> <p><input type="checkbox"/> <u>Vaginal birth after previous C-section</u></p> <p><input type="checkbox"/> <u>Primary C-section</u></p> <p><input type="checkbox"/> <u>Repeat C-section</u></p> <p><input type="checkbox"/> <u>Forceps</u></p> <p><input type="checkbox"/> <u>Vacuum</u></p>	<p><b>METHOD OF DELIVERY</b></p> <p><i>A. Was delivery attempted with forceps and/or vacuum extraction?</i></p> <p><i>Attempted forceps    <input type="checkbox"/>Yes    <input type="checkbox"/>No</i></p> <p><i>Attempted vacuum    <input type="checkbox"/>Yes    <input type="checkbox"/>No</i></p> <p><i>B. Fetal presentation at birth</i></p> <p><input type="checkbox"/> <i>Cephalic</i></p> <p><input type="checkbox"/> <i>Breech</i></p> <p><input type="checkbox"/> <i>Other</i></p> <p><i>C. Final route and method of delivery (Check one)</i></p> <p><i>Vaginal:</i></p> <p><input type="checkbox"/> <i>Spontaneous</i></p> <p><input type="checkbox"/> <i>Forceps</i></p> <p><input type="checkbox"/> <i>Vacuum</i></p> <p><i>Or:</i></p> <p><input type="checkbox"/> <i>Cesarean</i></p> <p><i>If cesarean, was a trial of labor attempted?</i></p> <p><input type="checkbox"/>Yes            <input type="checkbox"/>No</p> <p><i>D. Has the mother had a previous cesarean delivery?</i></p> <p><input type="checkbox"/>Yes            <i>If Yes, how many_____</i></p> <p><input type="checkbox"/>No</p> <p><b>Source:</b> Hospital Record</p>

<p align="center"><b>U.S. Standard Birth Certificate 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Standard Birth Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>42. <b>Abnormal Conditions of the Newborn</b> (Check all that apply)</p> <p><input type="checkbox"/> Anemia (Hct. &lt;38/Hgb.&lt;13)</p> <p><input type="checkbox"/> <u>Birth injury</u></p> <p><input type="checkbox"/> Fetal alcohol syndrome</p> <p><input type="checkbox"/> Hyaline membrane dresses/RDS</p> <p><input type="checkbox"/> Meconium aspiration syndrome</p> <p><input type="checkbox"/> <u>Assisted ventilation ≤30 min</u></p> <p><input type="checkbox"/> <u>Assisted ventilation ≥30 min</u></p> <p><input type="checkbox"/> <u>Seizures</u></p> <p><input type="checkbox"/> None</p> <p><input type="checkbox"/> Other (Specify) _____</p>	<p><b>ABNORMAL CONDITIONS OF THE NEWBORN</b> (Occurring within 24 hours of delivery)</p> <p><i>Assisted ventilation required immediately following delivery</i>    <input type="checkbox"/>Yes</p> <p><i>Assisted ventilation required for more than six hours</i>    <input type="checkbox"/>Yes</p> <p><i>NICU admission</i>    <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p><i>Newborn given surfactant replacement therapy</i>    <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p><i>Antibiotics received by the newborn for suspected neonatal sepsis</i>    <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p><i>Seizure or serious neurologic dysfunction</i>    <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p><i>Significant birth injury (skeletal fracture(s), peripheral nerve injury, soft tissue or solid organ hemorrhage which requires intervention)</i> <input type="checkbox"/>Yes    <input type="checkbox"/>No <i>If Yes, Specify</i> _____</p> <p><b>Action:</b> The list of conditions has been changed to seek information about significant conditions of the newborn and resulting treatments.</p> <p><b>Source:</b> Hospital Record</p>

<p align="center"><b>U.S. Standard Birth Certificate 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Standard Birth Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>43. <b>Congenital Anomalies of Child</b> (Check all that apply)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <u>Anencephalus</u></li> <li><input type="checkbox"/> <u>Spina bifida/Meningocele</u></li> <li><input type="checkbox"/> Hydrocephalus</li> <li><input type="checkbox"/> Microcephalus</li> <li><input type="checkbox"/> Other central nervous system anomalies (Specify) _____</li> <li><input type="checkbox"/> <u>Heart malformations</u></li> <li><input type="checkbox"/> Other circulatory/respiratory anomalies (Specify) _____</li> <li><input type="checkbox"/> Rectal atresia/stenosis</li> <li><input type="checkbox"/> Tracheo-esophageal fistula/Esophageal atresia</li> <li><input type="checkbox"/> <u>Omphalocele/Gastroschisis</u></li> <li><input type="checkbox"/> Other gastrointestinal anomalies (Specify) _____</li> <li><input type="checkbox"/> Malformed genitalia</li> <li><input type="checkbox"/> Renal agenesis</li> <li><input type="checkbox"/> Other urogenital anomalies (Specify) _____</li> <li><input type="checkbox"/> <u>Cleft lip/palate</u></li> <li><input type="checkbox"/> Polydactyly/Syndactyly/Adactyly</li> <li><input type="checkbox"/> Club foot</li> <li><input type="checkbox"/> <u>Diaphragmatic hernia</u></li> <li><input type="checkbox"/> Other musculoskeletal/integumental anomalies (Specify) _____</li> <li><input type="checkbox"/> <u>Down's syndrome</u></li> <li><input type="checkbox"/> <u>Other chromosomal anomalies</u> (Specify) _____</li> <li><input type="checkbox"/> None</li> <li><input type="checkbox"/> Other (Specify) _____</li> </ul>	<p><b>CONGENITAL ANOMALIES OF THE NEWBORN</b> (<i>Observed within 24 hours of delivery</i>) (Check all that apply)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Neural tube defect</i></li> <li><input type="checkbox"/> <i>Cyanotic congenital heart disease</i></li> <li><input type="checkbox"/> <i>Congenital diaphragmatic hernia</i></li> <li><input type="checkbox"/> <i>Anterior abdominal wall defect</i></li> <li><input type="checkbox"/> Omphalocele</li> <li><input type="checkbox"/> Gastroschisis</li> <li><input type="checkbox"/> <i>Limb reduction defect (excluding congenital amputation and dwarfing syndromes)</i></li> <li><input type="checkbox"/> <i>Orofacial defect/cleft</i></li> <li><input type="checkbox"/> <i>Suspected chromosomal disorder</i> <i>Karyotype confirmed</i>    <input type="checkbox"/>Yes    <input type="checkbox"/>No <i>Karyotype pending</i>    <input type="checkbox"/>Yes    <input type="checkbox"/>No</li> <li><input type="checkbox"/> <i>Hypospadias</i></li> <li><input type="checkbox"/> <i>None of the anomalies listed above</i></li> </ul> <p><b>Action:</b> Replace with a list of congenital anomalies that are evident at delivery and require intervention.</p> <p><b>Source:</b> Hospital Record</p>



<p align="center"><b>U.S. Standard Birth Certificate 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Standard Birth Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p align="right"><i>(Addition)</i></p>	<p><b><i>FACILITY ID (NPI)</i></b></p> <p><b>New Item:</b> The National Provider Identifier (NPI) will identify the facility where the mother delivered and provide additional information about the facility when it becomes available.</p> <p><b>Source:</b> Hospital or Other Facility</p>
<p align="right"><i>(Addition)</i></p>	<p><b><i>SOCIAL SECURITY NUMBER REQUESTED FOR CHILD?</i></b> <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p><b>New item:</b> This item is already on the certificate for all states participating in the enumeration at birth program.</p> <p><b>Source:</b> Parent's Worksheet</p>
<p align="right"><i>(Addition)</i></p>	<p><b><i>MOTHER'S SOCIAL SECURITY NUMBER</i></b></p> <p><b><i>FATHER'S SOCIAL SECURITY NUMBER</i></b></p> <p><b>New Items:</b> Social Security numbers are already being collected by States in accordance with Federal child support legislation.</p> <p><b>Source:</b> Parent's worksheet</p>
<p align="right"><i>(Addition)</i></p>	<p><b><i>DID MOTHER GET WIC FOOD FOR HERSELF DURING THIS PREGNANCY?</i></b> <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p><b>New Item:</b> Include this item as an indicator of program participation as well as socioeconomic status.</p> <p><b>Source:</b> Parent's Worksheet</p>

<p align="center"><b>U.S. Standard Birth Certificate 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Standard Birth Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p align="right"><i>(Addition)</i></p>	<p><b><i>PRINCIPAL SOURCE OF PAYMENT FOR THIS DELIVERY</i></b></p> <p> <input type="checkbox"/> <i>Private Insurance</i>  <input type="checkbox"/> <i>Medicaid</i>  <input type="checkbox"/> <i>Self-pay</i>  <input type="checkbox"/> <i>Other (Specify) _____</i> </p> <p><b>New Item:</b> The Medicaid response will provide a measure of socioeconomic status, as well as an indication of program participation. Self-pay will provide an indication of the number of women for whom no source of payment was identified at the time of admission.</p> <p><b>Source:</b> Hospital Admission Record</p>
<p><i>(Addition)</i></p> <p><i>(Addition)</i></p>	<p><b><i>MOTHER'S MEDICAL RECORD NUMBER</i></b></p> <p>_____</p> <p><b><i>NEWBORN MEDICAL RECORD NUMBER</i></b></p> <p>_____</p> <p><b>New Items:</b> Include the medical record number of the mother and child at the time of delivery. This information combined with the hospital identifier will enable querying of individual records and linkage with hospital discharge data.</p> <p><b>Source:</b> Hospital Record</p>

<p align="center"><b>U.S. Standard Birth Certificate 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Standard Birth Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p align="right"><i>(Addition)</i></p>	<p><b><i>WAS THE PRENATAL RECORD AVAILABLE FOR COMPLETION OF BIRTH CERTIFICATE?</i></b>  <input type="checkbox"/> <i>Yes</i>   <input type="checkbox"/> <i>No</i></p> <p><b>New Item:</b> Include this item as an indicator of the continuity of care and the accuracy of information from prenatal records.</p> <p><b>Source:</b> Information Available to Person Completing Certificate</p>
<p align="right"><i>(Addition)</i></p>	<p><b><i>INFECTIONS PRESENT AND/OR TREATED DURING THIS PREGNANCY</i></b>  <i>(Check all that apply)</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Gonorrhea</i></li> <li><input type="checkbox"/> <i>Syphilis</i></li> <li><input type="checkbox"/> <i>Herpes Simplex Virus (HSV)</i></li> <li><input type="checkbox"/> <i>Chlamydia</i></li> <li><input type="checkbox"/> <i>Hepatitis B</i></li> <li><input type="checkbox"/> <i>Hepatitis C</i></li> <li><input type="checkbox"/> <i>None of the above</i></li> </ul> <p><b>New Item:</b> This item seeks information about the prevalence of specific infections during pregnancy.</p> <p><b>Source:</b> Prenatal Care Record and Hospital Record</p>

<p align="center"><b>U.S. Standard Birth Certificate 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Standard Birth Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p align="right"><i>(Addition)</i></p>	<p><b><i>MATERNAL MORBIDITY</i></b> (<i>Occurring 24 hours before delivery or within 24 hours of delivery</i>) (<i>Check all that apply</i>)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Maternal transfusion</i></li> <li><input type="checkbox"/> <i>Third or fourth degree perineal laceration</i></li> <li><input type="checkbox"/> <i>Ruptured uterus</i></li> <li><input type="checkbox"/> <i>Unplanned hysterectomy</i></li> <li><input type="checkbox"/> <i>Admission to intensive care unit</i></li> <li><input type="checkbox"/> <i>Unplanned operating room procedure following delivery</i></li> <li><input type="checkbox"/> <i>None of the above</i></li> </ul> <p><b>New Item:</b> Information about significant indicators of maternal morbidity is being sought.</p> <p><b>Source:</b> Mother's Hospital Records</p>
<p align="right"><i>(Addition)</i></p>	<p><b><i>IS INFANT LIVING AT TIME OF REPORT?</i></b></p> <p align="center"><input type="checkbox"/>Yes <input type="checkbox"/>No <input type="checkbox"/>Transferred</p> <p><b>New item:</b> Include this item to stimulate completion of infant death certificates and linkage between birth and death certificates.</p> <p><b>Source:</b> Hospital Records</p>
<p align="right"><i>(Addition)</i></p>	<p><b><i>IS INFANT BEING BREAST FED?</i></b></p> <p align="center"><input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p><b>New item:</b> Breast feeding makes significant contributions to infant health. An objective concerning the percentage of mothers breast feeding at hospital discharge has been included among maternal and child health performance objectives.</p> <p><b>Source:</b> Hospital Records</p>

## Recommendations for the 2003 Revision of the U.S. Standard Certificate of Death

### Organization of the Death Subgroup

The Death Subgroup of the Panel to Evaluate the U.S. Standard Certificates and Report was assigned to review the U.S. Standard Certificate of Death, last revised in 1989, and make recommendations for consideration by the Parent Group. The Death Subgroup members were as follows:

Alvin T. Onaka, Ph.D., Chairperson  
State Registrar and Acting Chief  
Office of Health Status Monitoring  
Hawaii Department of Health

Gregory George Davis, M.D.  
Associate Coroner/Medical Examiner  
Jefferson County, Alabama  
(National Association of Medical  
Examiners)

Karen Grady  
State Registrar and Chief  
Bureau of Vital Records and Health  
Statistics  
Health and Human Services (New  
Hampshire)

Randy L. Hanzlick, M.D.  
Chief, Medical Examiner  
Fulton County  
Atlanta, Georgia  
(College of American Pathologists)

Michael R. Lavoie  
Director, Vital Records Section  
Epidemiology and Prevention Branch  
Division of Public Health  
Department of Human Resources  
(Georgia)

Nelly Leon-Chisen, RRA  
Director, Central Office on ICD-9 CM  
(American Hospital Association)

A. Torrey McLean  
State Registrar  
North Carolina Vital Records

Barbara J. Moore  
Moore's Home for Funerals  
(National Funeral Directors  
Association)

Steven Schwartz, Ph.D.  
Registrar and Director  
Office of Vital Statistics and  
Epidemiology  
City of New York Department of Health

Priscilla Short, M.D.  
Director  
Office of Biomedical Science and  
Clinical Research  
(American Medical Association)

Ken R. Smith, Ph.D.  
Professor  
Departments of Family and Consumer  
Studies and Sociology  
University of Utah  
(Researcher)

Jonathan VanGeest, Ph.D.  
(American Medical Association)

The following staff from the Division of Vital Statistics, National Center for Health Statistics also attended part of or all Subgroup meetings:

Susan A. Hawk, Facilitator  
Donna Hoyert, Ph.D., Rapporteur  
Kenneth D. Kochanek, Rapporteur

Kimberley D. Peters, Rapporteur  
Harry M. Rosenberg, Ph.D.  
George C. Tolson

The Death Subgroup met in conjunction with each of the six meetings of the Panel to Evaluate U.S. Standard Certificates and Report, beginning in January 1998. The Subgroup's first meeting entailed determining procedures for evaluating the existing certificate and identifying topics for which outside expert testimony would be needed. The Subgroup also began reviewing current and recommended death certificate items.

At its May 1998 meeting, the Subgroup continued reviewing items on the certificate to determine which should be retained as on the 1989 standard, retained but modified, or deleted. In addition, the Subgroup addressed infant mortality, pronouncing and certifying concepts, and the education and surgery items. Finally, the Subgroup discussed what items should be added to the death certificate to enhance the quality of the data collected.

The Death Subgroup continued to review current and recommended items for the death certificate during its third meeting, held in July 1998. Subgroup members also discussed how to handle risk factors relating to the cause of death and reviewed testimony from ASTHO and AMA regarding the tobacco item. The first recommendations of the Death Subgroup were forwarded to the Parent Group.

The Death Subgroup's fourth convening in October 1998 resulted in the Subgroup finalizing a number of recommendations for the Parent Group's consideration. The Subgroup continued to review current and recommended items for the death certificate. The Subgroup reviewed and responded to Parent Group questions about Death Subgroup recommendations, including the pronouncing section. Among other topics, the Subgroup discussed topics such as homelessness, behavioral risk factors, and AMA's recommendations regarding the training and education of medical certifiers on completing the cause of death section of the death certificate.

During its January 1999 meeting, the Death Subgroup finalized additional recommendations and revisited items sent back by the Parent Group for clarification. In addition, Subgroup members discussed the addition of a separate "For Statistical Use Only" section on the standard death certificate.

In April 1999, the Death Subgroup held its final meeting. During this meeting, Subgroup members met with NCHS Director, Dr. Ed Sondik, regarding the inclusion of a tobacco item on the standard death certificate. The Subgroup reviewed

wording on instructions and did a final review of other items. The Subgroup also discussed the formatting of the certificate and developed recommendations regarding implementation, education, and research for consideration by the Parent Group.

### **Summary of Major Decisions**

The Subgroup to evaluate the U.S. Standard Certificate of Death made several semantic changes to the standard death certificate and reorganized portions of the certificate, as appropriate, to ease the use of this document. Many of the Subgroup's recommendations included wording changes and/or the addition of check boxes to existing certificate items to obtain more detailed information.

In addition, the Death Subgroup added items to the certificate to address public health concerns and issues associated with ICD-9 and ICD-10 coding. Among other items, the Subgroup added a question to collect information on whether tobacco use contributed to death, a question to collect information on the pregnancy status of female decedents, and a question to collect additional information on traffic deaths. Other major decisions included the addition of a "For Statistical Use Only" section to the certificate that includes the Occupation, Business/Industry, Hispanic Origin, Race, and Education items. This section is intended to help improve the quality of data, especially for sensitive topics. Extensive instructions for the physician and funeral director were added as detachable pages to the certificate.

## **Items Recommended for the 2003 U.S. Standard Certificate of Death**

The following items were recommended by the Death Subgroup and approved by the Parent Group for inclusion on the 2003 U.S. Standard Certificate of Death. The rationale for including each item is noted. Please note that the item numbers correspond to the proposed 2003 certificate provided in Appendix A. The 1989 standard death certificate is provided in Appendix B.

### **To be completed by: FUNERAL DIRECTOR**

#### **1. DECEDENT'S LEGAL NAME (Include AKAs if any) (First, Middle, Last)**

The Subgroup recommended that this item, previously "Decedent's Name," be retained. The item now also includes a prompt to include aliases. This item is used to identify the decedent. The decedent's legal name is needed for legal, linkage, and genealogical purposes. The instructions for the funeral director stipulate the inclusion of any other names used by the decedent if substantially different from the legal name.

#### **2. SEX**

The Subgroup recommended that this item be retained to aid in the identification of the decedent. This item is used in research and statistical analysis to determine sex-specific death rates.

#### **3. SOCIAL SECURITY NUMBER**

The Subgroup recommended that this item be retained, as it is useful in identifying the decedent and facilitates the filing of social security claims.

#### **4a. AGE-Last Birthday (Years)**

#### **4b. UNDER 1 YEAR (Months, Days)**

#### **4c. UNDER 1 DAY (Hours, Minutes)**

The Subgroup recommended that these items be retained. This information is used to study differences in age-specific mortality and to plan and evaluate public health programs.

#### **5. DATE OF BIRTH (Mo/Day/Yr)**

The Subgroup recommended that this item be retained. This information is useful in the identification of the decedent for legal purposes. This information helps to verify the accuracy of the age item.

#### **6. BIRTHPLACE (City and State or Foreign Country)**



The Subgroup recommended that this item be retained. The item is used to match birth and death certificates of a deceased individual, and is useful for linkage/genealogical and research purposes. The Subgroup suggested that more space be provided for this item in the design of the certificate.

- 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

The Subgroup recommended that these items be retained, with the addition of Apt. No. Mortality data by residence are used with population data to compute death rates for geographic areas. These data are important in environmental studies. Data on deaths by place of residence of the decedent are used to prepare population estimates and projections. Local officials use this information to evaluate the availability and use of services in their areas. For item 7g, the Subgroup recommended that “Inside City Limits” be retained, unless States use an automated GIS system to geocode. Information on residence inside city limits is used to properly assign events within a county. Information on Zip Code and whether the decedent lived inside city limits is valuable for studies of deaths for small areas and is needed until geocoding is universal.

- 8. EVER IN U.S. ARMED FORCES?  
Yes No

The Subgroup recommended that this item be retained. The Standards and Design Subgroup recommended that it be slightly modified by deleting “Was decedent.” This information identifies decedents who were veterans and is of use to veteran groups.

- 9. MARITAL STATUS AT TIME OF DEATH
  - Married
  - Married, but separated
  - Widowed
  - Divorced
  - Never Married
  - Unknown

The Subgroup recommended that this item be retained, but changed to a check box item. The Subgroup recommended adding “Separated” as part of the married prompt to clarify that a person who is separated is still married. Parent Group members raised concern regarding the check boxes proposed by the Death Subgroup and offered the alternative “Married, but separated” check box. This check box is intended to alleviate confusion for those who are married and

have never been separated. This item is used in determining the differences in mortality by marital status.

10. SURVIVING SPOUSE'S NAME (If wife, give name prior to first marriage)

The Subgroup recommended that this item be retained. The Standards and Design Subgroup recommended that it be slightly modified to include "Name." This information is used in genealogical studies and to establish proper insurance settlement and other survivor benefits, such as those of the Social Security Administration. In addition, it is needed for legal reasons, e.g., the surviving spouse has rights to legal disposition.

11. FATHER'S NAME (First, Middle, Last)

The Subgroup recommended that this item be retained because the name of the decedent's father aids in identification of the decedent's record.

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

The Subgroup recommended that this item, previously "Mothers Name (First, Middle, Maiden Surname)," be retained. The title of the item and the prompt have been modified to exclude the term "maiden." The name of the decedent's mother aids in identification of the decedent's record. The surname prior to first marriage is important for matching the record with other records because it remains constant throughout a lifetime, in contrast to other names that may change due to marriage or divorce.

13a. INFORMANT'S NAME (Type/Print)

13b. RELATIONSHIP TO DECEDENT

The Subgroup recommended that Informant's Name be retained, with the addition of Relationship to Decedent. The information is useful for legal purposes and will help identify the informant. This information can help determine the validity of facts in cases where the informant is a family member, which may help in cases where there are disputes of the information.

13c. MAILING ADDRESS (Street and Number, City, State, Zip Code)

The Subgroup recommended that this item be retained, with "Rural Route Number" removed from the prompt. The mailing address of the informant is used to contact the informant when inquiries must be made to correct or complete any items on the death certificate. This information is useful for registration/certification processing and linkage/genealogical purposes. The Subgroup noted that instructions can still mention rural route; however, rural routes are being phased out.

14. METHOD OF DISPOSITION

- |                                     |   |
|-------------------------------------|---|
| <input type="checkbox"/> Burial     | <input type="checkbox"/> Donation             |
| <input type="checkbox"/> Entombment | <input type="checkbox"/> Removal from State   |
| <input type="checkbox"/> Cremation  | <input type="checkbox"/> Other (Specify)_____ |

The Subgroup recommended that this item be retained with the addition of a check box for “Entombment.” Entombment is becoming an increasingly frequent method of disposition, and this information is helpful in the event that the body is exhumed or disinterred. Information for this item indicates whether the body was properly disposed of as required by law. It serves to locate the body in case exhumation, autopsy, or transfer is required later.

15. PLACE OF DISPOSITION (Name of cemetery, crematory, other place)

16. LOCATION—CITY, TOWN, AND STATE

The Subgroup recommended that these items be retained. This information indicates whether the body was properly disposed of as required by law and serves to locate the body in case exhumation, autopsy, or transfer is required later.

17. NAME AND COMPLETE ADDRESS OF FUNERAL FACILITY

The Subgroup recommended that this item, previously “Name and Address of Facility,” be retained. This item assists in quality control in completing and filing death certificates. It identifies the individual responsible for filing the death certificate, which is necessary when querying items on the certificate.

18. SIGNATURE OF FUNERAL SERVICE LICENSEE OR OTHER AGENT

19. LICENSE NUMBER (of Licensee)

The Subgroup recommended that these items be retained. This information assists in quality control in completing and filing death certificates. It identifies the person who is responsible for filing the certificate with the registrar.

**To be completed by: PRONOUNCER**

20. PLACE DEATH PRONOUNCED (Check only one: see instructions)  
IF DEATH WAS PRONOUNCED IN A HOSPITAL:  
 Inpatient       Emergency Room/Outpatient       Dead on Arrival  
IF DEATH WAS PRONOUNCED SOMEWHERE OTHER THAN A HOSPITAL:  
 Residence       Hospice facility  
 Nursing home/Long-term care facility       Other (Specify)\_\_\_\_\_

These items replace the previously titled "Place of Death" item. They were moved to the Pronouncing Physician section for ease of use by the physician. The recommendation also reflects the addition of "Hospice facility" as a check box item and the expansion of the "Nursing home" check box to include "Long-term care facility." "Long-term care facility" reflects changes in terminology while "hospice facility" reflects changes in types of care and advanced directives. These items will better indicate the place where death occurred.

21. FACILITY NAME (If not institution, give street & number)  
22. CITY, TOWN, AND ZIP CODE  
23. COUNTY OF DEATH

The Subgroup recommended that these items be retained because the information is needed for health planning and identifying specific health problems in certain areas.

24. DATE PRONOUNCED DEAD (Mo/Day/Yr)

The Subgroup recommended retaining this item, because it is used to identify the date the decedent was legally pronounced dead. This information is helpful in cases where the body of a person who has been dead for some time is found and the death is pronounced by a medical examiner or coroner.

25. TIME PRONOUNCED DEAD

The Subgroup recommended that this item be added because the actual/presumed and pronounced time of death are not clearly distinguished, and each is of interest.

26. SIGNATURE OF PERSON PRONOUNCING DEATH  
27. LICENSE NO.  
28. DATE SIGNED (Mo/Day/Yr)

These items replace the Pronouncing Physician statement from the 1989 standard. The Subgroup recommended retaining these items because the information is useful for quality control in completing and filing death certificates.

They identify who is responsible for filing the certificate with the registrar. The Subgroup recommended that States that file death records electronically should allow for electronic authentication of the record, rather than requiring a signature. This information is useful for States with pronouncing laws.

Grouping items 20-29 together clarifies who is responsible for completing this information, in addition to making it easier for the individual completing this information.

**To be completed by: CERTIFIER**

**29. ACTUAL OR PRESUMED DATE OF DEATH (Mo/Day/Yr) (Spell Month)**

The Subgroup recommended retaining this item, previously titled “Date of Death,” and moved it to the pronouncing section. This information is used in conjunction with the hour of death to establish the exact time of death of the decedent. Epidemiologists use the date of death in conjunction with the cause-of-death information for research on intervals between injuries, onset of conditions, and death.

**30. ACTUAL OR PRESUMED TIME OF DEATH**

The Subgroup recommended that this item, previously titled “Time of Death,” be retained but slightly modified. This item establishes the exact time of death, which is important in inheritance cases where there is a question of who died first. This is also important in the case of multiple deaths in the same family.

**31. WAS MEDICAL EXAMINER OR CORONER CONTACTED? Yes No**

The Subgroup recommended that this item be retained. This item indicates whether the medical examiner or coroner was informed when the circumstances required such action.

**32. CAUSE OF DEATH (See instructions and examples)**

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. DO NOT ABBREVIATE.

a. IMMEDIATE CAUSE (Final disease or condition resulting in death)

b-d. 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.

Approximate interval: Onset to death

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

The Subgroup recommended that these items be retained with an increase in the size of Part II. The Subgroup discussed the terminology used and decided that the wording was clear. The point was made that education is the key to getting quality cause-of-death information. The cause of death is the most important statistical research item on the death certificate. It provides medical information that serves as a basis for describing trends in public health and mortality and for analyzing the conditions leading to death. Mortality statistics are a major source for epidemiological studies. This information provides a basis for research in disease etiology and evaluation of diagnostic techniques, which, in turn, lead to improvements in patient care. The increased size in Part II gives the physician more opportunity to list risk factors.

33. WAS AN AUTOPSY PERFORMED? Yes No

The Subgroup recommended that this item be retained. An autopsy is important to give additional insight into the conditions that lead to death. This additional information is important to arrive at the immediate and underlying causes when the cause of death is not immediately clear.

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

The Subgroup recommended that this item be retained. This information assists in determining whether for the 10 to 15 percent of cases for which an autopsy is done, the information was used to assist in determining the cause of death. Knowing whether the autopsy results were used to determine the cause of death gives insight into the quality of the cause-of-death data.

35. DID TOBACCO USE CONTRIBUTE TO THE DEATH?

- |                              |                                   |
|------------------------------|-----------------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> Probably |
| <input type="checkbox"/> No  | <input type="checkbox"/> Unknown  |

The Subgroup recommended adding this question to the standard because tobacco use is a major public health issue, but is not reported well as a contributing factor to death. This item will help eliminate under reporting of this information. The question measures a public health outcome and is needed for public health program assessment. Seven States currently collecting these data separately have increased their reporting of this information. The death certificate is the best source of population-based data for collecting this information. The “probably” option was added for cases where a physician may have a high degree of certainty regarding the issue, but is not 100 percent sure.

36. IF FEMALE:  Not pregnant within past year  
 Not pregnant, but pregnant within 42 days of death  
 Not pregnant, but pregnant 43 days to 1 year before death

- Pregnant at time of death
- Unknown if pregnant within the past year

The Subgroup recommended the addition of this item because this is an important public health issue, and there is a need to standardize the way this information is collected. The level of detail in this item reflects the information needed for ICD-10 coding. Studies indicate that when this item is asked separately, the collection of data is improved. The American College of Obstetrics and Gynecology (ACOG) and the Division of Reproductive Health, CDC, strongly support this item. This information is used to improve the cause of death and will help identify maternal deaths. The death certificate is the best source of population-based data for collecting this information.

37. MANNER OF DEATH

- |                                   |  |
|-----------------------------------|--|
| <input type="checkbox"/> Natural  | <input type="checkbox"/> Homicide                |
| <input type="checkbox"/> Accident | <input type="checkbox"/> Pending Investigation   |
| <input type="checkbox"/> Suicide  | <input type="checkbox"/> Could not be determined |

The Subgroup recommended that this item be retained. In cases of accidental death, this information is used to justify the payment of double indemnity of life insurance policies. It is used to obtain a more accurate determination of the cause of death.

38. DATE OF INJURY (Mo/Day/Yr)

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:

The Subgroup recommended retaining these items, adding Zip Code to item 43 and removing “Rural Route Number” from the prompt. The Subgroup also recommended providing additional prompts in item 41 to improve data quality. The more specific prompts are intended to diminish the number of instances where the place of injury is not stated. In cases of accidental death, these items are used to justify the payment of double indemnity on life insurance policies. These items are needed for more accurate determination of the causes of death. Information from these items forms the basis of statistical studies of occupational injuries. The Subgroup determined that because rural route is being phased out,





50. FOR REGISTRAR ONLY–DATE FILED (Mo/Day/Yr)

The Subgroup recommended that this item be retained but modified. This information verifies whether the death certificate was filed within the time period specified by law. Acceptability and amendment issues relate to the time the record is filed.

***For Statistical Use Only***

The Subgroup recommended that the certificate contain a section titled “For Statistical Use Only.” This section contains items that are strictly for statistical purposes. This may also help the funeral director when asking sensitive questions to the informant about the decedent.

**To be completed by: FUNERAL DIRECTOR**

51. DECEDENT’S EDUCATION (Check the box that best describes the highest degree or level of school completed at the time of death.)

- 8<sup>th</sup> grade or less
- 9<sup>th</sup> to 12<sup>th</sup> 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)

*The Subgroup recommended that this item be retained on the death certificate. However, it has been modified to a check box format to collect more specific data on degrees obtained. Please see the “Education” chapter of this report for additional information.*

52. DECEDENT OF HISPANIC ORIGIN? Check the box that best describes whether the decedent was Spanish/Hispanic/Latino. Check the “No” box if decedent was not Spanish/Hispanic/Latino.

- No, not Spanish/Hispanic/Latino
- Yes, Puerto Rican
- Yes, Mexican, Mexican American, Chicano
- Yes, Cuban
- Yes, other Spanish/Hispanic/Latino-specify \_\_\_\_\_

*The Subgroup recommended that this item be retained on the death certificate. However, it has been changed to a check box item to obtain more detailed information and follow the format of the Census question. This information is*

*important for population estimates and projections. Please see the "Race and Ethnicity" chapter of this report for additional information.*

53. DECEDENT'S RACE Check one or more races to indicate what the decedent considered himself or herself to be.
- 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 \_\_\_\_\_

*The Subgroup recommended that this item be retained on the death certificate. However, it has been changed to a check box item to elicit more specific information. This information is critical for population estimates and projections. Please see the "Race and Ethnicity" chapter of this report for additional information.*

54. DECEDENT'S USUAL OCCUPATION (indicate type of work done during most of working life. DO NOT USE RETIRED.)
55. KIND OF BUSINESS/INDUSTRY

The Subgroup recommended that these items be retained. About half of the States code this information, and more States are planning on doing so in the future. This information is useful in studying occupationally related mortality and to identify job-related risk areas.

LOCAL FILE NO. (top left margin)

The Subgroup recommended that this item be retained because it is needed to distinguish between records in the registration and processing stages.

STATE FILE NO. (top right margin)

The Subgroup recommended that this item be retained because it is needed to distinguish between records in the registration and processing stages.

NAME OF DECEDENT (For use by physician or institution) (landscape in left margin)

The Subgroup recommended that this item be retained because it allows the hospital to assist in completing the death certificate before the body is removed by the funeral director. However, since the funeral director is responsible for completion of the personal information about the decedent, and since the hospital frequently does not have the complete legal name of the decedent, the hospital or physician could enter the name they have for the decedent in this item, and the funeral director could enter the full legal name in item 1. This should be helpful in expediting the filing of death certificates.

## Secondary Data Items

Throughout their deliberations, the Birth, Death, and Fetal Death Subgroups pondered whether to propose the collection of various items intended to enhance the national data set. Part of the charge of each Subgroup was to determine which questions should be included on the standard certificates to elicit the best possible information. This process resulted in the discussion of a number of topics of national health interest. There were some data that the Subgroups wanted to obtain, but did not believe collection was warranted on a national basis as part of the standard certificate. However, the Parent Group thought that it would be helpful to provide a uniform question or procedure for those States that choose to include such items/procedures on their certificates. The list of items was referred to as “secondary or B-list items.” The Parent Group also thought that secondary data items would be useful for the next revision of the standard certificates because they would be items not part of the national data set, but items that had been tested in some States. All items rejected by the Parent Group for inclusion on the standard certificates were also considered for secondary data items for states to select if they wish to include the item on the state certificate.

The secondary data items recommended for the death certificate by the Parent Group include:

- ***Was the decedent receiving hospice care? Yes, No, Unknown.*** This information will better describe the level of care a person received.
- As a follow-up to the Race item, ask, ***Which of these groups would you say best describes your race?*** This information is important in bridging information between single and multiple race data collection and is consistent with the way the National Health Interview Survey collects data.

**Items Recommended for Deletion from the U.S. Standard Certificate of Death**

The Death Subgroup recommended and the Parent Group approved the removal of the following item from the U.S. Standard Certificate of Death. The rationale for excluding the item is noted.

REGISTRAR'S SIGNATURE

The Subgroup recommended deleting this item, noting that as the death certificate moves toward an electronic format, signatures become a barrier in the process of registration. It was also noted that the State file number on the death certificate demonstrates that the record has been accepted and officially filed with the State.

## **Other Items Considered by Subgroup, but Rejected**

The following are items the Death Subgroup considered as possible additions to the U.S. Standard Certificate of Death, but ultimately decided not to bring before the Parent Group. Four criteria were used by the Subgroup to determine whether an item should be included on the death certificate. These criteria include: 1) the item is needed for legal purposes, 2) the item is needed for national, state, or local public health programs or for scientific studies, 3) the information must be collectable with reasonable accuracy and completeness, and 4) vital statistics should be the best source for the information. The Subgroup's deliberations for some of the items are noted.

### ***Was Decedent Homeless or in a Homeless Shelter?***

The Death Subgroup originally recommended adding homelessness as a B-list item. The Subgroup felt that many programs in States would like an item on the death certificate to help identify homeless persons. In addition, the Subgroup indicated that this item would permit study on mortality outcomes of the homeless population or the investigation of homelessness as a risk factor for mortality. Finally, the Subgroup noted that this item is important for research purposes. The Parent Group questioned whether homelessness should be a B-list item and requested more detail on the rationale and strategy. Upon further deliberation, the Subgroup agreed that it could be difficult to collect this sensitive information. The group noted that current estimates of homelessness are problematic because they are linked to the definition of homelessness, which researchers do not agree on. Ultimately, the Death Subgroup withdrew this recommendation, acknowledging that there are better sources for obtaining these data.

### ***Was Scene Investigated by Medical Examiner/Coroner's Office?***

The Subgroup originally recommended to add a check box item in the certifier section to indicate if the scene was investigated by a medical examiner or coroner's office. The Subgroup felt that this item would improve the quality of the stated cause of death and would be helpful for registration/certification and research purposes. In addition, the item could be used to check national compliance with the SIDS definition, which requires a scene investigation. Parent Group members expressed concern as to whether knowing if the coroner was at the scene improves reporting. The definition of "scene" was also questioned, and it was noted that child death review teams provide much of this information. The medical examiner's report is also an alternative source for this information. Overall, the Parent Group was concerned that the justification for adding the item to the death certificate is not strong enough. Subsequently, the representative of the National Association of Medical Examiners (NAME) surveyed the members of NAME regarding the collection of this information. The NAME members who were surveyed did not support the collection of this information, whereby the Death Subgroup withdrew the recommendation, noting that there are better sources for the information.

### ***Length of Residence in Country***

The Subgroup decided that although this item can be collected in a reasonable length of time, the death certificate is not the best source of this information.

### ***Age When Immigrated to the United States, If the Decedent Is an Immigrant***

The Subgroup discussed adding this item because it could be useful for legal, linkage, and genealogical purposes, as well as for research studies and program planning and evaluation. However, the Subgroup decided that the death certificate is not the best source of this information.

### ***Country of Parents' Birth***

Four States currently collect this item. Subgroup members recommending this item noted that it would be useful for genealogical purposes, but not for legal purposes or registration processing. There were questions raised by some of the members of the Subgroup regarding the quality of data for this item.

### ***Citizen of Country***

This item was on the U.S. Standard Certificate from 1948 through 1978. It was removed from the standard in the 1989 revision because the Immigration and Naturalization Service was no longer interested in the item. When the States were surveyed, the general consensus was that those that did not collect this item saw no reason to include it, while those that have it seem to have no problems with keeping it. It was noted that the collection of this information facilitated the reporting of the death to the respective country's consular office in the U.S. as required by Article 37 of the Vienna Convention on Consular Relations.

### ***State of Birth of Mother and Father***

This item was removed from the standard certificate in 1949. Currently, only two States collect it. The Subgroup decided not to include it because it does not seem very useful and the quality of data is a concern.

### ***Number of Years at Last Residence at Time of Death***

The Subgroup determined that the death certificate is not the best source for this information.

### ***Residence Address of Longest Duration (in years)***

The Subgroup determined that the death certificate is not the best source for this information.

### ***Census Tract and Block Group for Place of Death and Residence***

The Subgroup determined that the death certificate is not the best source for this information.

### ***Geographic Background of Deceased and Parents***

The Subgroup determined that the death certificate is not the best source for this information.

### ***Health Insurance Plan at Time of Death***

The Subgroup determined that the death certificate is not the best source for this information.

### ***Health Care Provider Type***

The Subgroup felt there are better sources for this information.

### ***Income Level***

The Subgroup decided that although the information in this item could be collected in a reasonable amount of time, it should not be collected as part of the death certificate.

### ***Additional Socioeconomic Data—Number in House, Welfare, Owner/Renter***

The Subgroup determined that the death certificate is not the best source for this information.

### ***Occupation***

The Subgroup discussed a number of issues regarding occupation. There was a recommendation to modify item 12a, Decedent's Usual Occupation, on the certificate to make it more exact. The item would be modified to ask current occupation if on the job injury or usual occupation if chronic disease. There was also a recommendation to add Current Occupation, Industry, and Employer. The Subgroup decided against each of the recommendations.

### ***Occupation and Employer for the Decedent's First Two Major Jobs***

The Subgroup determined that the death certificate is not the best source for this information.

### ***Employer***

It was unclear whether the recommendation was to add the last employer/employer at time of death, or the long-term employer. If included, this item would be useful for registration and certificate processing and helpful for studies and programs.

Approximately five States collect this information. This should be the same employer as referred to in the rest of occupation and industry item (i.e., usual as opposed to most recent). It was stated that many individuals do not have a usual employer anymore, as some have careers where they change from job to job. In a previous review of the item, it did not meet any of the criteria. However, one member thought that this item would help to code occupation and industry.



### ***Occupation, Company Name/Usual Employer of the Deceased***

This item was dropped from the standard certificate after the 1918 revision, and there were concerns about the quality and accuracy of data collected. Subgroup members questioned what would be gained by including it. It was noted that the information supplements that found in the Software for Occupation and Industry Coding, especially at the local level. This item was considered for the last revision, but it was determined that the information could be obtained from other sources. To add this item, additional questions, such as detailed occupation, would also need to be asked. New Hampshire is one of the three States that collects this item, and New Hampshire also includes check boxes for type of occupation. It was noted that collecting this item may be more costly. Thus, the group decided not to include usual employer or company name on the standard certificate.

### ***Occupation, Injury***

This item focuses on identifying whether the injury occurred while the decedent was doing his/her job or just occurring at work while the decedent was engaged in an activity not related to his/her job. This information is used by the Bureau of Labor Statistics on its survey of occupational fatalities. The Subgroup decided not to include it on the standard certificate.

### ***Education and Occupation of Spouse***

The Subgroup decided that although this item would be helpful for studies and programs, and the data would be available in most cases and could be collected in a reasonable amount of time, the death certificate is not the best source for this information.

### ***Change “Surviving Spouse” to “Most Recent Spouse” and Whether Living or Dead, include First, Middle, Last, and Maiden Name.***

The recommended terminology would be useful for genealogy purposes, but genealogists would want all spouses to be listed. The Subgroup determined that surviving spouse is a clearer concept and is needed for issues concerning survivor benefits. Thus, the Subgroup felt that the earlier recommendation did not need to be reconsidered.

### ***Accommodate Same-sex Partners Under Marital Status***

The Subgroup determined that States would need to identify the legality of same-sex marriages and thus decided not to include this item.

### ***Indicator of Cohabitation or Other Social Support System***

The Subgroup determined that the death certificate is not the best source for this information.

### ***Surviving Next of Kin Information, in Addition to Spouse***

This item is helpful in linkage and genealogy and for studies and programs. There is a reasonable likelihood of accuracy, and the data are available in most cases and could be collected in a reasonable amount of time. However, the Subgroup determined that it is inappropriate to collect this information on the death certificate. One can obtain surviving kin information from the Social Security Administration. The Subgroup had agreed to add relationship of informant to death certificate, which indirectly provides additional information of this type.

### ***Age of Parents at Time of Their Death or Current Age if Still Alive***

The Subgroup determined that the death certificate is not the best source for this information.

### ***Space for Number of Dead Siblings***

The Subgroup determined that the death certificate is not the best source for this information. This information can be obtained from the child death review.

### ***Usual Physician's Name and Address***

The Subgroup considered adding this item, noting that it could be used for legal purposes, would be helpful in studies and programs, and could be collected with a reasonable likelihood of accuracy. In addition, the data are available in most cases and could be collected in a reasonable amount of time. Subgroup members also noted that this item could be used for quality control of the data, and the death certificate is the best source for this information.

Some Subgroup members questioned where the item would be placed on the certificate and the purpose of collecting the information. They argued that it might be difficult to collect in many cases. In addition, if there is a question, the follow back is to records not the usual physician. Moreover, physicians might dispute who the "usual" physician is. The basis for this belief is that there seem to be conflicts now over who should be the certifier. For quality control purposes, it would better to have the chart number or medical record number. However, if you have the name, it is easy to find the medical record. Ultimately, the Subgroup decided not to add this item to the death certificate.

### ***Race***

The Subgroup discussed a number of issues concerning race. There was a recommendation to add a descriptor field for ethnic origin; and modify Race to include "mixed" as a prompt. The Subgroup decided against these recommendations.

### ***A Unique Identifier, such as Kennedy-Kastenbaum Number***

The Subgroup did not vote on this item because the Kennedy-Kastenbaum number does not exist.

***For Childhood Deaths, Replace Items 10-12b with Other Relevant Information***

The Subgroup discussed whether there should be a different death certificate for children. The group noted that in an electronic certificate, you do not need to replace these items. Upon further consideration, the Subgroup agreed that replacing the items was not necessary, that it would involve an enormous amount of work, and that it would complicate the system substantially by introducing multiple forms. In addition, the Subgroup agreed that an alternative is to link to birth certificates.

***Final Disposition Place for Cremation/Temporary Storage Cases***

The Subgroup determined that the death certificate is not the best source for this information. Depending on State laws, cemeteries may or may not have to maintain records. The cemetery should keep the plot number and other relevant information.

***Was Embalming Performed, Embalmer and License Number***

This item may be useful for future exhumations, but perhaps for only a few cases. There was some concern that State regulation of whether this information is kept could be a problem. The Subgroup was unsure of whether the death certificate is the best source for this information. Thus, the Subgroup ultimately decided not to recommend this item.

***Space to Indicate if Mentally Retarded or Birth Defects***

This item would be helpful for linkage or genealogy purposes and for studies and programs. It was noted that funeral directors would probably not be willing to ask this question. If included, the Subgroup noted, it should be placed in the cause-of-death section. Some Subgroup members indicated that this information is known and is sometimes noted in an autopsy report. The Subgroup questioned whether registries or a follow-up instrument would be another source for this information. Ultimately, the Subgroup did not recommend that this item be included as part of the death certificate.

***If Maternal Death, Did Infant Die Too?***

The Subgroup agreed that this information is difficult to collect and that this occurrence is rare. The Subgroup felt that the death certificate is not the best source for this information.

***For Homicides, Relation of Perpetrator and Victim***

The Subgroup determined that the death certificate is not the best source for this information.

***Place to Indicate E-codes in Cause of Death; Modify Cause of Death So It Can Be Reported in ICD Code***

The Subgroup did not think this was an appropriate item for the death certificate because cause of death information should be reported literally, not in a coded format.

***Space to Report Major Autopsy Diagnoses***

The Subgroup indicated that autopsy findings might not be available at the time the death certificate is filed. Thus, the Subgroup decided not to recommend that this item be added to the death certificate.

***Modify Cause of Death to Have Just One Major Cause-of-Death***

It was noted that the death certificate must follow the format established by the World Health Organization, which requires the inclusion of Parts 1 and 2. Thus, this recommendation was rejected by the Subgroup.

***Modify Cause of Death, Reverse Order***

The study conducted by Dr. Fred Smith of Cleveland State University and Dr. James Weed of the National Center for Health Statistics indicates that there are no benefits to reversing the order of the cause-of-death section. There is no other literature on the topic. The problem seems to be more one of communicating to the physicians what is desired in the cause-of-death section. The Subgroup decided that the format is important and that changes could be made in the use of prompts.

***Delete Interval Between Onset and Death***

Subgroup members argued that this information is used in processing and coding to verify the sequence and that the death certificate is a good source for this information. Therefore, the subgroup rejected the proposal to delete the interval.

***Did Diabetes Mellitus Contribute to Death?***

There was some discussion on whether a specific cause should be singled out. If the cause contributed to the death, then it should already be included in the cause-of-death section. Although sometimes diabetes is the cause of death, at other times it is a risk factor. The Subgroup felt that singling out a specific cause was not appropriate, and that this is more of an education issue. If physicians were completing the death certificate appropriately, then all the diabetes cases that contributed to death would be known. Only North Dakota has this item, and the group felt that State's question was not worded appropriately for the section of the death certificate in which it was included.

## ***Injury***

### ***Auto Restraint Use Status in Traffic Cases***

### ***Was Injury Related to Self-employment?***

### ***Work Related - Was Work Being Done for Pay or Compensation?***

### ***Work Related - Was Work-related Injury Related to the Usual Occupation/Industry? If not, Specify***

The Subgroup discussed numerous items related to injury. The Subgroup recommended adding a question on whether an injury contributed to death and if the injury was alcohol or drug related. The Subgroup also recommended requesting further information in the injury section regarding activity and circumstances at time of fatal injury and more specific information on how injury occurred.

Upon deliberation of these items, the Subgroup agreed that these items had been addressed in earlier discussions of the injury section. The death certificate provides boxes to address each of these items. If further information is desired, the alternative source is the coroner/autopsy report. With respect to the item on adding information to how injury occurred section the group decided having space was more important than having prompts.

### ***Modify 31a to Allow Differentiation Between Medical Examiner/Coroner***

This information is not coded. If the certificate is completed correctly, the information is already there. Because the title is included in the item, the Subgroup did not feel that this was a relevant issue. It is already differentiated.

### ***Specific Indication if Domestic Violence Was Involved in Death***

The Subgroup did not accept this recommendation.

### ***Cause of Death, Surgery; Surgery Prior to Death***

Currently, eight States collect this information. It was on the standard certificate until 1956, and it is used to prompt the certifier. Written testimony was received from the nosologists at the National Center for Health Statistics. According to the nosologists, this question complicates the coding of cause of death and creates data entry problems. It is rarely used and is not helpful in coding. For each different format, special instructions are needed. The nosologists indicated that if the item is adopted, there needs to be a three-part question to include date of surgery, if any; type of surgery; and conditions for which the surgery was performed. This information should currently be included in Part II. The Subgroup decided against this recommendation.

### ***Risk Factors on Death Certificate***

The Subgroup discussed a number of risk factors to be included on the death certificate. Suggestions included adding space for diagnoses existing at death (other conditions not death-related) and to report medical conditions and behavioral risk factors. Subgroup members also recommended adding a checklist to indicate existence of chronic illnesses and psychiatric conditions, even if not the cause of death; for suicides, an item to indicate any illnesses in preceding year; and specific indication if domestic violence was involved in death. The addition of the following questions was also recommended:

- Did alcohol use contribute to death?
- Was there a history of substance abuse?
- Did death result from a prescription medication problem?
- Did patient have dementia (specify type if known)?
- Was contagious disease present at time of death?
- Was decedent in intensive care within 1 month of death?
- Did death result from vaccine-preventable disease?
- Did decedent smoke in the past 15 years? Amount smoked, years since quit smoking?

Currently, only significant conditions contributing to death are collected. These risk factors do not have to relate to the cause of death. In a previous discussion of risk factors, the Subgroup agreed that it was important that there be a direct connection between conditions/risk factors and the cause of death. The death certificate is not a medical record, and it is not intended to collect prevalence data. In the case of the intensive care recommendation, another source for the information would be hospital discharge data. The medical examiner's report may be another source.

### **Certifier Section**

#### ***Have you been trained in death certification procedures?***

The Subgroup rejected this recommendation because they felt it was not public health information and inappropriate for the death certificate.

#### ***Have you read the instructions on how to complete this death certificate?***

The Subgroup rejected this recommendation because they felt it was not public health information and inappropriate for the death certificate.

#### ***Space to Indicate Medical Examiner/Coroner Case Number***

The Subgroup noted that this could be expanded to include the hospital number or autopsy number, and that there might also need to be space for the place of autopsy since the death may have occurred somewhere other than a hospital, while the autopsy would have been performed in a hospital. The group agreed that including this item should not delay the death certificate filing. New York City

currently collects this information. This item is helpful in communications with the medical examiner's office, as it is easier for the medical examiner to find records by case number than by name. However, there is little use for this item nationally. The Subgroup decided that this might be helpful with followback surveys, and that this could probably be a State decision.

### ***Organ Donation***

According to the *Federal Register* (Vol. 63, No. 119), hospitals must contact the Organ Procurement Organization in a timely manner about individuals who die or whose death is imminent in the hospital. Currently, Delaware, Nebraska, and Oregon have a similar item on their death certificates. The United Network for Organ Sharing is a registry of organ donations. The Subgroup decided against recommending organ donation as a new item for the certificate.

### ***Modify Autopsy Filed (28a) to Get More Information on Extent of Autopsy***

The Subgroup decided against this recommendation, noting that there may need to be a better definition of autopsy.

### ***Items to Track Advance Directives, Life Support, Relief of Pain and Suffering***

The Subgroup rejected this recommendation because it is inappropriate for a death certificate.

## **Suggested Policy and Procedure Adjustments**

***All State registrars should have unencumbered access to complete information obtained by the registrar of another State when transfer of information between States is required.***

This recommendation is not relevant for this group.

***A stricter policy is needed for deaths of low weight infants (especially those below 500 grams) to assure that a death certificate is completed when a birth certificate has been completed.***

This recommendation is not relevant for this group; it is a registration issue.

***Link the [infant] death certificate to the birth certificate immediately upon death.***

Because States are already doing this, the Subgroup felt that no action was necessary.

***For infants, include a field to link the death certificate to the birth certificate.***

This item would be helpful for linkage or genealogy. It is needed for registration and certificate processing, is helpful for studies and programs, and has a reasonable likelihood of accuracy. It is helpful for quality control of the data.

New York City includes the medical record number to help improve follow-up of very low birth weight babies. Discussion occurred on how particular items—hospital of birth, death before hospital discharge—improved the ability to link records. However, the Subgroup felt that if the recommendation was to enter the birth certificate number, then only the vital records office would have this information. Thus, the Subgroup found the recommendation to be infeasible.

## **Conclusion**

In its deliberations, the Death Subgroup made every effort to develop a death certificate which is as up-to-date as possible after considering legal, public health, and research needs. In addition to these considerations, another consideration was the accuracy and completeness with which information could be collected on the death certificate versus other data sources. The Subgroup also recognized that death registration would need to address new requirements demanded by the latest revision of the International Classification of Diseases and the anticipated requirements of increasing use of electronic death registration. The Subgroup proposed expanded instructions and uniform standards for the collection, editing, and processing of all data recorded on the death certificate.



U.S. Standard Death Certificate 1989	Proposed U.S. Standard Death Certificate 2003 <i>Italicized items or check boxes differ from 1989.</i>
1. <b>DECEDENT'S NAME</b> (First, Middle, Last)	<b>DECEDENT'S LEGAL NAME</b> (Include AKA's if any) (First, Middle, Last)
2. <b>SEX</b>	<b>Same</b>
3. <b>DATE OF DEATH</b> (Month, Day, Year)	<b>ACTUAL OR PRESUMED DATE OF DEATH</b> (Mo/Day/Yr) ( <i>Spell Month</i> )
4. <b>SOCIAL SECURITY NUMBER</b>	<b>Same</b>
5a. <b>AGE - Last Birthday</b> (Years)	<b>Same</b>
5b. <b>UNDER 1 YEAR</b> (Months, Days)	<b>Same</b>
5c. <b>UNDER 1 DAY</b> (Hours, Minutes)	<b>Same</b>
6. <b>DATE OF BIRTH</b> (Month, Day, Year)	<b>DATE OF BIRTH</b> ( <i>Mo/Day/Yr</i> )
7. <b>BIRTHPLACE</b> (City and State or Foreign Country)	<b>Same</b>
8. <b>WAS DECEDENT EVER IN U.S. ARMED FORCES?</b> (Yes or no)	<b>EVER IN U.S. ARMED FORCES?</b> <i>Yes No</i>
9a. <b>PLACE OF DEATH</b> <u>HOSPITAL:</u> <input type="checkbox"/> Inpatient <input type="checkbox"/> ER/Outpatient <input type="checkbox"/> DOA <u>OTHER:</u> <input type="checkbox"/> Nursing Home <input type="checkbox"/> Residence <input type="checkbox"/> Other (Specify) _____	<b>PLACE DEATH PRONOUNCED IF DEATH WAS PRONOUNCED IN A HOSPITAL:</b> <input type="checkbox"/> Inpatient <input type="checkbox"/> Emergency Room/Outpatient <input type="checkbox"/> Dead on Arrival <hr/> <b>IF DEATH WAS PRONOUNCED SOMEWHERE OTHER THAN A HOSPITAL:</b> <input type="checkbox"/> Residence <input type="checkbox"/> <i>Hospice facility</i> <input type="checkbox"/> Nursing home/long-term care facility <input type="checkbox"/> Other (Specify) _____  <b>Action:</b> Hospice facility was added due to the increased use of this facility type.

U.S. Standard Death Certificate 1989	Proposed U.S. Standard Death Certificate 2003 <i>Italicized items or check boxes differ from 1989.</i>
9b. <b>FACILITY NAME</b> (If not institution, give street and number)	<b>Same</b>
9c. <b>CITY, TOWN, OR LOCATION OF DEATH</b>	<b>CITY, TOWN, AND ZIP CODE</b>
9d. <b>COUNTY OF DEATH</b>	<b>Same</b>
10. <b>MARITAL STATUS</b> - Married, Never Married, Widowed, Divorced (Specify)	<b>MARITAL STATUS AT TIME OF DEATH</b> <input type="checkbox"/> Married <input type="checkbox"/> <i>Married, but separated</i> <input type="checkbox"/> Widowed <input type="checkbox"/> Divorced <input type="checkbox"/> Never Married <input type="checkbox"/> Unknown  <b>Action:</b> Changed to a check box format. “Married, but separated” was added to alleviate confusion for those who are married and have never been separated.
11. <b>SURVIVING SPOUSE</b> (If wife, give maiden name)	<b>SURVIVING SPOUSE’S NAME</b> (If wife, give name prior to first marriage)
12. a. <b>DECEDENT’S USUAL OCCUPATION</b> (Give kind of work done during most of working life. Do <u>not</u> use retired)  12. b. <b>KIND OF BUSINESS/INDUSTRY</b>	<b>DECEDENT’S USUAL OCCUPATION</b> ( <i>Indicate type</i> of work done during most of working life. DO <u>NOT</u> USE RETIRED)  <b>Same</b>

<p align="center"><b>U.S. Standard Death Certificate 1989</b></p>	<p align="center"><b>Proposed U.S. Standard Death Certificate 2003</b></p> <p align="center"><i>Italicized items or check boxes differ from 1989.</i></p>
<p>13. a. <b>RESIDENCE-STATE</b>  13. b. <b>COUNTY</b>  13. c. <b>CITY, TOWN, OR LOCATION</b>  13. d. <b>STREET AND NUMBER</b></p> <p>13. e. <b>INSIDE CITY LIMITS?</b> (Yes or No)  13. f. <b>ZIP CODE</b></p>	<p><b>Same</b>  <b>Same</b>  <b>CITY OR TOWN</b>  <b>Same</b>  <b><i>APT. NO.</i></b>  <b>Same:</b> Changed to check box format <input type="checkbox"/>Yes  <input type="checkbox"/>No  <b>Same</b></p>
<p><b>14. WAS DECEDENT OF HISPANIC ORIGIN?</b>  (Specify No or Yes–If yes specify Cuban, Mexican, Puerto Rico, etc.)  <input type="checkbox"/>No <input type="checkbox"/>Yes (Specify)_____</p>	<p><b>DECEDENT OF HISPANIC ORIGIN?</b>  <i>Check the box that best describes whether the decedent is Spanish/Hispanic/Latino. Check the “No” box if decedent is not Spanish/Hispanic/ Latino.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>No, not Spanish/Hispanic/Latino</i></li> <li><input type="checkbox"/> <i>Yes, Puerto Rican</i></li> <li><input type="checkbox"/> <i>Yes, Mexican, Mexican American, Chicano</i></li> <li><input type="checkbox"/> <i>Yes, Cuban</i></li> <li><input type="checkbox"/> <i>Yes, other Spanish/Hispanic/Latino-specify _____</i></li> </ul> <p><b>Action:</b> Change the wording and response categories for these items to comply with OMB guidelines and year 2000 Census questions.</p>

<p><b>U.S. Standard Death Certificate 1989</b></p>	<p><b>Proposed U.S. Standard Death Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p><b>15. RACE</b>            American Indian, Black, White, etc.            (Specify)</p>	<p><b><i>DECEDENT'S RACE</i></b>  <i>(Check one or more races to indicate what the decedent considered himself or herself to be.)</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>White</i></li> <li><input type="checkbox"/> <i>Black or African American</i></li> <li><input type="checkbox"/> <i>American Indian or Alaska Native</i>  <i>(Name of the enrolled or principal tribe)</i></li> </ul> <hr/> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Asian Indian</i></li> <li><input type="checkbox"/> <i>Chinese</i></li> <li><input type="checkbox"/> <i>Filipino</i></li> <li><input type="checkbox"/> <i>Japanese</i></li> <li><input type="checkbox"/> <i>Korean</i></li> <li><input type="checkbox"/> <i>Vietnamese</i></li> <li><input type="checkbox"/> <i>Other Asian-specify</i> _____</li> <li><input type="checkbox"/> <i>Native Hawaiian</i></li> <li><input type="checkbox"/> <i>Guamanian or Chamorro</i></li> <li><input type="checkbox"/> <i>Samoan</i></li> <li><input type="checkbox"/> <i>Other Pacific Islander-specify</i></li> </ul> <hr/> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Other-specify</i> _____</li> </ul> <p><b>Action:</b> Change the wording and response categories for these items to comply with OMB guidelines and year 2000 Census questions.</p>

<p><b>U.S. Standard Death Certificate 1989</b></p>	<p><b>Proposed U.S. Standard Death Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p><b>16. DECEDENT'S EDUCATION</b> (Specify only highest grade completed) Elementary/Secondary (0-12) College (1-4 or 5+)</p>	<p><b>DECEDENT'S EDUCATION</b> <i>(Check the box that best describes the highest degree or level of school completed at the time of death.)</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>8<sup>th</sup> grade or less</i></li> <li><input type="checkbox"/> <i>9<sup>th</sup> - 12<sup>th</sup> grade; no diploma</i></li> <li><input type="checkbox"/> <i>High school graduate or GED completed</i></li> <li><input type="checkbox"/> <i>Some college credit, but no degree</i></li> <li><input type="checkbox"/> <i>Associate degree (e.g., AA, AS)</i></li> <li><input type="checkbox"/> <i>Bachelor's degree (e.g., BA, AB, BS)</i></li> <li><input type="checkbox"/> <i>Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA)</i></li> <li><input type="checkbox"/> <i>Doctorate (e.g., PhD, EdD) or Professional degree (e.g., MD, DDS, DVM, LLB, JD)</i></li> </ul> <p><b>Action:</b> Change the wording and response categories for consistency with a collapsed set of Census categories.</p>
<p><b>18. FATHER'S NAME</b> (First, Middle, Last)</p>	<p><b>Same</b></p>
<p><b>19. MOTHER' NAME</b> (First, Middle, Maiden Surname)</p>	<p><b>MOTHER'S NAME <i>PRIOR TO FIRST MARRIAGE</i></b> (First, Middle, Last)</p>
<p><b>20. a. INFORMANT'S NAME</b> (Type/Print)</p>	<p><b>INFORMANT'S NAME</b></p>
	<p><b>RELATIONSHIP TO DECEDENT</b></p> <p><b>New Item:</b> This item was added to help identify the informant. It is useful for legal purposes.</p>
<p><b>19. b. MAILING ADDRESS</b> (Street and Number or Rural Route Number, City or Town, State, Zip Code)</p>	<p><b>MAILING ADDRESS</b> (Street and Number, City, State, Zip Code)</p>

<b>U.S. Standard Death Certificate 1989</b>	<b>Proposed U.S. Standard Death Certificate 2003</b>  <i>Italicized items or check boxes differ from 1989.</i>
20. a. <b>METHOD OF DISPOSITION</b> <input type="checkbox"/> Burial <input type="checkbox"/> Cremation <input type="checkbox"/> Removal from State <input type="checkbox"/> Donation <input type="checkbox"/> Other (specify)	<b>METHOD OF DISPOSITION</b> <input type="checkbox"/> Burial <input type="checkbox"/> Donation <input checked="" type="checkbox"/> <i>Entombment</i> <input type="checkbox"/> Removal from State <input type="checkbox"/> Cremation <input type="checkbox"/> Other (specify)  <b>Action:</b> “Entombment” was added because it is becoming an increasingly frequent method of disposition. In addition, the information is helpful in the event that the body is exhumed or disinterred.
20. b. <b>PLACE OF DISPOSITION</b> (Name of cemetery, crematory, or other place)	<b>PLACE OF DISPOSITION</b> (Name of cemetery, crematory, other place)
20. c. <b>LOCATION</b> —City or Town, State	<b>LOCATION</b> —CITY, TOWN, AND STATE
21. a. <b>SIGNATURE OF FUNERAL SERVICE LICENSEE OR PERSON ACTING AS SUCH</b>	<b>SIGNATURE OF FUNERAL SERVICE LICENSEE OR <i>OTHER AGENT</i></b>
21. b. <b>LICENSE NUMBER</b> (of licensee)	<b>Same</b>
22. <b>NAME AND ADDRESS OF FACILITY</b>	<b>NAME AND <i>COMPLETE</i> ADDRESS OF <i>FUNERAL</i> FACILITY</b>
23. a. <b>To the best of my knowledge, death occurred at the time, date, and place stated.</b> Signature and Title	<b><i>SIGNATURE OF PERSON PRONOUNCING DEATH</i></b>
23. b. <b>LICENSE NUMBER</b>	<b>Same</b>

<p><b>U.S. Standard Death Certificate 1989</b></p>	<p><b>Proposed U.S. Standard Death Certificate 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>23. c. <b>DATE SIGNED</b> (Month, Day, Year)</p>	<p><b>DATE SIGNED</b> (Mo/Day/Yr)</p> <p><b>Action:</b> The Parent Group modified the “Date Signed” item to “Date Certified” to allow for electronic authentication and consistency with the birth certificate.</p>
<p>24. <b>TIME OF DEATH</b></p> <p style="text-align: right;"><b>M</b></p>	<p><b>TIME <i>PRONOUNCED DEAD</i></b></p>
<p style="text-align: right;"><i>(Addition)</i></p>	<p><b>ACTUAL OR PRESUMED TIME OF DEATH</b></p> <p><b>New Item:</b> This item establishes the exact time of death, which is important in inheritance cases where there is a question of who died first. This is also important in the case of multiple deaths in the same family. This information is needed for legal, registration/certification, and research purposes</p>
<p>25. <b>DATE PRONOUNCED DEAD</b> (Month, Day, Year)</p>	<p><b>DATE PRONOUNCED DEAD</b> (Mo/Day/Yr)</p>
<p style="text-align: right;"><i>(Addition)</i></p>	<p><b>ACTUAL OR PRESUMED DATE OF DEATH</b> (Mo/Day/Yr) (Spell month)</p> <p><b>New Item:</b> This information is used in conjunction with the hour of death to establish the exact time of death of the decedent. Epidemiologists use the date of death in conjunction with the cause-of-death information for research on intervals between injuries, onset of conditions, and death. This item is needed for legal, registration/certification, and research purposes.</p>

<p align="center"><b>U.S. Standard Death Certificate 1989</b></p>	<p align="center"><b>Proposed U.S. Standard Death Certificate 2003</b></p> <p align="center"><i>Italicized items or check boxes differ from 1989.</i></p>
<p><b>26. WAS CASE REFERRED TO MEDICAL EXAMINER/CORONER?</b> (Yes or no)</p>	<p><b>WAS MEDICAL EXAMINER OR CORONER CONTACTED?</b> <input type="checkbox"/>Yes <input type="checkbox"/>No</p>
<p>1. <b>PART I.</b> Enter the diseases, injuries, or complications that directly caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.</p> <p>    a. IMMEDIATE CAUSE (Final disease or condition resulting in death)</p> <p>    b-d. Due to (or as a consequence of): Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE (Disease or injury that initiated events resulting in death) LAST.</p> <p>Approximate Interval Between Onset and Death</p> <p><b>PART II.</b> <u>Other significant conditions</u> contributing to death but not resulting in the underlying cause given in PART I.</p>	<p><b>CAUSE OF DEATH (See instructions and examples)</b></p> <p><b>PART I.</b> Enter the <i>chain of events</i>—diseases, injuries, complications—that directly caused the death. DO NOT enter <i>terminal events</i> such as cardiac arrest, respiratory arrest, or <i>ventricular fibrillation</i>. DO NOT ABBREVIATE.</p> <p>    a. IMMEDIATE CAUSE (Final disease or condition resulting in death)</p> <p>    b-d. Due to (or as a consequence of): Sequentially list conditions, if any, leading to the cause <i>listed on line a</i>. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST.</p> <p>Approximate Interval: Onset to Death</p> <p><b>PART II.</b> <u>Enter other significant conditions</u> contributing to death but not resulting in the underlying cause given in PART I.</p>



U.S. Standard Death Certificate 1989	Proposed U.S. Standard Death Certificate 2003 <i>Italicized items or check boxes differ from 1989.</i>
<i>(Addition)</i>	<p><b>DID TOBACCO USE CONTRIBUTE TO DEATH?</b></p> <p><input type="checkbox"/> Yes  <input type="checkbox"/> No  <input type="checkbox"/> Probably  <input type="checkbox"/> Unknown</p> <p><b>New Item:</b> This new question measures a public health outcome and is needed for public health program assessment.</p>
<i>(Addition)</i>	<p><b>IF FEMALE:</b> <input type="checkbox"/> Not pregnant within past year</p> <p><input type="checkbox"/> Not pregnant, but pregnant within 42 days of death</p> <p><input type="checkbox"/> Not pregnant, but pregnant 43 days to 1 year before death</p> <p><input type="checkbox"/> Pregnant at time of death</p> <p><input type="checkbox"/> Unknown if pregnant within the past year</p> <p><b>New Item:</b> This item was added to improve the measurement of maternal mortality, based on the experience of States that currently ask this question on their death certificate.</p>
28. a. <b>WAS AN AUTOPSY PERFORMED?</b> (Yes or no)	<b>WAS AN AUTOPSY PERFORMED?</b> <i><input type="checkbox"/>Yes <input type="checkbox"/>No</i>
28. b. <b>WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO THE COMPLETION OF CAUSE OF DEATH?</b> (Yes or no)	<b>WERE AUTOPSY FINDINGS AVAILABLE <i>TO COMPLETE</i> THE CAUSE OF DEATH?</b> <i><input type="checkbox"/>Yes <input type="checkbox"/>No</i>

U.S. Standard Death Certificate 1989	Proposed U.S. Standard Death Certificate 2003 <i>Italicized items or check boxes differ from 1989.</i>
29. <b>MANNER OF DEATH</b> <input type="checkbox"/> Natural <input type="checkbox"/> Accident <input type="checkbox"/> Suicide <input type="checkbox"/> Homicide <input type="checkbox"/> Pending Investigation <input type="checkbox"/> Could not be determined	<b>Same</b>
30. a. <b>DATE OF INJURY</b> (Month, Day, Year)	<b>DATE OF INJURY</b> (Mo/Day/Yr)
30. b. <b>TIME OF INJURY</b>  <b>M</b>	<b>TIME OF INJURY</b>
30. c. <b>INJURY AT WORK?</b> (Yes or no)	<b>INJURY AT WORK?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
30. d. <b>DESCRIBE HOW INJURY OCCURRED</b>	<b>Same</b>
30. e. <b>PLACE OF INJURY</b> –At home, farm, street, factory, office building, etc. (Specify)	<b>PLACE OF INJURY</b> ( <i>e.g., Decedent's home; construction site; restaurant; wooded area</i> )
30. f. <b>LOCATION</b> (Street and Number or Rural Route Number, City or Town, State)	<b>LOCATION OF INJURY:</b> State: City or Town: Street & Number: Apartment No.: Zip Code:

<p align="center"><b>U.S. Standard Death Certificate 1989</b></p>	<p align="center"><b>Proposed U.S. Standard Death Certificate 2003</b></p> <p align="center"><i>Italicized items or check boxes differ from 1989.</i></p>
<p align="right"><i>(Addition)</i></p>	<p><b>IF TRANSPORTATION ACCIDENT, SPECIFY:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Driver/Operator</li> <li><input type="checkbox"/> Passenger</li> <li><input type="checkbox"/> Pedestrian</li> <li><input type="checkbox"/> Other (Specify) _____</li> </ul> <p><b>New Item:</b> This item was added to facilitate ICD-10 cause-of-death coding, which places much greater emphasis on traffic status than ICD-9.</p>
<p>31. a. <b>CERTIFIER</b> (Check only one)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <u>CERTIFYING PHYSICIAN</u> (Physician certifying cause of death when another physician has pronounced death and completed Item 23) To the best of my knowledge, death occurred due to the cause(s) and manner as stated.</li> <li><input type="checkbox"/> <u>PRONOUNCING AND CERTIFYING PHYSICIAN</u> (Physician both pronouncing death and certifying to cause of death) To the best of my knowledge, death occurred at the time, date, and place and due to the cause(s) and manner as stated.</li> <li><input type="checkbox"/> <u>MEDICAL EXAMINER/CORONER</u> 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 as stated.</li> </ul>	<p><i>To the best of my knowledge, the circumstances surrounding death were as indicated in the Certifier Section.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Certifying Physician</i></li> <li><input type="checkbox"/> <i>Pronouncing and Certifying Physician</i></li> <li><input type="checkbox"/> <i>Medical Examiner/Coroner</i></li> </ul> <p><i>Signature of certifier:</i></p> <p>_____</p>

<b>U.S. Standard Death Certificate 1989</b>	<b>Proposed U.S. Standard Death Certificate 2003</b>  <i>Italicized items or check boxes differ from 1989.</i>
31. b. <b>SIGNATURE AND TITLE OF CERTIFIER</b>	<b>TITLE OF CERTIFIER</b>
31. c. <b>LICENSE NUMBER</b>	<b>Same</b>
31. d. <b>DATE SIGNED</b> (Month, Day, Year)	<b>DATE CERTIFIED</b> (Mo/Day/Yr)
32. <b>NAME AND ADDRESS OF PERSON WHO COMPLETED CAUSE OF DEATH (ITEM 27)</b> (Type/Print)	<b>NAME, ADDRESS, AND ZIP CODE OF PERSON COMPLETING CAUSE OF DEATH (ITEM 33)</b>
33. <b>REGISTRAR'S SIGNATURE</b>	<b>Deleted:</b> This item was deleted because as the death certificate moves toward an electronic format, signatures become a barrier in the process of registration.
34. <b>DATE FILED</b> (Month, Day, Year)	<b>FOR REGISTRAR ONLY – DATE FILED</b> (Mo/Day/Yr)

## Recommendations for the 2003 Revision of the U.S. Standard Report of Fetal Death

### Organization of the Fetal Death Subgroup

The Fetal Death Subgroup of the Panel to Evaluate the U.S. Standard Certificates and Report was assigned to review the U.S. Standard Report of Fetal Death, last revised in 1989, and make recommendations for the Parent Group's consideration. The Fetal Death Subgroup members were as follows:

Lorne A. Phillips, Ph.D., Chairperson\*  
State Registrar and Director  
Center for Health and Environmental  
Statistics  
Kansas Department of Health and  
Environment

Michael R. Lavoie, Chairperson\*  
Director, Vital Records Section  
Epidemiology and Prevention Branch  
Division of Public Health  
Department of Human Resources  
(Georgia)

Greg R. Alexander, Sc.D., MPH  
Professor  
Department of Maternal and Child  
Health  
University of Alabama at Birmingham  
(Researcher)

W. Sundin Applegate, M.D., MPH  
Medical Director  
Community and Family Health Services  
Arizona Department of Health Services  
(Maternal and Child Health Affiliate of  
ASTHO)

Lillian Blackmon, M.D.  
Associate Professor  
Department of Pediatrics  
University of Maryland Medical Systems  
(American Academy of Pediatrics)

A. Torrey McLean  
State Registrar  
North Carolina Vital Records

Barbara J. Moore  
Moore's Home for Funerals  
(National Funeral Directors Association)

Barry Nangle, Ph.D.  
Director, Bureau of Vital Records  
Utah Department of Health

Alvin T. Onaka, Ph.D.  
State Registrar and Acting Chief  
Office of Health Status Monitoring  
Hawaii Department of Health

Priscilla Short, M.D.  
Director, Office of Biomedical Science  
and Clinical Research  
American Medical Association

\*Note: Dr. Phillips served as Fetal Death Subgroup Chairperson for the first four meetings. As the result of Dr. Phillips being appointed Acting Health Director, Mr. Lavoie served as Chairperson for the last two meetings.

Ken R. Smith, Ph.D.  
Professor, Departments of Family and  
Consumer Studies and Sociology  
University of Utah (Researcher)

Minta Uzodinma  
Chief Nurse Consultant  
Mississippi State Department of Health  
(American College of Nurse Midwives)

Henry A. Thiede, M.D.  
Fellow of the American College of  
Obstetricians and Gynecologists  
(American College of Obstetricians and  
Gynecologists)

The following staff from the National Center for Health Statistics also attended part of or all Subgroup meetings:

Jonnae O. Atkinson  
Judy M. Barnes, Rapporteur  
Kenneth G. Keppel, Ph.D.  
Kenneth D. Kochanek

Julia L. Kowaleski  
Marian F. MacDorman, Ph.D.  
Joyce A. Martin

The Fetal Death Subgroup met in conjunction with five of the six meetings of the Panel to Evaluate the U.S. Standard Certificates and Report, beginning in May 1998. During its first meeting, the Subgroup identified preliminary issues to be addressed on the U.S. Standard Report of Fetal Death. The Subgroup also noted a number of issues to be discussed at subsequent meetings, including definitions of fetal death items, State reporting requirements for fetal death, and data collection.

At its July 1998 meeting, the Fetal Death Subgroup discussed testimony on a number of topics of concern, including the usefulness of fetal autopsies, the need for standard definitions of obstetric terminology, medical risk factors, measurement of gestational age, and prenatal care. The Subgroup also talked about the uses of fetal death data, electronic processing, and items for possible consideration as additions to the fetal death report.

The Subgroup again discussed fetal autopsies during its third convening in October 1998. The Fetal Death Subgroup also considered items to be included in the Cause-of-Fetal-Death section of the report and began reviewing recommendations from the Birth Subgroup. In addition, the Subgroup continued discussing possible additions to the report.

In January 1999, the Fetal Death Subgroup explored medical items and began formulating recommendations for the Parent Group's consideration. In addition, the Subgroup reviewed further Birth Subgroup recommendations and items on the existing fetal death report and determined which should be retained as on the 1989

standard; retained, but modified; or deleted. The Subgroup also discussed how to improve the quality of cause of fetal death information.

In February 1999, the physicians in the Subgroup convened a small group of additional physicians to discuss issues related to risk factors and cause of fetal death. These discussions took place independent of discussions held during Subgroup meetings.

The Fetal Death Subgroup held its final meeting in April 1999. During this convening, the Subgroup revisited items sent back by the Parent Group and finalized recommendations the Parent Group. Extensive work was completed on the Cause-of-Fetal-Death section. The Subgroup also identified data to be collected on worksheets.

### **Summary of Major Decisions**

The Subgroup to Evaluate the U.S. Standard Report of Fetal Death recommended important changes to the standard report. The Medical Risk Factors, Obstetric Procedures, Complications of Labor and/or Delivery, Method of Delivery, and Congenital Anomalies sections were modified. In some cases, the section names were changed, and a number of check box items were added, deleted, or amended, as appropriate, to elicit better information on fetal death etiology.

In addition, the Fetal Death Subgroup added items to the report to enhance data collection. Many of the modifications and additions are in line with recommendations from the Birth Subgroup, e.g., items on maternal morbidity, WIC participation, prenatal care, cigarette smoking, mother's height and weight, infections, and principal source of payment for delivery. Other additions include items on method of disposition, fetal appearance at delivery, placenta appearance, autopsy and histological placental examination performed and used in determining cause of fetal death, and previous adverse pregnancy outcomes.

Finally, standardized individual worksheets for the mother and hospital staff were developed. These worksheets include clear, unambiguous questions, definitions, instructions, and information on preferred sources of the data and where in the records that information is most likely to be found. The worksheets will be tested prior to implementation and refined based on test results. These changes should lead to improvements in the quantity and, most importantly, the quality of fetal death data.

## Items Recommended for the 2003 U.S. Standard Report of Fetal Death

The following items were recommended by the Fetal Death Subgroup and approved by the Parent Group for inclusion on the 2003 U.S. Standard Report of Fetal Death. The rationale for including each item is noted. Please note that the item numbers correspond to the proposed 2003 fetal death report provided in Appendix A. The 1989 standard report of fetal death is provided in Appendix B.

### 1. NAME OF FETUS (optional-at the discretion of the parents)

The Subgroup recommended that this item be added to the report. There was some concern that adding this question to the report raises the issue of whether the fetus is a person, a sensitive topic in the abortion debate. It was also expressed that some parents want to name the fetus and that a number of States include this item as an option on the Report of Fetal Death.

### 2. TIME OF DELIVERY

\_\_\_\_\_ (24hr)

The Subgroup recommended that this item be added to the report to document the exact time of delivery for legal purposes and for the order of birth in the case of plural deliveries. The time recorded should be the exact time when the delivery is complete.

### 3. SEX (M/F/Unk)

The Subgroup recommended that this item be retained with the addition of “unknown” to the prompt. The information is used to measure fetal and perinatal mortality by sex. This information helps identify differences in the impact of environmental and biological factors between the sexes.

### 4. DATE OF DELIVERY (Mo/Day/Yr)

The Subgroup recommended that this item be retained, but modified to use the MM/DD/YYYY date format instead of Month, Day, Year as on the 1989 standard. This item is used in conjunction with the date the last normal menses began to calculate the length of gestation, which is an essential element in the study of low birth weight deliveries.



5a. CITY, TOWN, OR LOCATION OF DELIVERY

5b. ZIP CODE OF DELIVERY

6. COUNTY OF DELIVERY

7. PLACE WHERE DELIVERY OCCURRED (Check one)

Hospital

Clinic/Doctor's office

Freestanding birthing center

Other (Specify)

Home Delivery: Planned to  
deliver at home? Yes No

\_\_\_\_\_

8. FACILITY NAME (If not institution, give street and number)

9. FACILITY ID. (NPI)

The Subgroup recommended that items 5a, 5b, 6, 8, and 9 be retained, with the addition of Zip Code of Delivery and allowing for the collection of the Facility ID, or National Provider Identifier (NPI), if available. These items identify the place of delivery, which is used to study relationships of hospital and non-hospital pregnancy terminations. Also, many States use this information to produce statistical data by specific facility. Information on place of delivery, together with residence information, provides data to evaluate the utilization and distribution of health services. This information is also useful for follow-up and query programs.

The Subgroup recommended that item 7 be added to the report. It identifies home deliveries, deliveries in freestanding birthing centers, and deliveries in non-hospital clinics or physicians' offices, thereby permitting analysis of the number and characteristics of deliveries by type of facility. In addition, this information is helpful in determining the level of utilization and characteristics of deliveries occurring in such facilities and could be an important quality issue for perinatal analysis. This recommendation is consistent with the Birth Subgroup's recommendation as modified by the Parent Group.

10.a. MOTHER'S CURRENT LEGAL NAME (First, Middle, Last, Suffix)

The Subgroup recommended that this item be retained, but modified to more clearly request the appropriate information. This item is needed to identify the record.

10.b. DATE OF BIRTH (Mo/Day/Yr) (Mother)

The Subgroup recommended that this item be retained, but modified to use the MM/DD/YYYY date format instead of Month, Day, Year. This information is needed to calculate the age of the mother, which is one of the most important factors in the study of childbearing and pregnancy outcome.

10c. MOTHER'S NAME PRIOR TO FIRST MARRIAGE (First, Middle, Last, Suffix)

The Subgroup recommended that this item be retained, but modified to more clearly request the appropriate information. The modification to this item addresses concerns raised regarding the use of the term "maiden." The items are needed to identify the record. The mother's name prior to first marriage (the name given at birth, except in cases of adoption) is important for matching the record with other records because it remains constant throughout her life, in contrast to other names that may change due to changes in marital status and other reasons.

10.d. BIRTHPLACE (State, Territory, or Foreign Country) (Mother)

The Subgroup recommended that this item be added to the report. This item provides information on recent immigrant groups and is used for tracing family histories. It can be used with the U.S. Bureau of the Census data to compare the childbearing of women who are born in the United States with that of foreign-born women. This recommendation ensures consistency with the birth record.

11.a. RESIDENCE OF MOTHER-STATE

11.b. COUNTY

11.c. CITY, TOWN, OR LOCATION

11.d. STREET AND NUMBER

11.e. APT. NO.

11.f. ZIP CODE

11.g. INSIDE CITY LIMITS? Yes No

The Subgroup recommended that this item be retained with the addition of Apartment Number. This information is needed for the placement and evaluation of community health and other services and programs.

12.a. FATHER'S CURRENT LEGAL NAME (First, Middle, Last, Suffix)

The Subgroup recommended that this item be retained, but modified for consistency with the Birth Subgroup recommendation. This information helps identify the record.

12.b. DATE OF BIRTH (Mo/Day/Yr) (Father)

The Subgroup recommended that this item be retained, but modified to use the MM/DD/YYYY date format instead of Month, Day, Year. This information is needed to calculate the age of the father, which is used to study possible association with congenital anomalies among aging parents.

12.c. BIRTHPLACE (State, Territory, or Foreign Country) (Father)

The Subgroup recommended that this item be added to the report. This item provides information on recent immigrant groups and is used for tracing family histories. This recommendation ensures consistency with the birth record.

13. METHOD OF DISPOSITION

- |   |   |
|---|---|
| <input type="checkbox"/> Burial               | <input type="checkbox"/> Donation           |
| <input type="checkbox"/> Cremation            | <input type="checkbox"/> Removal from State |
| <input type="checkbox"/> Hospital Disposition | <input type="checkbox"/> Other (specify)    |

The Subgroup recommended that this item be added to the report. This information indicates whether the fetus was disposed of as required by law. It also serves to locate the fetus in case exhumation, autopsy, or transfer is required later.

Parent Group members noted that this information is useful, nationally, as NCHS does receive requests for this type of data. This recommendation is not consistent with that of the Death Subgroup, as the death certificate includes a check box for "Entombment." The Fetal Death Subgroup indicated that this item would be captured as part of the "Other" category because it is very rarely used for a fetal death.

14. ATTENDANT'S NAME, TITLE, AND NPI

- NAME: \_\_\_\_\_ NPI: \_\_\_\_\_
- TITLE:
- |                                 |  |
|---------------------------------|--|
| <input type="checkbox"/> MD     | <input type="checkbox"/> Other Midwife |
| <input type="checkbox"/> DO     | <input type="checkbox"/> Other         |
| <input type="checkbox"/> CNM/CM | (Specify) _____                        |

The Subgroup recommended that these items be retained with the addition of NPI to the title and CM as an option as part of the CNM check box item. This information is important for querying and for assessment of service rendered. It will permit separate identification of deliveries attended by certified nurse midwives, certified midwives, lay midwives, and other persons. The Subgroup noted that the instructions should specify that whoever is responsible for the delivery should be listed as the attendant. For delivery services with training programs, the responsible physician/midwife should be listed as the attendant if he/she is in the room during the delivery. In all other circumstances, the person actually delivering the baby should be listed as the attendant. The attendant must be physically in the room at the time of delivery. This recommendation is consistent with that of the Birth Subgroup.

15. NAME AND TITLE OF PERSON COMPLETING REPORT (Type/Print)

Name \_\_\_\_\_

Title \_\_\_\_\_

The Subgroup recommended that this item be retained because it identifies the person to query for missing information.

16. DATE REPORT COMPLETED

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
MM DD YYYY

The Parent Group recommended that this item be added to the report to document whether the certificate or report was completed within the time period specified by law.

17. DATE RECEIVED BY REGISTRAR

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
MM DD YYYY

The Subgroup recommended that this item be added to the report to document whether the certificate was filed or received within the time period specified by law. The Subgroup initially recommended that the item read "Date Filed by Registrar." However, the Parent Group pointed out that this may not apply in States that have reports of fetal death. It was noted that certificates are filed, but reports are not. Thus, the Subgroup modified its recommendation to ensure the appropriate wording for certificates and reports.

18. CAUSE/CONDITIONS CONTRIBUTING TO FETAL DEATH

18.a. INITIATING CAUSE/CONDITION (Select one or specify)

Maternal Conditions/Diseases (Specify)\_\_\_\_\_

Complications of Placenta, Cord, or Membranes

- Rupture of membranes prior to onset of labor
- Abruptio placenta
- Placenta insufficiency
- Prolapsed cord
- True knot in cord
- Chorioamnionitis
- Other (Specify)\_\_\_\_\_

Other Obstetrical or Pregnancy Complications (Specify)\_\_\_\_\_

Fetal Anomaly (Specify)\_\_\_\_\_

Fetal Injury (Specify)\_\_\_\_\_

Fetal Infection (Specify)\_\_\_\_\_

Other Fetal Conditions/Disorders (Specify)\_\_\_\_\_

- Unknown

18.b. OTHER SIGNIFICANT CAUSES OR CONDITIONS (Select or specify all that apply)

Maternal Conditions/Diseases (Specify)\_\_\_\_\_

Complications of Placenta, Cord, or Membranes

- Rupture of membranes prior to onset of labor
- Abruptio placenta
- Placenta insufficiency
- Prolapsed cord
- True knot in cord
- Chorioamnionitis
- Other (Specify)\_\_\_\_\_

Other Obstetrical or Pregnancy Complications (Specify)\_\_\_\_\_

Fetal Anomaly (Specify)\_\_\_\_\_

Fetal Injury (Specify)\_\_\_\_\_

Fetal Infection (Specify)\_\_\_\_\_

Other Fetal Conditions/Disorders (Specify)\_\_\_\_\_

- Unknown

The Subgroup recommended that this information be retained, but completely reformatted. The Cause-of-Fetal-Death section was restructured to include new autopsy and pathology items, as well as additional physiologic characteristics of delivery. The Subgroup recommended that the Cause-of-Fetal-Death section be modified to combine a check box format with space to specify additional detail on cause. The check boxes provide some guidance regarding what information is desired, while the specify lines allow the certifier flexibility. The cause of fetal death is the most important statistical research item on the fetal death report.

Mortality statistics provide a basis for epidemiological studies. This information provides a basis for research in the conditions that led to fetal death.

#### 18.c. WEIGHT OF FETUS

\_\_\_\_\_ (grams)

The Subgroup recommended that this item be retained as part of the Cause-of-Fetal-Death section, with the instruction modified to specify measurement in grams. This is the single most important characteristic associated with the viability of the fetus. It is also related to prenatal care, marital status, socioeconomic status, and other factors associated with the delivery of the fetus. It is useful in evaluating the effectiveness of health care.

#### 18.d. OBSTETRIC ESTIMATE OF GESTATION (completed weeks)

The Subgroup recommended that this item, previously "Clinical Estimate of Gestation (Weeks)," be retained as part of the Cause-of-Fetal-Death section. The change in title is consistent with the Birth Subgroup's recommendation for this item. This information is intended to provide an alternate estimate of gestational age when the date last normal menses began is missing or apparently incompatible with the weight of fetus.

#### 18.e. FETAL APPEARANCE AT DELIVERY

- Structure and appearance normal
- Obvious dysmorphic features
- Desquamation/maceration
  - Minimal to mild (< 5% of body surface area)
  - Moderate to severe ( $\geq$  5% of body and two anatomic areas)
- Hydrops fetalis
- Mummification

The Subgroup recommended that this item be added to the Cause-of-Fetal-Death section of the report. This item allows the delivery attendant to report physical findings obvious at delivery and helps in determining the gestational age of the fetus. This information also helps in determining the time and cause of fetal death in the absence of an autopsy. This item may encourage doctors to provide higher quality information and helps in understanding inconsistent weight and gestational age.

18.f. PLACENTA APPEARANCE

- Normal
- Abnormal (Specify)\_\_\_\_\_

The Subgroup recommended that this item be added to the Cause-of-Fetal-Death section. Placenta questions are answered as part of standard obstetric practice.

Parent Group members asked for clarification on what qualifies as “abnormal” appearance for a placenta. It was explained that broken blood vessels, calcification, and tears are examples of abnormal appearance and that examples could be provided in the instructions. There was concern expressed regarding whether hospital staff would complete information on the specify line. Subgroup members indicated that they intentionally avoided making this a check box item of the most common items of abnormal appearance.

18.g. ESTIMATED TIME OF FETAL DEATH

- Dead at first assessment (admission to hospital)
- Died during labor
- Unknown time of fetal death

The Subgroup recommended restructuring this item for inclusion as part of the Cause-of-Fetal-Death section. This information replaces the previous item entitled, “Fetus Died Before Labor, During Labor or Delivery, Unknown.” This item provides a check to ensure that the delivery was properly reported as a fetal death and was not a live birth.

Concern was raised about the appropriate wording for this section because “time” seems to indicate clock measurements.

18.h. WAS AN AUTOPSY PERFORMED? Yes No

The Subgroup recommended that this item be added to the Cause-of-Fetal-Death section. An autopsy is important to accurately determine the medical conditions that led to the death of the fetus. In addition, the Fetal Death Subgroup felt that this question would be useful in prompting medical examiners to perform more autopsies. It was further noted that autopsies yield better cause-of-fetal-death information.

18.i. WAS A HISTOLOGICAL PLACENTAL EXAMINATION PERFORMED?

- Yes No

The Subgroup recommended that this item be added to the Cause-of-Fetal-Death section. An examination of the placenta can yield important information to help establish medical conditions that led to the fetal death.

18. j. WERE AUTOPSY OR HISTOLOGICAL PLACENTAL EXAMINATION RESULTS USED IN DETERMINING THE CAUSE OF FETAL DEATH?  
Yes No

The Subgroup recommended that this item be added to the Cause-of-Fetal-Death section. This item provides information on the data available to the certifier when he/she certified the cause of fetal death. This item can provide some indication as to the quality of the Cause-of-Fetal-Death data. The incorporation of information from the autopsy and placental exam is critical to making a more accurate and specific diagnosis of the cause of the fetal death.

19. DID MOTHER GET WIC FOOD FOR HERSELF DURING THIS PREGNANCY?  
Yes No

The Subgroup recommended that this item be added to the report. This recommendation is consistent with that of the Birth Subgroup. This item is an indicator of program participation, as well as socioeconomic status. (WIC is the nutrition program for Women, Infants, and Children. WIC gives pregnant women and/or their children food, checks, or vouchers for food.)

20. WAS THE PRENATAL RECORD AVAILABLE FOR COMPLETION OF THE FETAL DEATH REPORT? Yes No

The Subgroup recommended that this item be added to the report. This recommendation is consistent with that of the Birth Subgroup and is important for quality of care assurance. This information indicates whether the prenatal medical record was available when the report of fetal death was completed.

21. DATE OF FIRST PRENATAL CARE VISIT

\_\_\_\_/\_\_\_\_/\_\_\_\_  
MM DD YYYY

No Prenatal Care

The Subgroup recommended that this item, previously “Month of Pregnancy Prenatal Care Began,” be retained. This recommendation is consistent with that of the Birth Subgroup. The modification will allow for the recording of more precise information on the length of prenatal care received. This item identifies when during the pregnancy the woman entered prenatal care. This item is needed as the basis for measures of how soon women initiate prenatal care and for measures of the appropriate utilization of services. This information is also used to study the impact of prenatal care on pregnancy outcome.

22. TOTAL NUMBER OF PRENATAL VISITS FOR THIS PREGNANCY (If none, enter ‘0’)



The Subgroup recommended that this item, previously “Prenatal Visits–Total Number,” be retained. This recommendation is consistent with that of the Birth Subgroup. This item indicates how many prenatal care visits the woman made during pregnancy. This item is needed as the basis for measures of utilization of prenatal care services. It is also used in conjunction with Date of First Prenatal Care Visit to assess the adequacy of prenatal care. The Subgroup recommended that the instructions define a prenatal visit as a visit in which there is an examination and/or counseling for the pregnancy.

23. MOTHER’S EDUCATION (Check the box that best describes the highest degree or level of school completed at the time of delivery)
- 8<sup>th</sup> grade or less
  - 9<sup>th</sup> to 12<sup>th</sup> 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)

*The subgroup recommended that this item be retained on the fetal death report. However, it has been modified to a check box format to collect more specific data on degrees obtained. Education is highly related to fertility, health practices, and pregnancy outcome. It is also used as an indicator of socioeconomic status. Please see the “Education” chapter of this report for additional information.*

24. MOTHER OF HISPANIC ORIGIN? (Check the box that best describes whether the mother is Spanish/Hispanic/Latino. Check the “No” box if mother is not Spanish/Hispanic/Latino.)
- No, not Spanish/Hispanic/Latino
  - Yes, Puerto Rican
  - Yes, Mexican, Mexican American, Chicano
  - Yes, Cuban
  - Yes, other Spanish/Hispanic/Latino-(Specify) \_\_\_\_\_

*The subgroup recommended that this item be retained on the fetal death report. However, it has been changed to a check box item to elicit more specific information and follow the format of the Census question. This item will make it possible to compare variations in child-bearing patterns and pregnancy outcomes of Hispanics. Please see the “Race and Ethnicity” chapter of this report for additional information.*

25. MOTHER'S RACE (Check one or more races to indicate what the mother considers herself to be)

- 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) \_\_\_\_\_

*The subgroup recommended that this item be retained on the fetal death report. However, it has been changed to a check box item to elicit more specific information. This information is used to study racial variations in childbearing, access to health care, and variations in pregnancy and pregnancy outcome. Please see the "Race and Ethnicity" chapter of this report for additional information.*

26. FATHER'S EDUCATION (Check the box that best describes the highest degree or level of school completed at the time of delivery)

- 8<sup>th</sup> grade or less
- 9<sup>th</sup> to 12<sup>th</sup> grade; no diploma
- High School Graduate or GED completed
- One or more years of college, 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)

*The subgroup recommended that this item be retained on the fetal death report. However, it has been modified to a check box format to collect more specific data on degrees obtained. Education is highly related to fertility, health practices, and pregnancy outcome. It is also used as an indicator of socioeconomic status. Please see the "Education" chapter of this report for additional information.*

27. FATHER OF HISPANIC ORIGIN? (Check the box that best describes whether the father is Spanish/Hispanic/Latino. Check the “No” box if father is not Spanish/Hispanic/Latino.)

- No, not Spanish/Hispanic/Latino
- Yes, Puerto Rican
- Yes, Mexican, Mexican American, Chicano
- Yes, Cuban
- Yes, other Spanish/Hispanic/Latino-(Specify) \_\_\_\_\_

*The subgroup recommended that this item be retained on the fetal death report. However, it has been changed to a check box item to elicit more specific information and follow the format of the Census question. This item will make it possible to compare variations in child-bearing patterns and pregnancy outcomes of Hispanics. Please see the “Race and Ethnicity” chapter of this report for additional information.*

28. FATHER’S RACE (Check one or more races to indicate what the father considers himself to be)

- 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) \_\_\_\_\_

*The subgroup recommended that this item be retained on the fetal death report. However, it has been changed to a check box item to elicit more specific information. This information is used to study racial variations in childbearing, access to health care, and variations in pregnancy and pregnancy outcome. Please see the “Race and Ethnicity” chapter of this report for additional information.*

29. MOTHER MARRIED? (At delivery, conception, or any time between)

- Yes No

The Subgroup recommended that this item be retained. This information is used to monitor the substantial differences in fertility patterns and pregnancy outcomes for married and unmarried women. This information can help to identify the need for additional supportive public health and other services.

30. CIGARETTE SMOKING BEFORE AND DURING PREGNANCY

Please answer for each time period.

(If none, enter "0." 1 pack = 20 cigarettes)

Average number of cigarettes smoked per day:

Three Months Before Pregnancy \_\_\_\_\_

First Three Months of Pregnancy \_\_\_\_\_

Second Three Months of Pregnancy \_\_\_\_\_

Last Three Months of Pregnancy \_\_\_\_\_

The Subgroup recommended to retain but modify this item for consistency with that of the Birth Subgroup. This item, previously "Tobacco use during pregnancy," provides information on changes in tobacco use before and during pregnancy, which has an impact on pregnancy outcome.

31. MOTHER'S HEIGHT AND WEIGHT

HEIGHT \_\_\_\_\_ (inches)

PREPREGNANCY WEIGHT \_\_\_\_\_ (pounds)  
(or weight at first prenatal visit)

WEIGHT AT DELIVERY \_\_\_\_\_ (pounds)  
(or weight at last prenatal visit)

The Subgroup recommended to retain but modify this item, previously "Weight gained during pregnancy," to gain additional information. The recommendation is consistent with that of the Birth Subgroup. The Birth Subgroup indicated that maternal weight gain without knowledge of maternal body mass index (BMI) is of little use and that height and prepregnancy weight are needed to determine if weight gain is appropriate and to calculate maternal BMI.

32. PRINCIPAL SOURCE OF PAYMENT FOR THIS DELIVERY

- Private Insurance
- Medicaid
- Self-pay
- Other (Specify) \_\_\_\_\_

The Subgroup recommended that this item be added to the standard report. This recommendation is consistent with that of the Birth Subgroup. This item provides important information for low-income women and their children and is strongly associated with pregnancy outcomes. There are important differences in maternal characteristics and pregnancy outcomes among payment categories.

33. NUMBER OF PREVIOUS LIVE BIRTHS

33.a. Now Living

Number \_\_\_\_\_

None

33.b. Now Dead

Number \_\_\_\_\_

None

33.c. DATE OF LAST LIVE BIRTH

\_\_\_\_\_/\_\_\_\_\_  
MM YYYY

34. NUMBER OF OTHER PREGNANCY OUTCOMES

(spontaneous or induced losses or ectopic pregnancies)

34.a. Number \_\_\_\_\_

None

34.b. DATE OF LAST OTHER PREGNANCY OUTCOME

\_\_\_\_\_/\_\_\_\_\_  
MM YYYY

The Subgroup recommended these items to replace those previously in the “Pregnancy History” section. This recommendation is consistent with that proposed by the Birth Subgroup. The terminology was modified to make the information sought clearer. “Live Births” was changed to “Number of Previous Live Births.” “Other Terminations” was changed to “Number of Other Pregnancy Outcomes,” defined as spontaneous or induced losses or ectopic pregnancies. This information is essential for determining live-birth and total-birth order, which are important in studying trends in childbearing and child spacing. The information is useful in studying health problems associated with birth order. The dates of last live birth and last other pregnancy outcome permit the calculation of intervals between live births and fetal deaths and between pregnancies. This information allows researchers to analyze the relationship of various maternal characteristics and pregnancy outcomes with birth and pregnancy intervals.

35. DATE LAST NORMAL MENSES BEGAN

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
MM DD YYYY

The Subgroup recommended that this item be retained, with the date collected in the MM/DD/YYYY format. This item provides information on the length of gestation, which can be associated with weight of fetus to determine the maturity of the fetus at delivery. It is also associated with infant morbidity and mortality and is important in medical research.

36. PLURALITY - Single, Twin, Triplet, etc.

(Specify) \_\_\_\_\_

37. IF NOT SINGLE BIRTH - Born First, Second, Third, etc.

(Specify) \_\_\_\_\_

The Subgroup recommended that these items be retained because this information is used to study survival differences for multiple births based on order of delivery.

38. MOTHER TRANSFERRED FOR MATERNAL MEDICAL OR FETAL INDICATIONS FOR DELIVERY? Yes No  
IF YES, ENTER NAME OF FACILITY MOTHER TRANSFERRED FROM:

\_\_\_\_\_

The Subgroup recommended that this item be added to the report. The item identifies the place from where the mother was transferred, which may be needed to query for missing information. This recommendation is consistent with that of the Birth Subgroup.

39. RISK FACTORS IN THIS PREGNANCY (Check all that apply)

Diabetes

- Prepregnancy (Diagnosis prior to this pregnancy)
- Gestational (Diagnosis in this pregnancy)

Hypertension

- Prepregnancy (Chronic)
- Gestational (PIH, preeclampsia, eclampsia)
- Autoimmune disorder
- Vaginal bleeding during this pregnancy prior to the onset of labor
- Pregnancy resulted from infertility treatment
- Hemoglobinopathy
- Uterine anomaly
- Blood antigen isoimmunization
- Motor vehicle accident
- Other traumatic injury
- Acute drug effect/Toxicity/Reaction
- Prior incision of uterine wall
- None of the above
- Other (Specify) \_\_\_\_\_

The Subgroup recommended the retention of this item, previously "Medical Risk Factors for This Pregnancy," with modification. The Subgroup recommended that a number of items be deleted from the 1989 version of this section and that some of the existing items be modified to glean more specific information.

The risk factors proposed for collection can contribute to the national data set. Also, these data will provide more specific information regarding fetal death events. Diabetes information is associated with macrosomia, cesarean delivery, metabolic abnormalities, and congenital anomalies. Management during

pregnancy can reduce poor maternal and infant outcomes. Hypertension is associated with increased risk for preterm delivery, intrauterine growth restriction, maternal and perinatal morbidity and mortality. Vaginal bleeding during the pregnancy prior to the onset of labor is associated with increased risk for multiple adverse pregnancy outcomes. Pregnancy resulting from infertility treatment increases the incidence of multiple births.

40. PREVIOUS ADVERSE PREGNANCY OUTCOMES (Check all that apply)

- Previous preterm delivery
- Fetal death prior to 20 weeks
- Fetal death at 20 weeks or more
- SGA/IUGR (Small-for-gestational-age/Intrauterine growth restricted)
- Neonatal death
- Fetus/Infant with congenital anomaly
- None of the above

The Subgroup recommended that this item be added to the standard report. This information will provide more specific information regarding fetal death events. Previous preterm birth is associated with increased risk for preterm delivery.

Parent Group members voiced concern regarding the necessary resources to train hospital staff to collect this information. Some also questioned the benefits of collecting this information, noting that the data would be of little value to States. Subgroup members explained that substantial changes to the Report of Fetal Death will require additional training and field testing and encouraged the Group to view the data collection from a national perspective. It was further noted that States would, in fact, benefit indirectly from the collection of this information. There was also some discussion around the number of check boxes for this item, with some questioning whether hospital staff would skip the list and opt for the “none” check box, rather than examine the complete list of items. Subgroup members responded that the check boxes are intended to glean more specific data about fetal death events and noted that the Report of Fetal Death should address and promote public health policy needs.

41. CHRONOLOGY OF LABOR AND DELIVERY

A. Facility admission that included delivery:

\_\_\_\_/\_\_\_\_/\_\_\_\_ at \_\_\_\_\_  
MM DD YYYY 24 hour clock

Delivery not in facility

B. Rupture of membranes occurred on:

\_\_\_\_/\_\_\_\_/\_\_\_\_ at \_\_\_\_\_  
MM DD YYYY 24 hour clock

Not Applicable     Unknown date and time

C. Onset of labor occurred on:

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ at \_\_\_\_\_  
 MM DD YYYY 24 hour clock  
 Not Applicable     Unknown date and time  
 D. Full cervical dilatation occurred on:  
 \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ at \_\_\_\_\_  
 MM DD YYYY 24 hour clock  
 Not Applicable     Unknown date and time

The Subgroup recommended that this item be added to the standard. This recommendation is consistent with that of the Birth Subgroup. Reporting of facility admission that included delivery will allow for more precise determination of duration-dependent risk factors. Onset of labor information is needed because prolonged labor may have a significant deleterious effect on nerve supply to bladder and rectum, leading to incontinence in years to come.

42. CHARACTERISTICS OF LABOR AND DELIVERY

- Induction of labor Yes No
- Augmentation of labor Yes No
- Non-vertex presentation Yes No
- Steroids (glucocorticoids) for fetal lung maturation  
received by the mother prior to delivery Yes No
- Antibiotics received by the mother during labor Yes No
- Moderate/heavy meconium staining of the amniotic fluid Yes No
- Epidural or spinal anesthesia during labor Yes No

The Subgroup recommended retaining this item, previously “Complications of Labor and/or Delivery” for consistency with the Birth Subgroup recommendation. The change in the title was intended to elicit more descriptive information for very specific types of data and to remove any negative connotations associated with the term “complications.”

Induction and augmentation of labor have been associated with pregnancy outcome. Non-vertex presentation is a risk factor that may be an indication for cesarean delivery. Information on steroids (glucocorticoids) for fetal lung maturation supports their use in threatened preterm delivery prior to 34 weeks gestation to reduce risk for multiple adverse neonatal outcomes. No current national data system is collecting information on the implementation of the NICHD Consensus Conference recommendation for the use of steroids when preterm delivery is threatened/anticipated. The question on antibiotics is responsive to current CDC/ACOG/AAP guidelines recommending antibiotic treatment of 20 percent of women in labor (group B strep prophylaxis, preterm premature rupture of membranes). There is no national reporting system for tracing implementation and outcomes of these public health recommendations. Epidural or spinal anesthesia during labor data are needed for analysis of relationship to labor management, duration, operative delivery, and neonatal



outcomes as there are current reports of adverse association with each of the above.

43. MATERNAL MORBIDITY (Check all that apply)  
(occurring 24 hours before delivery or within 24 hours of delivery)
- Maternal transfusion
  - Third or fourth degree perineal laceration
  - Ruptured uterus
  - Unplanned hysterectomy
  - Admission to intensive care unit
  - Unplanned operating room procedure following delivery
  - None of the above

The Subgroup recommended that this item be added to the report because there is currently no national system of data collection on maternal morbidity and thus no easy mechanism for correlating pregnancy factors on a national basis. Several of the elements included are currently used as clinical quality indicators in various accreditation systems. Having a national database expands the information for assessing perinatal health care delivery systems. Third or fourth degree perineal laceration information may have implications for future problems with anal incontinence—especially for older mothers. Ruptured uterus data may indicate whether there are increases in incidences related to vaginal birth after previous c-section. Unplanned hysterectomy, admission to intensive care unit, and unplanned procedure following delivery data are useful for quality assurance purposes.

44. METHOD OF DELIVERY
- A. Was delivery attempted with forceps and/or vacuum extraction?  
Attempted forceps Yes No  
Attempted vacuum Yes No
- B. Fetal presentation at birth
- Cephalic
  - Breech
  - Other
- C. Final route and method of delivery (Check one)
- Vaginal:
- Spontaneous
  - Forceps
  - Vacuum
- Or:
- Cesarean
- If cesarean, was a trial of labor attempted?
- Yes No
- D. Has the mother had a previous cesarean delivery?  
Yes If Yes, how many\_\_\_\_\_

No

E.  Hysterotomy/Hysterectomy

The Subgroup recommended that this item be retained. However, the data elements have been completely restructured to provide information that is more representative of current practices and more readily analyzed with outcomes. Attempted forceps/attempted vacuum data are needed to evaluate indications for cesarean delivery and for correlation with reported adverse neonatal outcomes. The proposed organization of the final route and method of delivery portion will allow for a more complete report of the obstetric intervention used to effect delivery. Cesarean data are needed to evaluate the impact of the current emphasis on vaginal delivery in pregnancies subsequent to a cesarean delivery.

45. OBSTETRIC PROCEDURES (Check all that apply)

Cervical cerclage

Tocolysis

External cephalic version

Successful

Failed

None of the above

The Subgroup recommended that this item be retained. Induction of labor, Tocolysis, and None of the above are the only items recommended for retention from the 1989 revision. Induction of labor has been shifted to the “Characteristics of Labor and/or Delivery” section of the certificate. All of the items selected for inclusion are manipulative procedures that carry risk to the fetus. Cervical cerclage data are needed to monitor effectiveness of procedures in relation to preterm delivery. Tocolysis data are needed to assess frequency of use and to correlate use with pregnancy outcome. The External cephalic version procedure is being employed with increasing frequency to reduce the need for cesarean delivery because of fetal malpresentation. There are associated risks both for the mother and the fetus that should be monitored.

46. INFECTIONS PRESENT AND/OR TREATED DURING THIS PREGNANCY

(Check all that apply)

Gonorrhea

Syphilis

Herpes Simplex Virus (HSV)

Chlamydia

Listeria

Group B Streptococcus

Cytomeglovirus

Parvovirus

Toxoplasmosis

None of the above

Other (Specify) \_\_\_\_\_

The Subgroup recommended that this item be added to the report because all of the listed infections are known to cause concomitant fetal and/or subsequent neonatal infection and thus have significant public health implications. In addition, there is no current national reporting system for these infections that focuses on the prevalence of perinatal transmission.

#### 47. CONGENITAL ANOMALIES OF THE FETUS

(observed within 24 hours of delivery)

- |   |  |
|---|--|
| <input type="checkbox"/> Neural tube defect   | <input type="checkbox"/> Orofacial defect/cleft                              |
| <input type="checkbox"/> Congenital heart disease   | <input type="checkbox"/> Suspected chromosomal disorder                      |
| <input type="checkbox"/> Congenital diaphragmatic hernia  | Karyotype confirmed <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Anterior abdominal wall defect   | Karyotype pending <input type="checkbox"/> Yes <input type="checkbox"/> No   |
| <input type="checkbox"/> <input type="checkbox"/> Omphalocele   | <input type="checkbox"/> Hypospadias   |
| <input type="checkbox"/> <input type="checkbox"/> Gastroschisis   | <input type="checkbox"/> None of the anomalies listed above                  |
| <input type="checkbox"/> Limb reduction defect (excluding congenital amputation and dwarfing syndromes) | <input type="checkbox"/> Other (Specify) _____                               |

The Subgroup recommended that this item be retained. The items selected for this section will provide more specific information regarding fetal death events. The “Congenital Heart Disease” check box differs from that recommended by the Birth Subgroup because “cyanotic” cannot be determined unless the person is alive. Therefore, the Fetal Death Subgroup removed “cyanotic” from its recommendation. The Subgroup noted that instructions would state that anomalies diagnosed should be recorded regardless of whether they contributed to fetal death. The Fetal Death Subgroup recommendation also includes an “other (specify)” check box not on the birth certificate. The Subgroup indicated that the intent is to capture congenital anomalies not listed and provide more information for fetal death research. Some Parent Group members voiced concern that there would not be adequate data collected for this item. It was noted that there are differences between the recording of anomalies for fetal deaths and live births, as there is no diagnosis of anomalies weeks or months after a fetal death occurs as there would be for a live birth. It was further noted that the “other” check box is more likely to be noted in a fetal death than in a live birth.

MOTHER’S NAME (left margin)

The Subgroup recommended that this item be added because it helps identify the record.

MOTHER'S MEDICAL RECORD NUMBER (left margin)

The Subgroup recommended that this item be added because it helps identify the record.

## Secondary Data Items

Throughout their deliberations, the Birth, Death, and Fetal Death Subgroups pondered whether to propose the collection of various items intended to enhance the national data set. Part of the charge of each Subgroup was to determine which questions should be included on the standard certificates to elicit the best possible information. This process resulted in the discussion of a number of topics of national health interest. There were some data that the Subgroups wanted to obtain, but did not believe collection was warranted on a national basis as part of the standard certificate. However, the Parent Group thought that it would be helpful to provide a uniform question or procedure for those States that choose to include such items/procedures on their certificates. The list of items was referred to as “secondary or B-list items.” The Parent Group also thought that secondary data items would be useful for the next revision of the standard certificates because they would be items not part of the national data set, but items that had been tested in some States. All items rejected by the Parent Group for inclusion on the standard certificates were also considered for secondary data items for states to select if they wish to include the item on the state certificate.

The secondary data items recommended for the fetal death report by the Parent Group include:

- ***Crown-rump length (in cms.)***. This information will help in determining gestational age of the fetus.
- ***Mother/Father - usual occupation worked during last year***. This information was considered important, but it was felt that the funds were not available in most states to code the information. Therefore, it was recommended as a B-list item for those states that have the funding available to collect and code the information. This information is useful in studying occupationally related mortality and to identify job-related risk areas.
- ***Type of practitioner providing prenatal care***. This information is needed to examine the appropriateness of care and for quality assurance.
- As a follow-up to the Race item, ask, ***Which of these groups would you say best describes your race?*** This information is important in bridging information between single and multiple race data collection and is consistent with the way the National Health Interview Survey collects data.

## Items Recommended for Deletion from the U.S. Standard Report of Fetal Death

The Fetal Death Subgroup recommended and the Parent Group approved the removal of the following items from the U.S. Standard Report of Fetal Death. The rationale for excluding each item is noted.

OCCUPATION AND BUSINESS/INDUSTRY (Worked during last year)  
OCCUPATION (Mother)                      BUSINESS/INDUSTRY (Mother)  
OCCUPATION (Father)                      BUSINESS/INDUSTRY (Father)

The Subgroup recommended that this item be removed from the standard report because of the poor quality and lack of completeness of occupation and business/industry information currently collected. In addition, very few States code the information and, it is therefore, not available for public health purposes. This item was recommended as a secondary data item.

### OTHER RISK FACTORS FOR THIS PREGNANCY

Alcohol Use During Pregnancy                      Yes No

Average number drinks per week \_\_\_\_\_

The Subgroup recommended deleting this item because they determined that quality data are not obtained because of the stigma attached to alcohol use during pregnancy. This recommendation is consistent with that of the Birth Subgroup.

## **Other Items Considered by Subgroup, but Rejected**

The following are items the Fetal Death Subgroup considered as possible additions to the U.S. Standard Report of Fetal Death, but ultimately decided not to bring before the Parent Group. The Subgroup's deliberations for each item are noted.

### ***Changed Residence During Pregnancy-Did mother change residence during pregnancy?***

The Fetal Death Subgroup had considered bringing a recommendation before the Parent Group to add a question regarding whether the mother changed residence during her pregnancy. This item is an indicator of life stress during the pregnancy and can be useful for program planning. The Birth Subgroup had brought this recommendation before the Parent Group, but ultimately withdrew the recommendation. Thus, the Fetal Death Subgroup decided not to recommend this item.

### ***Social Security Number of Mother and Father***

The Subgroup considered whether to add an item for parents' social security numbers to the standard report. It was noted that eight States currently collect the social security number of the mother and father. There was some concern about making a recommendation against the Social Security Administration's guidelines to only allow the collection of these numbers for social security purposes. However, it was noted that the social security number can be collected for public health purposes or to link with birth data as long as the individual is told what the number will be used for. Ultimately, the Subgroup decided that this item should not be part of the standard, but should be considered as a secondary data item.

### ***Age of Mother/Age of Father***

The Subgroup considered adding age to the standard, but determined that this item is not necessary since the date of birth, which is a more accurate indicator of age, is already collected.

### ***Name and Location of Facility***

It was proposed that the name and location be included on the fetal death report for family records and to allow health departments to follow up with the person(s) responsible for disposition of the fetus. This item was not brought before the Parent Group.

### ***Ectopic Pregnancy***

There was some discussion around whether to add a separate question on ectopic pregnancy as part of the pregnancy history item on the fetal death report. Subgroup members noted that ectopic pregnancies are a growing problem and a public health issue, as they are related to sexually transmitted diseases and, to some degree, artificial reproductive technology. It was argued that because the only method to analyze ectopic pregnancy now is via claims data and front sheet data, the fetal

death report could be a source to monitor the problem. There was consensus that this item not be added to the standard, but taken into consideration as a secondary data item.

***If mother is not married, has paternity acknowledgment been signed in the hospital?***

The Fetal Death Subgroup did not recommend this item as the Birth Subgroup did because paternity is not often acknowledged as in the case of birth.

***Drug Usage by Mother***

***Name of Informant/Informant's Signature***

***Mother's Mailing Address***

***Attendant/Certifier Signature***

***Type of Practitioner Providing Prenatal Care***

The Subgroup decided to recommend this as a secondary data item for consistency with the Birth Subgroup recommendation.

***Funeral Director's Name/Signature***

***Registrar's Signature***

***Did mother undergo prenatal blood test screening?***

***Fetal Reduction***



### **Items Recommended by Subgroup, but Rejected by Parent Group**

The following items were recommended by the Fetal Death Subgroup, but rejected by the Parent Group for inclusion on the 2003 U.S. Standard Report of Fetal Death. The Subgroup's rationale for including the item is noted, as are Parent Group concerns regarding the addition of the item.

#### CROWN HEEL LENGTH (in cms., if known)

The Fetal Death Subgroup recommended adding this item because it felt this question would increase the body of evidence used to estimate gestation. However, the Parent Group disagreed. Since the Parent Group rejected the Subgroup's recommendation to add this as part of the standard, it was considered for addition as a secondary data item.

#### ANTHROPOMETRIC MEASUREMENTS

Crown-Rump Length \_\_\_\_\_ cm  
Foot Length \_\_\_\_\_ cm

The Subgroup recommended the addition of this item for epidemiological purposes. The information would help in determining gestational age. Parent Group members voiced uncertainty regarding whether the Report of Fetal Death is the best place to collect information on Crown-Rump Length and Foot Length. There was also concern that this item requires measurements in the absence of an autopsy.

#### IS MOTHER'S LACK OF ENGLISH LANGUAGE UNDERSTANDING A BARRIER TO COMMUNICATION?

- Yes
- No

The Fetal Death Subgroup recommended to add this item to help determine whether the inability to speak English impacts whether someone is able to receive health care. The Parent Group rejected this recommendation from both the Birth and Fetal Death Subgroups, noting that English may not be a barrier in hospitals that have diverse staff able to communicate with patients who do not speak English. Since this item was rejected for inclusion on the standard, it was considered for addition as a B-list item.

#### LIVING ARRANGEMENT DURING THIS PREGNANCY:

- Husband, parent(s) or other adult(s) usually present.
- Lived alone or with no other adult(s) usually present.

The Subgroup sought to add this question to ascertain whether there was any adult support during the pregnancy. The Parent Group rejected this

recommendation from both the Birth and Fetal Death Subgroups, indicating that such a question could be intrusive. Since this item was rejected for inclusion on the standard, it was considered for addition as a B-list item.

## **Conclusion**

In its deliberations, the Fetal Death Subgroup made every effort to develop a fetal death report which is as up-to-date as possible in terms of medical and obstetric technology and practice, as well as consistent with the birth certificate. The Subgroup also recognized the need for an entire package to make the standard report successful, including standardized worksheets for the hospital and the parents, and uniform standards for the collection, editing, and processing of all data recorded on the fetal death report.

<p align="center"><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>1. <b>Facility Name</b> (If not institution, give street and number)</p>	<p><b>Same</b> <b>Source:</b> Hospital Record</p>
<p>2. <b>City, Town or Location of Delivery</b></p>	<p><b>Same</b> <b>Source:</b> Hospital Record</p>
<p>3. <b>County of Delivery</b></p>	<p><b>Same</b> <b>Source:</b> Hospital Record</p>
	<p align="center"><b><i>ZIP CODE OF DELIVERY</i></b></p> <p><b>New Item:</b> Item makes fetal death report more similar to the birth certificate and is useful for geographical coding purposes.</p> <p><b>Source:</b> Hospital or Other Facility</p>
<p>4. <b>Date of Delivery</b> (Month, Day, Year)</p>	<p><b>Same</b> <b>Source:</b> Hospital Record</p>
<p>5. <b>Sex of Fetus</b></p>	<p><b>SEX</b> (<i>M/F/Unk</i>)</p> <p><b>Source:</b> Hospital Record</p>
<p>6a. <b>Mother' Name</b> (First, Middle, Last)</p>	<p><b>MOTHER'S CURRENT LEGAL NAME</b> (First, Middle, Last, <i>Suffix</i>)</p> <p><b>Source:</b> Informant's Worksheet</p>
<p>6b. <b>Maiden Surname</b></p>	<p><b>MOTHER'S NAME PRIOR TO FIRST MARRIAGE</b> (<i>First, Middle, Last, Suffix</i>)</p> <p><b>Action:</b> Obtain first, middle, and last names. This change would eliminate the use of the term "maiden name."</p> <p><b>Source:</b> Informant's Worksheet</p>

<p align="center"><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>7. <b>Date of Birth</b> [Mother] (Month, Day, Year)</p>	<p><b>Same</b> <b>Source:</b> Informant's Worksheet</p>
<p><b>Mother</b> 8a. Residence-State 8b. County 8c. City, Town, or Location 8d. Street and Number  8e. Inside City Limits? (Yes or No)  8f. Zip Code</p>	<p><b><i>RESIDENCE OF MOTHER-STATE</i></b> <b>Same</b> <b>Same</b> <b>Same</b> <b><i>APT. NO.</i></b> <b>Same:</b> Changed to check box format <input type="checkbox"/>Yes <input type="checkbox"/>No  <b>Same</b>  <b>Source:</b> Informant's Worksheet</p>
<p align="right"><i>(Addition)</i></p>	<p><b><i>BIRTHPLACE (Mother)</i></b> <b><i>BIRTHPLACE (Father)</i></b> <i>(State, Territory, or Foreign Country)</i>  <b>New Item:</b> Item provides information on recent immigrant groups and indicates differences in childbearing patterns between foreign and U.S.-born women.  <b>Source:</b> Informant's Worksheet</p>
<p>9. <b>Father's Name</b> (First, Middle, Last)</p>	<p><b>FATHER'S <i>CURRENT LEGAL NAME</i></b> (First, Middle, Last, <i>Suffix</i>)  <b>Source:</b> Informant's Worksheet</p>
<p>10. <b>Date of Birth</b> [Father] (Month, Day, Year)</p>	<p><b>Same</b> <b>Source:</b> Informant's Worksheet</p>

<p><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>11a. <b>Of Hispanic Origin</b> (Mother)?  11b. <b>Of Hispanic Origin</b> (Father)?  (Specify No or Yes–If yes specify Cuban, Mexican, Puerto Rico, etc.)  <input type="checkbox"/>No <input type="checkbox"/>Yes (Specify)_____</p>	<p><b><i>MOTHER OF HISPANIC ORIGIN?  FATHER OF HISPANIC ORIGIN?</i></b>  <i>(Check the box that best describes whether the mother/father is Spanish/Hispanic/Latino. Check the “No” box if mother/father is not Spanish/Hispanic/ Latino.)</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>No, not Spanish/Hispanic/Latino</i></li> <li><input type="checkbox"/> <i>Yes, Puerto Rican</i></li> <li><input type="checkbox"/> <i>Yes, Mexican, Mexican American, Chicano</i></li> <li><input type="checkbox"/> <i>Yes, Cuban</i></li> <li><input type="checkbox"/> <i>Yes, other</i>  <i>Spanish/Hispanic/Latino-(Specify)</i>  _____</li> </ul> <p><b>Action:</b> Change the wording and response categories for these items to make them comparable with Census questions.</p> <p><b>Source:</b> Informant’s Worksheet</p>

<p align="center"><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>12a. <b>Race</b> (Mother)  12b. <b>Race</b> (Father)  American Indian, Black, White, etc.  (Specify below)</p>	<p><b><i>MOTHER'S RACE</i></b>  <b><i>FATHER'S RACE</i></b> (Check one or more races to indicate what the mother/father considers herself/himself to be.)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>White</i></li> <li><input type="checkbox"/> <i>Black or African American</i></li> <li><input type="checkbox"/> <i>American Indian or Alaska Native</i>  (Name of the enrolled or principal tribe) _____</li> <li><input type="checkbox"/> <i>Asian Indian</i></li> <li><input type="checkbox"/> <i>Chinese</i></li> <li><input type="checkbox"/> <i>Filipino</i></li> <li><input type="checkbox"/> <i>Japanese</i></li> <li><input type="checkbox"/> <i>Korean</i></li> <li><input type="checkbox"/> <i>Vietnamese</i></li> <li><input type="checkbox"/> <i>Other Asian-(Specify)</i>  _____</li> <li><input type="checkbox"/> <i>Native Hawaiian</i></li> <li><input type="checkbox"/> <i>Guamanian or Chamorro</i></li> <li><input type="checkbox"/> <i>Samoan</i></li> <li><input type="checkbox"/> <i>Other Pacific Islander-(Specify)</i>  _____</li> <li><input type="checkbox"/> <i>Other-(Specify)</i>  _____</li> </ul> <p><b>Action:</b> Change the wording and response categories for these items to make them comparable with Census questions.</p> <p><b>Source:</b> Informant's Worksheet</p>

<p align="center"><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>13a. <b>Education</b> (Mother)  13b. <b>Education</b> (Father)  (Specify only highest grade completed)  Elementary/Secondary (0-12)  College (1-4 or 5+)</p>	<p><b><i>MOTHER'S EDUCATION</i></b>  <b><i>FATHER'S EDUCATION</i></b> <i>(Check the box that best describes the highest degree or level of school completed at the time of delivery.)</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>8<sup>th</sup> grade or less</i></li> <li><input type="checkbox"/> <i>9<sup>th</sup> to 12<sup>th</sup> grade; no diploma</i></li> <li><input type="checkbox"/> <i>High School Graduate or GED completed</i></li> <li><input type="checkbox"/> <i>Some college credit, but no degree</i></li> <li><input type="checkbox"/> <i>Associate degree (e.g., AA, AS)</i></li> <li><input type="checkbox"/> <i>Bachelor's degree (e.g., BA, AB, BS)</i></li> <li><input type="checkbox"/> <i>Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA)</i></li> <li><input type="checkbox"/> <i>Doctorate (e.g., PhD, EdD) or Professional degree (e.g., MD, DDS, DVM, LLB, JD)</i></li> </ul> <p><b>Action:</b> Change the wording and response categories for these items so that they will be consistent with a collapsed set of Census categories.</p> <p><b>Source:</b> Informant's Worksheet</p>
<p>14a-d. <b>Mother's [Father's] Occupation and Business/Industry</b>  (Worked during last year)</p>	<p><b>Deleted:</b> Very few States code the information and, therefore, it is not available for public health purposes.</p>

<p align="center"><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p><b>15. Pregnancy History</b> <b><u>Live Births</u></b></p> <p>15. a. Now Living Number _____ <input type="checkbox"/>None</p> <p>15. b. Now Dead Number _____ <input type="checkbox"/>None</p> <p>15. c. Date of Last Live Birth (Month, Year)</p> <p><b><u>Other Terminations</u></b> (Spontaneous and induced at any time after conception)</p> <p>15. d.(Do not include this fetus) Number _____ <input type="checkbox"/>None</p> <p>15. e. Date of Last Other Termination (Month, Year)</p>	<p><b><i>NUMBER OF PREVIOUS LIVE BIRTHS</i></b></p> <p><b>Same</b></p> <p><b>Same</b></p> <p><b>Same</b></p> <p><b><i>NUMBER OF OTHER PREGNANCY OUTCOMES</i></b> (<i>Spontaneous and induced losses or ectopic pregnancies</i>) Number _____ <input type="checkbox"/>None</p> <p><b><i>DATE OF LAST OTHER PREGNANCY OUTCOME</i></b> _____/_____ <i>MM YYYY</i></p> <p><b>Source:</b> Prenatal Care Record</p>
<p><b>16. Mother Married?</b> (At delivery, conception, or any time between) (Yes or No)</p>	<p><b>Same:</b> Changed to check box format <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p><b>Source:</b> Informant's Worksheet</p>
<p><b>17. Date Last Normal Menses Began</b> (Month, Day, Year)</p>	<p><b><i>DATE LAST NORMAL MENSES BEGAN</i></b> _____/_____/_____ <i>MM DD YYYY</i></p> <p><b>Source:</b> Prenatal Care Record</p>



<p align="center"><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p><b>18. Month of Pregnancy Prenatal Care Began</b> First, Second, Third, etc. (Specify)</p>	<p><b><i>DATE OF FIRST PRENATAL CARE VISIT:</i></b>            _____ / _____ / _____  <i>MMDDYYYY</i>  <input type="checkbox"/> <i>No Prenatal Care</i></p> <p><b>Source:</b> Prenatal Care Record</p> <p><b>Instructions:</b> Prenatal care begins when a physician or other health professional first examines and/or counsels the pregnant woman as part of an on-going program of care for the pregnancy. The date should provide a more precise indication of when care started.</p>
<p><b>19. Prenatal Visits-</b> Total Number (If none, so state)</p>	<p><b><i>TOTAL NUMBER OF PRENATAL VISITS FOR THIS PREGNANCY:</i></b> _____ (If none, <i>enter 0</i>)</p> <p><b>Source:</b> Prenatal Care Record</p>
<p><b>20. Weight of Fetus</b> (Specify unit)</p>	<p><b><i>WEIGHT OF FETUS</i></b> (<i>grams</i>)</p> <p><b>Source:</b> Prenatal Care Record (Moved to Cause-of-Fetal-Death section)</p>
<p><b>21. Clinical Estimate of Gestation</b> (Weeks)</p>	<p><b><i>OBSTETRIC ESTIMATE OF GESTATION</i></b> (<i>completed weeks</i>)</p> <p><b>Source:</b> Hospital Record (Moved to Cause-of-Fetal-Death Section)</p> <p><b>Instruction:</b> This information should be based on the attendant's final estimate of gestation based on all perinatal factors.</p>

<p><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>22. a. <b>Plurality</b> -Single, Twin, Triplet, etc. (Specify): _____</p> <p>22. b. <b>If Not Single Birth</b>—Born First, Second, Third, etc (Specify): _____</p>	<p><b>Same</b></p> <p><b>Same</b></p> <p><b>Source:</b> Hospital Record</p>

<p align="center"><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p>23. a. <b>Medical Risk Factors for this Pregnancy</b> (Check all that apply)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Anemia (Hct.&lt;30/Hgb.&lt;10)</li> <li><input type="checkbox"/> Cardiac disease</li> <li><input type="checkbox"/> Acute or chronic lung disease</li> <li><input type="checkbox"/> <u>Diabetes</u></li> <li><input type="checkbox"/> <u>Genital herpes</u></li> <li><input type="checkbox"/> Hydramnios/Oligohydramnios</li> <li><input type="checkbox"/> Hemoglobinopathy</li> <li><input type="checkbox"/> <u>Hypertension, chronic</u></li> <li><input type="checkbox"/> <u>Hypertension, pregnancy-associated</u></li> <li><input type="checkbox"/> <u>Eclampsia</u></li> <li><input type="checkbox"/> Incompetent cervix</li> <li><input type="checkbox"/> Previous infant 4000+ grams</li> <li><input type="checkbox"/> <u>Previous preterm or small-for-gestational age infant</u></li> <li><input type="checkbox"/> Renal disease</li> <li><input type="checkbox"/> <u>Rh sensitization</u></li> <li><input type="checkbox"/> <u>Uterine bleeding</u></li> <li><input type="checkbox"/> None</li> <li><input type="checkbox"/> Other (Specify) _____</li> </ul>	<p><b><i>RISK FACTORS IN THIS PREGNANCY</i></b> (Check all that apply)</p> <p><i>Diabetes</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Prepregnancy (Diagnosis prior to this pregnancy)</i></li> <li><input type="checkbox"/> <i>Gestational (Diagnosis in this pregnancy)</i></li> </ul> <p><i>Hypertension</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Prepregnancy (Chronic)</i></li> <li><input type="checkbox"/> <i>Gestational (PIH, preeclampsia, eclampsia)</i></li> </ul> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Autoimmune disorder</i></li> <li><input type="checkbox"/> <i>Vaginal bleeding during this pregnancy prior to the onset of labor</i></li> <li><input type="checkbox"/> <i>Pregnancy resulted from infertility treatment</i></li> <li><input type="checkbox"/> <i>Hemoglobinopathy</i></li> <li><input type="checkbox"/> <i>Uterine anomaly</i></li> <li><input type="checkbox"/> <i>Blood antigen isoimmunization</i></li> <li><input type="checkbox"/> <i>Motor vehicle accident</i></li> <li><input type="checkbox"/> <i>Other traumatic injury</i></li> <li><input type="checkbox"/> <i>Acute drug effect/Toxicity/Reaction</i></li> <li><input type="checkbox"/> <i>Prior incision of uterine wall</i></li> <li><input type="checkbox"/> <i>None of the above</i></li> <li><input type="checkbox"/> <i>Other (Specify) _____</i></li> </ul> <p><b><i>PREVIOUS ADVERSE PREGNANCY OUTCOME</i></b> (Check all that apply.)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Previous preterm delivery</i></li> <li><input type="checkbox"/> <i>Fetal death prior to 20 weeks</i></li> <li><input type="checkbox"/> <i>Fetal death at 20 weeks or more</i></li> <li><input type="checkbox"/> <i>SGA/IUGR (Small-for-gestational age/Intrauterine Growth Restricted)</i></li> <li><input type="checkbox"/> <i>Neonatal death</i></li> <li><input type="checkbox"/> <i>Fetus/Infant with congenital anomaly</i></li> </ul>



<p><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p><b>Weight gained during pregnancy:</b> _____ lbs</p>	<p><b><i>MOTHER'S HEIGHT AND WEIGHT</i></b></p> <p><b><i>HEIGHT</i></b> _____ (<i>inches</i>)  <b>Source:</b> Prenatal Care Record</p> <p><b><i>PREPREGNANCY WEIGHT</i></b>  _____ (<i>pounds</i>)  (<i>or weight at first prenatal visit</i>)</p> <p><b>Source:</b> Prenatal Care Record</p> <p><b><i>WEIGHT AT DELIVERY</i></b> _____  (<i>pounds</i>)  (<i>or weight at last prenatal visit</i>)</p> <p><b>Action:</b> Replace this item with three items that will provide a basis for calculating weight gain and determining body mass index.</p> <p><b>Source:</b> Hospital Record or Prenatal Care Record</p>

<p align="center"><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p><b>24. OBSTETRIC PROCEDURES</b> (Check all that apply)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Amniocentesis</li> <li><input type="checkbox"/> Electronic fetal monitoring</li> <li><input type="checkbox"/> <u>Induction of labor</u></li> <li><input type="checkbox"/> <u>Stimulation of labor</u></li> <li><input type="checkbox"/> <u>Tocolysis</u></li> <li><input type="checkbox"/> Ultrasound</li> <li><input type="checkbox"/> None</li> <li><input type="checkbox"/> Other (Specify) _____</li> </ul>	<p><b>OBSTETRIC PROCEDURES</b> (Check all that apply)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Cervical cerclage</i></li> <li><input type="checkbox"/> <i>Tocolysis</i></li> <li><i>External cephalic version</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Successful</i></li> <li><input type="checkbox"/> <i>Failed</i></li> </ul> </li> <li><input type="checkbox"/> <i>None of the above</i></li> </ul> <p><b>Action:</b> A substantially different item is recommended here to obtain information about procedures related to the timing of delivery and fetal presentation. Induction and stimulation of labor are included under <b>Characteristics of Labor and Delivery</b>.</p> <p><b>Source:</b> Prenatal Care Record and/or Hospital Record</p>

<p align="center"><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p><b>25. Complications of Labor and Delivery</b> (Check all that apply)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Febrile (&gt;100° F, or 38° C)</li> <li><input type="checkbox"/> <u>Meconium, moderate/heavy</u></li> <li><input type="checkbox"/> <u>Premature rupture of membranes (&gt;12 hours)</u></li> <li><input type="checkbox"/> Abruptio placenta</li> <li><input type="checkbox"/> Placenta Previa</li> <li><input type="checkbox"/> Other excessive bleeding</li> <li><input type="checkbox"/> Seizures during labor</li> <li><input type="checkbox"/> <u>Precipitous labor (&lt;3 hours)</u></li> <li><input type="checkbox"/> <u>Prolonged labor (&gt;20 hours)</u></li> <li><input type="checkbox"/> Dysfunctional labor</li> <li><input type="checkbox"/> <u>Breech/Malpresentation</u></li> <li><input type="checkbox"/> Cephalopelvic disproportion</li> <li><input type="checkbox"/> Cord prolapse</li> <li><input type="checkbox"/> Anesthetic complications</li> <li><input type="checkbox"/> <u>Fetal distress</u></li> <li><input type="checkbox"/> None</li> <li><input type="checkbox"/> Other (specify): _____</li> </ul>	<p><b><i>CHARACTERISTICS OF LABOR AND DELIVERY</i></b></p> <p><i>Induction of labor</i> <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p><i>Augmentation of labor</i> <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p><i>Non-vertex presentation</i> <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p><i>Steroids (glucocorticoids) for fetal lung maturation received by the mother prior to delivery</i> <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p><i>Antibiotics received by the mother during labor</i> <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p><i>Moderate/heavy meconium staining of the amniotic fluid</i> <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p><i>Epidural or spinal anesthesia during labor</i> <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p><b>Action:</b> A new list of actions and conditions that may be present during labor and delivery has been developed. Induction and stimulation (augmentation) of labor were previously included under <b>Obstetric Procedures.</b></p> <p><b>Source:</b> Hospital Record</p>

<p><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p><i>(Addition)</i></p>	<p><b><i>CHRONOLOGY OF LABOR AND DELIVERY</i></b></p> <p><input type="checkbox"/> <i>Facility admission that included delivery:</i>  _____ / _____ / _____ at  _____  <i>MM DD YYYY 24 hour clock</i></p> <p><input type="checkbox"/> <i>Delivery not in facility</i></p> <p><b><i>B. Rupture of membranes occurred on:</i></b>  _____ / _____ / _____ at  _____  <i>MM DD YYYY 24 hour clock</i></p> <p><input type="checkbox"/> <i>Not Applicable</i>      <input type="checkbox"/> <i>Unknown date and time</i></p> <p><b><i>C. Onset of labor occurred on:</i></b>  _____ / _____ / _____ at  _____  <i>MM DD YYYY 24 hour clock</i></p> <p><input type="checkbox"/> <i>Not Applicable</i>      <input type="checkbox"/> <i>Unknown date and time</i></p> <p><b><i>D. Full cervical dilation occurred on:</i></b>  _____ / _____ / _____ at  _____  <i>MM DD YYYY 24 hour clock</i></p> <p><input type="checkbox"/> <i>Not Applicable</i>      <input type="checkbox"/> <i>Unknown date and time</i></p> <p><b>New Item:</b> These items will facilitate the calculation of the length of stay in the hospital prior to delivery, the length of</p>



<p align="center"><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p><b>26. METHOD OF DELIVERY</b> (Check all that apply)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <u>Vaginal</u></li> <li><input type="checkbox"/> <u>Vaginal birth after previous C-section</u></li> <li><input type="checkbox"/> <u>Primary C-section</u></li> <li><input type="checkbox"/> <u>Repeat C-section</u></li> <li><input type="checkbox"/> <u>Forceps</u></li> <li><input type="checkbox"/> <u>Vacuum</u></li> <li><input type="checkbox"/> <u>Hysterotomy/hysterectomy</u></li> </ul>	<p><b>METHOD OF DELIVERY</b></p> <p>A. <i>Was delivery attempted with forceps and/or vacuum extraction?</i></p> <p><i>Attempted forceps</i>    <input type="checkbox"/>Yes    <input type="checkbox"/>No  <i>Attempted vacuum</i>    <input type="checkbox"/>Yes    <input type="checkbox"/>No</p> <p>B. <i>Fetal presentation at delivery</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Cephalic</i></li> <li><input type="checkbox"/> <i>Breech</i></li> <li><input type="checkbox"/> <i>Other</i></li> </ul> <p>C. <i>Final route and method of delivery (Check one)</i></p> <p><i>Vaginal:</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Spontaneous</i></li> <li><input type="checkbox"/> <i>Forceps</i></li> <li><input type="checkbox"/> <i>Vacuum</i></li> </ul> <p><i>Or:</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Cesarean</i></li> </ul> <p><i>If cesarean, was a trial of labor attempted?</i></p> <p><input type="checkbox"/>Yes                    <input type="checkbox"/>No</p> <p>D. <i>Has the mother had a previous cesarean delivery?</i></p> <p><input type="checkbox"/>Yes                    <i>If Yes, how many</i>_____</p> <p><input type="checkbox"/>No</p> <p>E. <input type="checkbox"/> <i>Hysterotomy/Hysterectomy</i></p> <p><b>Source:</b> Hospital Record</p>

<p align="center"><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p><b>27. Congenital Anomalies of Fetus</b> (Check all that apply)</p> <p><input type="checkbox"/> Anencephalus</p> <p><input type="checkbox"/> Spina bifida/Meningocele</p> <p><input type="checkbox"/> Hydrocephalus</p> <p><input type="checkbox"/> Microcephalus</p> <p><input type="checkbox"/> Other central nervous system anomalies (Specify) _____</p> <p><input type="checkbox"/> Heart malformations</p> <p><input type="checkbox"/> Other circulatory/respiratory anomalies (Specify) _____</p> <p><input type="checkbox"/> Rectal atresia/stenosis</p> <p><input type="checkbox"/> Tracheo-esophageal fistula/Esophageal atresia</p> <p><input type="checkbox"/> Omphalocele/Gastroschisis</p> <p><input type="checkbox"/> Other gastrointestinal anomalies (Specify) _____</p> <p><input type="checkbox"/> Malformed genitalia</p> <p><input type="checkbox"/> Renal agenesis</p> <p><input type="checkbox"/> Other urogenital anomalies (Specify) _____</p> <p><input type="checkbox"/> Cleft lip/palate</p> <p><input type="checkbox"/> Polydactyly/Syndactyly/Adactyly</p> <p><input type="checkbox"/> Club foot</p> <p><input type="checkbox"/> Diaphragmatic hernia</p> <p><input type="checkbox"/> Other musculoskeletal/integumental anomalies (Specify) _____</p> <p><input type="checkbox"/> Down's syndrome</p> <p><input type="checkbox"/> Other chromosomal anomalies (Specify) _____</p> <p><input type="checkbox"/> None</p> <p><input type="checkbox"/> Other (Specify) _____</p>	<p><b>CONGENITAL ANOMALIES OF THE FETUS</b> (<i>Observed within 24 hours of delivery</i>) (Check all that apply)</p> <p><input type="checkbox"/> <i>Neural tube defect</i></p> <p><input type="checkbox"/> <i>Congenital heart disease</i></p> <p><input type="checkbox"/> <i>Congenital diaphragmatic hernia</i></p> <p><input type="checkbox"/> <i>Anterior abdominal wall defect</i></p> <p><input type="checkbox"/> <i>Omphalocele</i></p> <p><input type="checkbox"/> <i>Gastroschisis</i></p> <p><input type="checkbox"/> <i>Limb reduction defect (excluding congenital amputation and dwarfing syndromes)</i></p> <p><input type="checkbox"/> <i>Orofacial defect/cleft</i></p> <p><input type="checkbox"/> <i>Suspected chromosomal disorder</i> <i>Karyotype confirmed</i>    <input type="checkbox"/>Yes    <input type="checkbox"/>No <i>Karyotype pending</i>    <input type="checkbox"/>Yes    <input type="checkbox"/>No</p> <p><input type="checkbox"/> <i>Hypospadias</i></p> <p><input type="checkbox"/> <i>None of the anomalies listed above</i></p> <p><input type="checkbox"/> <i>Other (Specify) _____</i></p> <p><b>Action:</b> Replace with a list of congenital anomalies that are evident at delivery and require intervention.</p> <p><b>Source:</b> Hospital Record</p>

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<p><b>CAUSE OF FETAL DEATH</b></p> <p><b>28. PART I Fetal or maternal condition directly causing fetal death.</b> Enter only one cause per line for a, b, and c.</p> <p>a. IMMEDIATE CAUSE (Specify Fetal or Maternal)</p> <p>b-c. DUE TO (OR AS A CONSEQUENCE OF)–Fetal and/or maternal conditions, if any, giving rise to the immediate cause(s), stating the underlying cause last. (Specify Fetal or Maternal)</p>	<p><b><i>CAUSE/CONDITIONS CONTRIBUTING TO FETAL DEATH</i></b></p> <p><b><i>INITIATING CAUSE/CONDITION</i></b> <i>(Select one or specify)</i></p> <p><i>Maternal Conditions/Diseases (Specify) _____</i></p> <p><i>Complications of Placenta, Cord, or Membranes</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Rupture of membranes prior to onset of labor</i></li> <li><input type="checkbox"/> <i>Abruptio placenta</i></li> <li><input type="checkbox"/> <i>Placenta insufficiency</i></li> <li><input type="checkbox"/> <i>Prolapsed cord</i></li> <li><input type="checkbox"/> <i>True knot in cord</i></li> <li><input type="checkbox"/> <i>Chorioamnionitis</i></li> <li><input type="checkbox"/> <i>Other (Specify) _____</i></li> </ul> <p><i>Other Obstetrical or Pregnancy Complications (Specify) _____</i></p> <p><i>Fetal Anomaly (Specify) _____</i></p> <p><i>Fetal Injury (Specify) _____</i></p> <p><i>Fetal Infection (Specify) _____</i></p> <p><i>Other Fetal Conditions/Disorders (Specify) _____</i></p> <p><input type="checkbox"/> <i>Unknown</i></p> <p><b>Action:</b> Check box and open-ended question formats are combined to capture the most clinically relevant information being reported, while concurrently meeting the WHO reporting requirements.</p>

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<p><b>CAUSE OF FETAL DEATH</b></p> <p><input type="checkbox"/> <b>PART II <u>Other significant conditions</u></b> of fetus or mother contributing to fetal death but not resulting in the underlying cause given in PART I.</p>	<p><b><i>OTHER SIGNIFICANT CAUSES OR CONDITIONS</i></b> (Select or specify all that apply)</p> <p><i>Maternal Conditions/Diseases</i> (Specify) _____</p> <p><i>Complications of Placenta, Cord, or Membranes</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Rupture of membranes prior to onset of labor</i></li> <li><input type="checkbox"/> <i>Abruptio placenta</i></li> <li><input type="checkbox"/> <i>Placenta insufficiency</i></li> <li><input type="checkbox"/> <i>Prolapsed cord</i></li> <li><input type="checkbox"/> <i>True knot in cord</i></li> <li><input type="checkbox"/> <i>Chorioamnionitis</i></li> <li><input type="checkbox"/> <i>Other</i> (Specify) _____</li> </ul> <p><i>Other Obstetrical or Pregnancy Complications</i> (Specify) _____</p> <p><i>Fetal Anomaly</i> (Specify) _____</p> <p><i>Fetal Injury</i> (Specify) _____</p> <p><i>Fetal Infection</i> (Specify) _____</p> <p><i>Other Fetal Conditions/Disorders</i> (Specify) _____</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Unknown</i></li> </ul> <p><b>Action:</b> Check box and open-ended question formats are combined to capture the most clinically relevant information being reported, while concurrently meeting the WHO reporting requirements.</p> <p><b>Source:</b> Hospital Record</p>

<p><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p style="text-align: right;"><i>(Addition)</i></p>	<p><b><i>WAS AN AUTOPSY PERFORMED?</i></b>  <input type="checkbox"/> <i>Yes</i> <input type="checkbox"/> <i>No</i></p> <p><b>New Item:</b> Item helps accurately determine the medical conditions that led to death of the fetus.</p> <p><b>Source:</b> Hospital Record</p>
<p><b>29. Fetus died before labor, during labor or delivery, unknown (Specify)</b></p>	<p><b><i>ESTIMATED TIME OF FETAL DEATH</i></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Dead at first assessment (admission to hospital)</i></li> <li><input type="checkbox"/> <i>Died during labor</i></li> <li><input type="checkbox"/> <i>Unknown time of fetal death</i></li> </ul> <p><b>Action:</b> Item is intended to accurately reflect what can be measured.</p> <p><b>Source:</b> Hospital Record</p>
<p style="text-align: right;"><i>(Addition)</i></p>	<p><b><i>WAS A HISTOLOGICAL PLACENTAL EXAMINATION PERFORMED?</i></b>  <input type="checkbox"/> <i>Yes</i> <input type="checkbox"/> <i>No</i></p> <p><b>New Item:</b> This information is important in determining the medical conditions that could have led to fetal death.</p> <p><b>Source:</b> Hospital Record</p>

<p><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p style="text-align: right;"><i>(Addition)</i></p>	<p><b><i>WERE AUTOPSY OR HISTOLOGICAL PLACENTAL EXAMINATION RESULTS USED IN DETERMINING THE CAUSE OF FETAL DEATH?</i></b></p> <p><input type="checkbox"/> <i>Yes</i>   <input type="checkbox"/> <i>No</i></p> <p><b>New Item:</b> Item provides information on the data available to the certifier when he/she certified the cause of fetal death, and can provide some indication as to the quality of the cause-of-fetal-death data.</p> <p><b>Source:</b> Hospital Record</p>
<p style="text-align: right;"><i>(Addition)</i></p>	<p><b><i>PLACENTA APPEARANCE</i></b></p> <p><input type="checkbox"/> <i>Normal</i></p> <p><input type="checkbox"/> <i>Abnormal</i></p> <p><i>(Specify)</i> _____</p> <p><b>New Item:</b> This information is collected as part of standard obstetric practice and is important in determining the medical conditions that could have led to fetal death.</p> <p><b>Source:</b> Hospital Record</p>

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<p align="right"><i>(Addition)</i></p>	<p><b><i>FETAL APPEARANCE AT DELIVERY</i></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Structure and appearance normal</i></li> <li><input type="checkbox"/> <i>Obvious dysmorphic features</i></li> <li><i>Desquamation/maceration</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Minimal to mild (&lt; 5% of body surface area)</i></li> <li><input type="checkbox"/> <i>Moderate to severe (≥ 5% of body and two anatomic areas)</i></li> </ul> </li> <li><input type="checkbox"/> <i>Hydrops fetalis</i></li> <li><input type="checkbox"/> <i>Mummification</i></li> </ul> <p><b>New Item:</b> Item allows the delivery attendant to report physical findings obvious at delivery. This item increases the information available about time and cause of fetal death in the absence of an autopsy.</p> <p><b>Source:</b> Hospital Record</p>
<p><b>30. ATTENDANT'S NAME AND TITLE</b> (If other than certifier) (Type/Print) Name _____</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> M.D.</li> <li><input type="checkbox"/> D.O.</li> <li><input type="checkbox"/> C.N.M.</li> <li><input type="checkbox"/> Other Midwife</li> <li><input type="checkbox"/> Other (specify) _____</li> </ul>	<p><b>ATTENDANT'S NAME, TITLE, AND NPI</b></p> <p>NAME: _____</p> <p>NPI: _____</p> <p>TITLE:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> MD</li> <li><input type="checkbox"/> DO</li> <li><input type="checkbox"/> CNM/CM</li> <li><input type="checkbox"/> Other Midwife</li> <li><input type="checkbox"/> Other (Specify) _____</li> </ul> <p><b>Source:</b> Hospital Record</p>

<p><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p><b>31. NAME AND TITLE OF PERSON COMPLETING REPORT</b> (Type/Print) Name _____ Title _____</p>	<p><b>Same</b></p> <p><b>Source:</b> Hospital Record</p>
<p><i>(Addition)</i></p>	<p><b><i>FACILITY ID (NPI)</i></b></p> <p><b>New Item:</b> The National Provider Identifier (NPI) will identify the facility where the mother delivered and provide additional information about the facility when it becomes available.</p> <p><b>Source:</b> Hospital or Other Facility</p>
<p><i>(Addition)</i></p>	<p><b><i>PLACE WHERE DELIVERY OCCURRED (Check one)</i></b></p> <p><input type="checkbox"/> <i>Hospital</i></p> <p><input type="checkbox"/> <i>Freestanding birthing center</i></p> <p><input type="checkbox"/> <i>Home Delivery: Planned to deliver at home? <input type="checkbox"/>Yes <input type="checkbox"/>No</i></p> <p><input type="checkbox"/> <i>Clinic/Doctor's office</i></p> <p><input type="checkbox"/> <i>Other (Specify) _____</i></p> <p><b>New Item:</b> Item added to make the fetal death report similar to the birth certificate and to assist in the identification of planned home deliveries.</p> <p><b>Source:</b> Hospital or Other Facility</p>



<p align="center"><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p align="center"><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p align="right"><i>(Addition)</i></p>	<p><b><i>PRINCIPAL SOURCE OF PAYMENT FOR THIS DELIVERY</i></b></p> <p><input type="checkbox"/> <i>Private Insurance</i></p> <p><input type="checkbox"/> <i>Medicaid</i></p> <p><input type="checkbox"/> <i>Self-pay</i></p> <p><input type="checkbox"/> <i>Other (Specify) _____</i></p> <p><b>New Item:</b> The item will provide a measure of socioeconomic status, as well as an indication of program participation. Self-pay will provide an indication of the number of women for whom no source of payment was identified at the time of admission.</p> <p><b>Source:</b> Hospital Admission Record</p>
<p align="right"><i>(Addition)</i></p>	<p><b><i>TIME OF DELIVERY (24 hr.)</i></b></p> <p><b>New Item:</b> Item documents the exact time of delivery for legal purposes and for the order of birth in the case of plural deliveries..</p> <p><b>Source:</b> Hospital or Other Facility</p>
<p align="right"><i>(Addition)</i></p>	<p><b><i>DATE REPORT COMPLETED</i></b></p> <p align="center"> <math display="block">\frac{\quad}{MM} / \frac{\quad}{DD} / \frac{\quad}{YYYY}</math> </p> <p><b>New Item:</b> Item documents whether the report was completed within the legally specified time period.</p> <p><b>Source:</b> Hospital or Other Facility</p>

<p><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p><i>(Addition)</i></p>	<p><b><i>DATE RECEIVED BY REGISTRAR</i></b></p> <p><i>_____ / _____ / _____</i></p> <p><i>MM DD YYYY</i></p> <p><b>New Item:</b> Item documents whether the report was filed within the legally specified time period.</p> <p><b>Source:</b> Registrar’s Office</p>
<p><i>(Addition)</i></p>	<p><b><i>WAS THE PRENATAL RECORD AVAILABLE FOR COMPLETION OF THE FETAL DEATH REPORT?</i></b></p> <p><i><input type="checkbox"/>Yes <input type="checkbox"/>No</i></p> <p><b>New Item:</b> Item provides information about the continuity of care and the accuracy of information from prenatal records.</p> <p><b>Source:</b> Prenatal Care Record and Hospital Record</p>

<p><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p><i>(Addition)</i></p>	<p><b><i>INFECTIONS PRESENT AND/OR TREATED DURING THIS PREGNANCY (Check all that apply)</i></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Gonorrhea</i></li> <li><input type="checkbox"/> <i>Syphilis</i></li> <li><input type="checkbox"/> <i>Herpes Simplex Virus (HSV)</i></li> <li><input type="checkbox"/> <i>Chlamydia</i></li> <li><input type="checkbox"/> <i>Listeria</i></li> <li><input type="checkbox"/> <i>Group B Streptococcus</i></li> <li><input type="checkbox"/> <i>Cytomeglovirus</i></li> <li><input type="checkbox"/> <i>Parvovirus</i></li> <li><input type="checkbox"/> <i>Toxoplasmosis</i></li> <li><input type="checkbox"/> <i>None of the above</i></li> <li><input type="checkbox"/> <i>Other (Specify) _____</i></li> </ul> <p><b>New Item:</b> This item seeks information about the prevalence of specific infections during pregnancy.</p> <p><b>Source:</b> Prenatal Care Record and Hospital Record</p>

<p><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p><i>(Addition)</i></p>	<p><b><i>MATERNAL MORBIDITY</i></b> <i>(Check all that apply) (Occurring 24 hours before delivery or within 24 hours of delivery):</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Maternal transfusion</i></li> <li><input type="checkbox"/> <i>Third or fourth degree perineal laceration</i></li> <li><input type="checkbox"/> <i>Ruptured uterus</i></li> <li><input type="checkbox"/> <i>Unplanned hysterectomy</i></li> <li><input type="checkbox"/> <i>Admission to intensive care unit</i></li> <li><input type="checkbox"/> <i>Unplanned operating room procedure following delivery</i></li> <li><input type="checkbox"/> <i>None of the above</i></li> </ul> <p><b>New Item:</b> Significant indicators of maternal morbidity are being sought.</p> <p><b>Source:</b> Mother's Hospital Records</p>
<p><i>(Addition)</i></p>	<p><b><i>DID MOTHER GET WIC FOOD FOR HERSELF DURING THIS PREGNANCY?</i></b> <input type="checkbox"/> <i>Yes</i> <input type="checkbox"/> <i>No</i></p> <p><b>New Item:</b> This item provides information about program participation and socioeconomic status.</p> <p><b>Source:</b> Informant's Worksheet</p>

<p><b>Report of Fetal of Fetal Death 1989</b></p> <p><u>Underlined check box items recommended for retention in same or modified form in 2003.</u></p>	<p><b>Proposed Report of Fetal Death 2003</b></p> <p><i>Italicized items or check boxes differ from 1989.</i></p>
<p><i>(Addition)</i></p>	<p><b><i>MOTHER TRANSFERRED FOR MATERNAL MEDICAL OR FETAL INDICATIONS FOR DELIVERY?</i></b>  <input type="checkbox"/> <i>Yes</i>   <input type="checkbox"/> <i>No</i></p> <p><b><i>IF YES, ENTER NAME OF FACILITY MOTHER TRANSFERRED FROM:</i></b></p> <p>_____</p> <p><b>New Item:</b> Item added to be consistent with the birth certificate information.</p> <p><b>Source:</b> Hospital Record</p>
<p><i>(Addition)</i></p>	<p><b><i>METHOD OF DISPOSITION</i></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Burial</i></li> <li><input type="checkbox"/> <i>Cremation</i></li> <li><input type="checkbox"/> <i>Hospital Disposition</i></li> <li><input type="checkbox"/> <i>Donation</i></li> <li><input type="checkbox"/> <i>Removal from State</i></li> <li><input type="checkbox"/> <i>Other (specify)</i></li> </ul> <p><b>New Item:</b> This item indicates whether the fetus was disposed of as required by law.</p> <p><b>Source:</b> Funeral Director</p>
<p><i>(Addition)</i></p>	<p><b><i>NAME OF FETUS (Optional-at the discretion of the parents)</i></b></p> <p><b>New Item:</b> Some parents want to name the fetus, and a number of States already include this item as an option on the Report of Fetal Death.</p> <p><b>Source:</b> Informant's Worksheet</p>

## Recommendations from the Standards and Design Subgroup

### Organization of the Standards and Design Subgroup

The Standards and Design Subgroup was responsible for reviewing the U.S. Standard Certificates of Live Birth and Death and Report of Fetal Death to determine how these documents should be designed as paper and/or electronic documents. While the Birth, Death and Fetal Death subgroups were responsible for designing the substance of the two certificates and report, the Standards and Design subgroup worked on design issues, building on the opportunities presented by the new certificates and electronic systems. The Subgroup's goal was to develop a complete "package" of new certificates, worksheets, instructions, and recommendations for an implementation plan. Its approach was to examine the process by which certificates are completed in various registration areas, survey current state work processes, and examine current worksheets.

Worksheets, for example, had not been included in the recommendations of previous standard certificate committees. The Subgroup felt that they are important data collection instruments and recommended them in various forms for all the certificates. The rationale is that most users need and use worksheets whether they have been provided by vital records offices or not, and they help to improve data quality. Further, worksheets serve as a bridge between the purely paper certificates with limited instructions, and the registration systems of tomorrow, which will be electronic.

The Standards and Design Subgroup members were as follows:

Steven Schwartz, Ph.D., Chairperson  
Registrar and Director  
Office of Vital Statistics and  
Epidemiology  
City of New York Department of Health

Donald Berry  
Manager  
Health Statistics and Research  
Bureau of Health Planning and  
Resource Management (Delaware)

Dorothy Harshbarger  
State Registrar and Director  
Center for Health Statistics  
Alabama Department of Public Health

Patricia Brown  
Senior Director, HHS Division  
Middle Atlantic Region, QuadraMed  
Corporation  
(American Health Information  
Management Association)

Gregory George Davis, M.D.

Associate Coroner/Medical Examiner  
Jefferson County, Alabama  
(National Association of Medical  
Examiners)

Carol Getts  
State Registrar and Director  
Division for Vital Records and Health  
Statistics  
Michigan Department of Community  
Health

Karen Grady  
State Registrar and Chief  
Bureau of Vital Records and Health  
Statistics  
Health and Human Services (New  
Hampshire)

Randy L. Hanzlick, M.D.  
Chief, Medical Examiner  
Fulton County  
Atlanta, Georgia  
(College of American Pathologists)

Nelly Leon-Chisen, RRA  
Director, Central Office on ICD-9 CM  
(American Hospital Association)

Jonathan VanGeest, Ph.D.  
(American Medical Association)

The following staff from the National Center for Health Statistics also attended  
Subgroup meetings:

George A. Gay  
Donna Hoyert, Ph.D.

T. J. Mathews  
George C. Tolson, Rapporteur  
David Justice, Rapporteur

The Standards and Design Subgroup met in conjunction with five of the six meetings of the Panel to Evaluate the U.S. Standard Certificates and Report, beginning in May 1998. The Subgroup also held a meeting in March 1999 in preparation for the Panel to Evaluate the U.S. Standard Certificates and Report's final meeting in April. During its first meeting, the Subgroup established goals and objectives and explored the use of technology in automating linkage between data sets.

At its July 1998 meeting, the Standards and Design Subgroup reviewed criteria proposed by the Death Subgroup to help determine how items would be formatted on the certificates and report. There was also a demonstration of New Hampshire's Electronic Death Registration software, presented by Ms. Karen Grady.

During its third meeting, held in October 1998, the Standards and Design Subgroup began reviewing recommendations from the Birth and Death Subgroups. In addition, Dr. Schwartz and Mr. Gay reported on their meeting with NCHS Cognitive Lab staff. The meeting was intended to solicit NCHS input on wording and other pretesting issues, as well as the certificate redesign process. Finally, the Subgroup heard presentations from fellow group members regarding a survey distributed to

States represented by Panel members. The survey synopses provide comments about current forms/worksheets being used in the States, available training material, and information on the survey respondents.

In January 1999, the Subgroup began developing worksheets to accompany the certificates and report and devised mock ups of the birth and death certificates. The Standards and Design Subgroup members continued debating the format for certain items and discussed how items should be grouped on the death certificate.

During its fifth meeting held in March 1999, the Subgroup reviewed findings from pilot testing at hospitals and focus groups convened to discuss medical items on the birth certificate and fetal death report. Subgroup members were assigned to breakout groups to further discuss the birth and death certificates. Members of the respective breakout groups reported their discussions to the Subgroup, which incorporated this input into its recommendations for the draft design of the certificates and report.

In April 1999, the Standards and Design Subgroup held its final meeting. During this meeting, the Subgroup finalized recommendations on the design of the birth and death certificates, fetal death report, and corresponding worksheets. The Subgroup also drafted recommendations to improve vital event certificate data quality to be brought before the Parent Group.

### **Certificates and Report**

The Standards and Design Subgroup spent a considerable amount of time and effort developing the format for the certificates and report. Much of the Subgroup's work focused on making the documents as consistent as possible to facilitate data comparability. The Subgroup also considered how the formatting of paper documents would ultimately impact the shift to electronic systems. The following are formatting items that will impact the birth and death certificates and fetal death report.

- Each certificate and report will have a left margin of at least 1 inch, preferably 1½ inches.
- The MM/DD/YYYY or MM/YYYY format for dates, as appropriate, will be used.

### **Birth Certificate**

The birth certificate will include two 8 ½ x 11-inch pages comprising three components for the collection of certified/legal items, information for administrative use, and information for medical and health purposes. As part of the document's reformatting, space will be reallocated to provide more space needed for child's name, mother's name, mother's residence, father's name, mother's mailing address, attendant's name, and certifier's name. Less space will be provided for mother's date of birth, father's date of birth, mother's birthplace, and father's birthplace.



**Death Certificate**

The death certificate will include three 8½ x 14-inch pages, yielding 6 full sides. The first page will include instructions for the certifier; the second page would be the official death certificate; and the third page would be instructions for the funeral director. The subgroup decided a worksheet for funeral directors would not be widely used since funeral directors already use their own worksheets which also include business information. Due to concerns regarding bleed through, the back of the death certificate will not be used. Tumble printing will be used for the instructions, and there will be instructions in the left margin to indicate who is to complete each section. There is a statistical section of the death certificate that is to be completed by the funeral director.

**Report of Fetal Death**

The fetal death report will include two 8 ½ x 11-inch pages comprising three components for the collection of certified/legal items, cause/conditions contributing to fetal death, and information for medical and health purposes. Much of the report will be formatted like the birth certificate because many of the items for collection are the same.

## **Supplemental Recommendations**

The Standards and Design Subgroup and the Death Subgroup made recommendations that went beyond specific items for or design of the standard certificates. The premise of most of these recommendations is to improve the quality of the data collected through the vital statistics system in the United States. The two major changes that were recommended in this evaluation of the standard certificates were 1) the development of worksheets to be used in the collection of birth, death, and fetal death data and 2) the development of a formal implementation plan. Many of the supplemental recommendations are included in the implementation plan.

### **General**

- For the implementation to work, States must look at the entire vital registration system, not just at the content and format of certificates and reports.
- NCHS should develop and implement a formal plan for the implementation of revisions to the standard certificates and report prior to the June NAPHSIS meeting.

### **Automation**

- States and NCHS must advocate the use of automated, electronic collection of data, which enables detailed instructions, help screens, and real-time edit checking.
- The new certificates and fetal death report should not only accommodate electronic filing, but also build on the transition from paper to electronic.

### **Public Relations**

- NCHS, NAPHSIS, and the States should encourage publicity about birth and death certificates, fetal death reports and their importance as sources of public health data.
- NCHS and NAPHSIS should convene a group of representatives from health care provider organizations (after completion of the recommended data sets) to discuss the proposed new data sets and their implementation.
- NCHS, NAPHSIS, and the States should work with professional organizations whose members participate in the vital registration process (e.g., AMA, ACOG, NFDA, AHIMA) to promote better data quality and systems, including making presentations at national and State meetings.
- NCHS and NAPHSIS should convene a group of the appropriate vendors and advise them to make certain modifications in hospital-based software that would facilitate completion of the birth certificate.

- NCHS should obtain endorsements in support of the revisions of the birth and death certificates and fetal death report and publicity from the following associations:
 

NAPHSIS	NFDA
AHA	ACOG
ASTHO	AAP
APHA	ACNM
AMA	AHIMA
CAP	Maternal & Child Health Affiliate
NAME	of ASTHO
- NCHS, in coordination with Subgroup Chairs, should support and encourage the reporting of Panel results in professional journals.

### **Funding**

- NCHS should seek adequate funding for the States to implement the recommended revisions of the birth and death certificates and fetal death report.

### **Training and Education - NCHS should take the lead in:**

- NCHS, NAPHSIS, and the States should work with AHIMA toward the creation of a certification/credentialing program for hospital registration staff, including development and use of computer interactive training programs.
- NCHS should develop a video to educate pregnant women and new mothers about the importance of correct information on the birth certificate. This video should be suitable for use in birthing centers, hospitals, waiting rooms of prenatal care providers, and childbirth classes.
- NCHS should seek funds to assist States in the development of an educational program for funeral service licensees and other agents and certifiers in the revision of the birth and death certificates and fetal death report.
- NCHS and NAPHSIS should work with the AMA and deans of medical schools to increase medical school education about the importance of the birth and death certificates and fetal death report and their proper use and completion.
- NCHS and NAPHSIS should work with the AMA and other professional organizations to encourage national licensing organizations to include questions about the birth and death certificates and fetal death report on examinations as an impetus for study by candidates.
- NCHS and NAPHSIS should work with the AMA and other professional organizations to encourage the appropriate residency review committees to include teaching about the birth and death certificates and fetal death report in post graduate medical education requirements.
- NCHS and NAPHSIS should work with the AMA and other professional organizations to encourage specialty board examiners to include questions on

the use and completion of birth and death certificates and fetal death report that apply to their candidates.

- NCHS should convene groups of physicians to support collection of “abnormal conditions of the newborn” item and recommend that additional information be provided to hospital personnel completing the certificate so that the proper use of the item is understood.

### **Training and Education - States should take the lead in:**

- Conducting education campaigns directed toward hospitals, physicians, nurse midwives, and funeral directors and others involved in the registration process emphasizing the change to the new certificates and fetal death report and their importance.
- NCHS and NAPHSIS should work with associations and other individuals to develop and distribute appropriate instructional materials utilizing NCHS and other available State examples.
- NCHS and NAPHSIS should work with the AMA and other professional organizations to urge State and local medical societies to use the birth and death certificates and fetal death report as a subject for continuing education and also pursue local policies and/or legislative changes which would enhance the practice of amending the records to increase accuracy, especially on the death certificate following an autopsy.

### **Worksheets and Data Collection**

- All States should require that worksheets be used for data collection.
- States should promote the proper use of birth worksheets. Parents birth worksheets should be initiated during prenatal care then verified with the mother after birth. This worksheet, when available, should also be used in the completion of the report of fetal death.
- States should require that worksheets used by hospitals must either be provided or approved by the States.
- States should require that uploading data from hospital, funeral home, or other automated record systems should only be permitted if approved by the State.
- NCHS should work to ensure that data collection forms prepared by third parties (e.g. Hollister, ACOG, hospitals and funeral firms) reflect the new certificates, worksheets, and instructions.
- States should facilitate the development of "cross-walks" between worksheets and third-party forms to improve data collection.
- States should develop a vital events clerk handbook that rephrases technical terminology in lay person's terms, similar to the New York State data dictionary.
- NCHS should reinstate the autopsy item on the death certificate as a part of the national data set (seek funding for the States for the collection of autopsy item on the death certificate).

## Quality Assurance

- States should provide data feedback and quality assurance reports to hospitals so that they can see the data and how it is used.
- States should be encouraged to have strong field and quality assurance programs to ensure high data quality.
- NCHS and NAPHSIS should develop a comprehensive set of recommended edits and value ranges to encourage consistency and standardization.
- A group should be established to include NCHS, NAPHSIS, and professional associations (e.g., AAP, ACOG) to regularly review items on the standard certificates. This group would review the standard certificates to ensure that definitions are accurate, new treatments and medications are accounted for, and needed changes are recommended.
- Identify an advocate (credentialed person) in each hospital to ensure accuracy of information on forms and to promote document quality.
- NCHS and NAPHSIS should work with the AMA and other professional organizations on the usefulness and feasibility of involving quality assurance groups in auditing and monitoring birth and death certificate and fetal death report completion by physicians in practice.

## Validation

- If testing proves that a particular method of collection is problematic, every effort should be made to improve data collection before considering whether to drop an item from the certificates, report, or worksheets.
- NCHS should seek funds for a research study to evaluate new items on the birth and death certificates and fetal death report.
- NCHS should pilot test the effectiveness of the revised birth and death certificates and fetal death report instructions with persons responsible for completing these records: medical record personnel, funeral service licensees, certifying physicians, medical examiners, and coroners.
- NCHS should pilot test the effectiveness of the repositioning of items on the birth and death certificates and fetal death report intended to improve the logic of the certification process.
- NCHS should seek funds for a research study of risk factors (excluding tobacco and pregnancy) on the death certificate to identify the relevant issues and evaluate options for collecting risk factor information related to mortality on the death certificate. The study should assess the appropriateness of asking for selected risk factors on the death certificate, and perhaps, the content and format of these questions. The study should be completed by the year 2009.

This issue has arisen because of the interest in understanding factors other than traditional medical factors that contribute to death including environmental and behavioral factors such as those described by McGinnis and Foege (1993). For example, the McGinnis and Foege article suggested that tobacco contributed to

19% of deaths in 1990 and diet and exercise contributed to 14% of deaths. In contrast, the WHO model of the death certificate focuses primarily on medical factors related to death, not risk factors.

The Death Subgroup discussed that collecting risk factors on the death certificate is only appropriate if the risk factor is defined closely, so that it is linked to death. While there is substantial interest in collecting this sort of information, the efficacy of collecting this information on the death certificate is unknown. The subgroup felt that it was important to examine the issues involved, but that it would take more than the few months available to do so.

Among the issues the study should address are: 1) what is the potential list of risk factors, 2) who provides the information: the attending physician or an informant, 3) who would have the information, 4) whether risk factor collection would be appropriate for the death certificate or if it would be better to collect using a survey (either retrospective or prospective), 5) whether the quality (e.g., reliability and validity) would be high enough for such socially sensitive issues on a public document, 6) how the information would be used, and 7) what would be the best way to collect (e.g., worksheet or electronic death certificate).

### **Follow Up to 2003 Revision**

- NCHS should reconvene the Panel to review and evaluate the implementation of the revision of the birth and death certificates and fetal death report in the 57 registration areas within 2 years of implementation.

### **Policy**

- Promote public health groups working toward amending Federal legislation to allow for the use of social security numbers.
- Encourage AMA to resolve or establish policy that birth and death certificates and fetal death report completion is a physician responsibility and duty to complete the continuum of patient care.
- States should be encouraged to have legislation that appropriately emphasizes that vital record completion is a physician duty.

### **Future Revisions**

- Include a perinatal pathologist on the Fetal Death Subgroup in the next revision.
- A recommendation was made after the revision panel had completed its deliberations and submitted the draft revisions to NCHS that input from a State epidemiologist would have been beneficial on several items. As a result, NCHS staff consulted with the Council of State and Territorial Epidemiologists (CSTE) on several issues. While this consultation did not result in any changes to the

drafts presented by the panel, their insights were very helpful. Therefore, a suggestion has been made that when the panel membership is selected for the next revision, CSTE be asked to select a State epidemiologist to represent them on the panel.

## **Items Recommended by the Subgroups, but Rejected by Parent Group**

The following item was recommended by the Death Subgroup but rejected by the Parent Group.

- In conjunction with HCFA and other health care funding sources, develop a plan to compensate institutions and/or certifiers for professional and administrative costs associated with a quality birth or death certificate or fetal death report.

The Parent Group generally opposed this recommendation because completing the standard certificates and reports is a legal requirement. In addition, some noted that the costs for services may already be built into funeral director fees or hospital overhead.

- Encourage States to have legislation that appropriately emphasizes that vital records completion is a physician duty.



## **Recommendations Related to the 1992 Model State Vital Statistics Act and Regulations**

The panel identified several areas where State laws or procedures would need to be changed to accommodate the recommendations of the Panel to Evaluate the U.S. Standard Certificates; it was also noted that the Model State Vital Statistics Act and Regulations would need to be changed as well. However, since States may need to revise their laws or regulations now, NCHS was asked to work with the Panel to draft wording related to the following and that these changes be incorporated into the Model Act and Regulations when those documents are next revised:

- Require that hospitals and prenatal care providers use either State provided or State approved worksheets to obtain the information required for the birth certificate and fetal death report.
- The revised birth certificate has a new “Information for Administrative Use” section. The law and regulations need to be changed to accommodate this new section and to address restrictions on the release of information contained in the section.
- The revised death certificate contains a “For Statistical Use Only” section. The law and regulations need to be changed to accommodate this new section and to address restrictions on the release of information contained in the section.
- The Panel has proposed that States move toward the use of more automation in the registration process and move toward eliminating the filing of a paper certificate. However, there are instances where a paper certificate may still be filed. The law and regulations should be changed to indicate that the signature of the certifier will only be required on a birth or death certificate filed manually. When a vital event is registered electronically, an alternative method approved by the state registrar may be used.

## Secondary Data Items

Throughout their deliberations, the Birth, Death, and Fetal Death Subgroups pondered whether to propose the collection of various items intended to enhance the national data set. Part of the charge of each Subgroup was to determine which questions should be included on the standard certificates to elicit the best possible information. This process resulted in the discussion of a number of topics of national health interest. There were some data that the Subgroups wanted to obtain, but did not believe collection was warranted on a national basis as part of the standard certificate. However, the Parent Group thought that it would be helpful to provide a uniform question or procedure for those States that choose to include such items/procedures on their certificates. The list of items was referred to as “secondary or B-list items.” The Parent Group also thought that secondary data items would be useful for the next revision of the standard certificates because they would be items not part of the national data set, but items that had been tested in some States. All items rejected by the Parent Group for inclusion on the standard certificates were also considered for secondary data items for states to collect if they wish to include the item on the state certificate.

The secondary data items recommended by the Parent Group include:

### ***Birth Certificate***

- ***Enter the exact month, day, and year that the mother/father was born. Age of mother/father \_\_\_\_\_ (years).***
- Collect the age of the mother on the Parent’s worksheet in addition to obtaining the mother’s date of birth for the certificate. This would be used as a consistency check on date of birth.
- Obtain the date of birth of the father whenever possible or collect age of father if the date of birth is not available, even when the mother is unmarried
- ***Mother/Father - usual occupation worked during last year.*** This information was considered important, but it was felt that the funds were not available in most states to code the information. Therefore, it was recommended as a B-list item for those states that have the funding available to collect and code the information. This information is useful in studying job-related risk areas.
- ***Type of practitioner providing prenatal care.*** This information is needed to examine the appropriateness of care and for quality assurance

### ***Death Certificate***

- ***Was the decedent receiving hospice care? Yes, No, Unknown.*** This information will better describe the level of care a person received.

### ***Fetal Death Report***

- ***Crown-rump length (in cms.).*** This information will help in determining gestational age of the fetus.
- ***Mother/Father - usual occupation worked during last year.*** This information was considered important, but it was felt that the funds were not available in most states to code the information. Therefore, it was recommended as a B-list item for those states that have the funding available to collect and code the information. This information is useful in studying occupationally related mortality and to identify job-related risk areas.
- ***Type of practitioner providing prenatal care.*** This information is needed to examine the appropriateness of care and for quality assurance.

### ***All Certificates***

- As a follow-up to the Race item, ask, ***Which of these groups would you say best describes your race?*** This information is important in bridging information between single and multiple race data collection and is consistent with the way the National Health Interview Survey collects data.

**ADDENDUM TO THE REPORT OF THE PANEL TO EVALUATE THE U.S. STANDARD CERTIFICATES  
- CERTIFICATE OF LIVE BIRTH**

Differences between the 3/15/2001 draft certificate of live birth (included in panel report) and the 9/18/2001 draft certificate of live birth are listed below. These changes were made after testing the worksheets and further deliberations by the Implementation Work Group, comprised of the Chairs of the Subgroups of the Panel to Evaluate the U.S. Standard Certificates.

ITEMS INCLUDED ON 3/15/2001 DRAFT CERTIFICATE OF LIVE BIRTH	ITEMS INCLUDED ON 9/18/2001 DRAFT CERTIFICATE OF LIVE BIRTH
29. WAS THE PRENATAL RECORD AVAILABLE FOR COMPLETION OF BIRTH CERTIFICATE?	N/A
<p><i>This item was dropped. The intent of this item was to determine the availability of prenatal care records to hospital staff at the time the certificate was completed. However, upon further review by the workgroup, it was determined that as the prenatal records are given as the sole source for several items, asking whether or not the records were available seemed contradictory and unnecessary. Further, there was concern that the question could leave the mistaken impression that other sources for this information were acceptable.</i></p>	
N/A	29b. DATE OF LAST PRENATAL CARE VISIT ____/____/_____ MM DD YYYY
<p><i>This item was added to handle a problem that was noted during the testing, namely, that the prenatal care record is sometimes sent to the hospital some time before delivery and therefore, the number of prenatal visits in the record are not complete. The date of the last prenatal care visit will help determine if all prenatal care visits have been noted in the records; a procedure for estimating additional visits that may have occurred after the prenatal records were sent to the hospital should be developed for consistency among all hospitals.</i></p>	
32. MOTHER'S HEIGHT _____ (inches)	31. MOTHER'S HEIGHT _____ (feet/inches)
<p><i>This item was modified so that hospital personnel would not be called on to convert feet (reported by the mother) to inches.</i></p>	
33. MOTHER'S PREPREGNANCY WEIGHT (or weight at first prenatal visit) _____ (pounds)	32. MOTHER'S PREPREGNANCY WEIGHT _____ pounds
<p><i>The initial recommendation was that information for this item be collected from mother's prenatal care records which may not include the mother's preferred pre-pregnancy weight but would include the mothers weight at first prenatal visit. Testing of the facility worksheet, however, revealed large discrepancies in reporting for this item which were largely attributed to differences between the mothers pre-pregnancy weight and the mother's weight at the first prenatal visit. In light of past studies which found a fairly high quality of data from the mother's self-report of pre-pregnancy weight, the source for this item was changed to the mother and the item modified to delete weight at first prenatal visit.</i></p>	
34. MOTHER'S WEIGHT AT DELIVERY (or weight at last prenatal visit) _____ (pounds)	33. MOTHER'S WEIGHT AT DELIVERY _____ (pounds)

ITEMS INCLUDED ON 3/15/2001 DRAFT  
CERTIFICATE OF LIVE BIRTH

ITEMS INCLUDED ON 9/18/2001 DRAFT  
CERTIFICATE OF LIVE BIRTH

*The parenthetical phrase (or weight at last prenatal visit) was deleted because a large disparity in reporting weight was detected in the testing of this item. The difference noted was in reporting weight at delivery and weight at last prenatal care visit. Weight at delivery is in the admission/anesthesia record and is fairly easy to find. Therefore, the paren (or weight at last prenatal visit) was deleted.*

38. CIGARETTE SMOKING BEFORE AND DURING PREGNANCY

Please answer for each time period.  
(If none, enter "0". 1 pack = 20 cigarettes)

Average number of cigarettes smoked per day.

Three Months Before Pregnancy \_\_\_\_\_  
First Three Months of Pregnancy \_\_\_\_\_  
Second Three Months of Pregnancy \_\_\_\_\_  
Last Three Months of Pregnancy \_\_\_\_\_

37. CIGARETTE SMOKING BEFORE AND DURING PREGNANCY

For each time period, enter either the number of cigarettes or the number of packs of cigarettes smoked. IF NONE, ENTER "0".

Average number of cigarettes or packs of cigarettes smoked per day.  
# of cigarettes # of packs

Three Months Before Pregnancy \_\_\_\_\_ OR \_\_\_\_\_  
First Three Months of Pregnancy \_\_\_\_\_ OR \_\_\_\_\_  
Second Three Months of Pregnancy \_\_\_\_\_ OR \_\_\_\_\_  
Last Three Months of Pregnancy \_\_\_\_\_ OR \_\_\_\_\_

*This item was modified to add the option of reporting of the number of packs of cigarettes smoked. The change was made upon the recommendation of NCHS's Cognitive Research Lab. Their experience with tobacco use questions has shown that whereas some people think in terms of the number of cigarettes smoked, others think in terms of the number of packs of cigarettes smoked. They therefore recommended that the item be modified to allow the mother to report in either measure.*

**ITEMS INCLUDED ON 3/15/2001 DRAFT  
CERTIFICATE OF LIVE BIRTH**

**ITEMS INCLUDED ON 9/18/2001 DRAFT  
CERTIFICATE OF LIVE BIRTH**

**42. RISK FACTORS IN THIS PREGNANCY**  
(Check all that apply)

Diabetes

- Prepregnancy (Diagnosis prior to this pregnancy)
- Gestational (Diagnosis in this pregnancy)

Hypertension

- Prepregnancy (Chronic)
- Gestational (PIH, preeclampsia, eclampsia)

- Previous preterm birth
- Other previous poor pregnancy outcome  
(Includes, perinatal death, small-for-gestational  
age/intrauterine growth restricted birth)
- Vaginal bleeding during this pregnancy prior to  
the onset of labor
- Pregnancy resulted from infertility treatment
- None of the above

**41. RISK FACTORS IN THIS PREGNANCY**

Diabetes

- Prepregnancy (Diagnosis prior to this pregnancy)
- Gestational (Diagnosis in this pregnancy)

Hypertension

- Prepregnancy (Chronic)
- Gestational (PIH, preeclampsia, eclampsia)

- Previous preterm birth
- Other previous poor pregnancy outcome  
(Includes, perinatal death, small-for-gestational  
age/intrauterine growth restricted birth)
- Vaginal bleeding during this pregnancy prior to  
the onset of labor
- Pregnancy resulted from infertility treatment
- Mother had a previous cesarean delivery  
If yes, how many \_\_\_\_\_
- None of the above

***The check box question “Mother had a previous cesarean delivery, if yes, how many” was moved from the METHOD OF DELIVERY item to the RISK FACTORS IN THIS PREGNANCY item. It was determined that the best source for information on previous cesareans is the mother’s prenatal care records, the source for the Risk Factors items, and not the labor and delivery records, the source for “The Method of Delivery” item.***

**ITEMS INCLUDED ON 3/15/2001 DRAFT  
CERTIFICATE OF LIVE BIRTH**

**ITEMS INCLUDED ON 9/18/2001 DRAFT  
CERTIFICATE OF LIVE BIRTH**

**45. CHRONOLOGY OF LABOR AND DELIVERY**

DD. Facility admission that included delivery  
\_\_\_\_ / \_\_\_\_ / \_\_\_\_ at \_\_\_\_  
MM DD YYYY 24 hour clock

Delivery not in facility

EE. Rupture of membranes occurred on:  
\_\_\_\_ / \_\_\_\_ / \_\_\_\_ at \_\_\_\_  
MM DD YYYY 24 hour clock

Not applicable  Unknown date and time

FF. Onset of labor occurred on:  
\_\_\_\_ / \_\_\_\_ / \_\_\_\_ at \_\_\_\_  
MM DD YYYY 24 hour clock

Not applicable  Unknown date and time

GG. Full cervical dilation occurred on:  
\_\_\_\_ / \_\_\_\_ / \_\_\_\_ at \_\_\_\_  
MM DD YYYY 24 hour clock

Not applicable  Unknown date and time

**44. ONSET OF LABOR (Check all that apply)**

Premature Rupture of the Membranes  
(prolonged,  $\geq 12$  hrs.)

Precipitous Labor (<3 hrs.)

Prolonged Labor ( $\geq 20$  hrs.)

None of the above

***CHRONOLOGY OF LABOR AND DELIVERY item was dropped and replaced by ONSET OF LABOR item because the facility testing results for the chronology item revealed an unacceptably high level of missing or inaccurate data. Times and dates were often not reported in the specified place in the records, or if reported, were difficult for personnel to read and transcribe accurately. It is replaced by the ONSET OF LABOR which is intended to capture some of the information which would have been captured by the chronology item. Further research showed that the specific items which comprise the ONSET OF LABOR item are included as check boxes in most standard medical records and therefore should be more readily transcribe from the records.***

***The Implementation Work Group recommended CHRONOLOGY OF LABOR AND DELIVERY as a secondary data item.***

**ITEMS INCLUDED ON 3/15/2001 DRAFT  
CERTIFICATE OF LIVE BIRTH**

**ITEMS INCLUDED ON 9/18/2001 DRAFT  
CERTIFICATE OF LIVE BIRTH**

**46. CHARACTERISTICS OF LABOR AND DELIVERY**

- Induction of labor  Yes  No
- Augmentation of labor  Yes  No
- Non-vertex presentation  Yes  No
- Steroids (glucocorticoids) for fetal lung maturation received by the mother prior to delivery  Yes  No
- Antibiotics received by the mother during labor  Yes  No
- Clinical chorioamnionitis diagnosed during labor or maternal temperature  $\geq 38^{\circ}\text{C}$  ( $100.4^{\circ}\text{F}$ )  Yes  No
- Moderate/heavy meconium staining of the amniotic fluid  Yes  No
- Fetal intolerance of labor such that one or more of the following actions was taken: in-utero resuscitative measures, further fetal assessment, or operative delivery  Yes  No
- Epidural or spinal anesthesia during labor  Yes  No

**45. CHARACTERISTICS OF LABOR AND DELIVERY (Check all that apply)**

- Induction of labor
- Augmentation of labor
- Non-vertex presentation
- Steroids (glucocorticoids) for fetal lung maturation received by the mother prior to delivery
- Antibiotics received by the mother during labor
- Clinical chorioamnionitis diagnosed during labor or maternal temperature  $\geq 38^{\circ}\text{C}$  ( $100.4^{\circ}\text{F}$ )
- Moderate/heavy meconium staining of the amniotic fluid
- Fetal intolerance of labor such that one or more of the following actions was taken: in-utero resuscitative measures, further fetal assessment, or operative delivery
- Epidural or spinal anesthesia during labor
- None of the above

*The instruction (Check all that apply) and a check box for None of the above were added rather than using a yes/no format to make this item consistent with the other check box items on the birth certificate.*



**ITEMS INCLUDED ON 3/15/2001 DRAFT  
CERTIFICATE OF LIVE BIRTH**

**ITEMS INCLUDED ON 9/18/2001 DRAFT  
CERTIFICATE OF LIVE BIRTH**

<p>47. METHOD OF DELIVERY</p> <p>A. Was delivery attempted with forceps and/or vacuum extraction?          Attempted forceps            <input type="checkbox"/> Yes   <input type="checkbox"/> No          Attempted Vacuum            <input type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p>B. Fetal presentation at birth  <input type="checkbox"/> Cephalic  <input type="checkbox"/> Breech  <input type="checkbox"/> Other</p> <p>C. Final route and method of delivery (Check one)          Vaginal:  <input type="checkbox"/> Spontaneous  <input type="checkbox"/> Forceps  <input type="checkbox"/> Vacuum          Or,  <input type="checkbox"/> Cesarean          If cesarean, was a trial of labor attempted? <input type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p>D. Has the mother had a previous cesarean delivery?  <input type="checkbox"/> Yes   If yes, how many _____  <input type="checkbox"/> No</p>	<p>46. METHOD OF DELIVERY</p> <p>A. Was delivery with forceps attempted but unsuccessful?  <input type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p>B. Was delivery with vacuum extraction attempted but unsuccessful?  <input type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p>C. Fetal presentation at birth  <input type="checkbox"/> Cephalic  <input type="checkbox"/> Breech  <input type="checkbox"/> Other</p> <p>D. Final route and method of delivery (Check one)  <input type="checkbox"/> Vaginal/Spontaneous  <input type="checkbox"/> Vaginal/Forceps  <input type="checkbox"/> Vaginal/Vacuum  <input type="checkbox"/> Cesarean          If cesarean, was a trial of labor attempted?  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
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***“Has the mother had a previous cesarean delivery?  Yes    No If yes, how many” was moved to RISK FACTORS IN THIS PREGNANCY; items 46A, 46B, and 46C were reformatted to improve clarity, data quality, and reliability.***

<p>48. MATERNAL MORBIDITY (Check all that apply) (Observed within 24 hours of delivery)</p> <p><input type="checkbox"/> Maternal transfusion  <input type="checkbox"/> Third or fourth degree perineal laceration  <input type="checkbox"/> Ruptured uterus  <input type="checkbox"/> Unplanned hysterectomy  <input type="checkbox"/> Admission to intensive care unit  <input type="checkbox"/> Unplanned operating room procedure following delivery  <input type="checkbox"/> None of the above</p>	<p>47. MATERNAL MORBIDITY (Check all that apply) (Complications associated with labor and delivery)</p> <p><input type="checkbox"/> Maternal transfusion  <input type="checkbox"/> Third or fourth degree perineal laceration  <input type="checkbox"/> Ruptured uterus  <input type="checkbox"/> Unplanned hysterectomy  <input type="checkbox"/> Admission to intensive care unit  <input type="checkbox"/> Unplanned operating room procedure following delivery  <input type="checkbox"/> None of the above</p>
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***The instruction “Observed within 24 hours of delivery” was deleted to be consistent with changes made to the CONGENITAL ANOMALIES OF THE NEWBORN and ABNORMAL CONDITIONS OF THE NEWBORN items. The parenthetical “Complications associated with labor and delivery” was added for clarity.***

**ITEMS INCLUDED ON 3/15/2001 DRAFT  
CERTIFICATE OF LIVE BIRTH**

**ITEMS INCLUDED ON 9/18/2001 DRAFT  
CERTIFICATE OF LIVE BIRTH**

<p>50. BIRTHWEIGHT: (grams)</p>	<p>49. BIRTHWEIGHT (grams preferred, specify unit) _____</p> <p style="text-align: center;"><input type="checkbox"/> grams    <input type="checkbox"/> lb/oz</p>
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*BIRTHWEIGHT was modified to allow for weight to be collected in pounds and ounces in addition to grams. This change was made when testing indicated that some hospitals do not measure birthweight in grams, but continue to measure birthweight only in pounds and ounces. So as not to have hospitals convert pounds and ounces to grams, which could present potential problems for data accuracy, the question was modified to allow for reporting in pounds and ounces where necessary.*

<p>55. ABNORMAL CONDITIONS OF THE NEWBORN (Occurring within 24 hours of delivery)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Assisted ventilation required immediately following delivery      <input type="checkbox"/> Yes    <input type="checkbox"/> No</li> <li><input type="checkbox"/> Assisted ventilation required for more than six hours      <input type="checkbox"/> Yes    <input type="checkbox"/> No</li> <li><input type="checkbox"/> NICU admission      <input type="checkbox"/> Yes    <input type="checkbox"/> No</li> <li><input type="checkbox"/> Newborn given surfactant replacement therapy      <input type="checkbox"/> Yes    <input type="checkbox"/> No</li> <li><input type="checkbox"/> Antibiotics received by the newborn for suspected neonatal sepsis      <input type="checkbox"/> Yes    <input type="checkbox"/> No</li> <li><input type="checkbox"/> Seizure or serious neurologic dysfunction      <input type="checkbox"/> Yes    <input type="checkbox"/> No</li> <li><input type="checkbox"/> Significant birth injury (skeletal fracture(s), peripheral nerve injury, and/or soft tissue/solid organ hemorrhage which requires intervention)      <input type="checkbox"/> Yes    <input type="checkbox"/> No If yes, (Specify) _____</li> </ul>	<p>54. ABNORMAL CONDITIONS OF THE NEWBORN (Check all that apply)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Assisted ventilation required immediately following delivery</li> <li><input type="checkbox"/> Assisted ventilation required for more than six hours</li> <li><input type="checkbox"/> NICU admission</li> <li><input type="checkbox"/> Newborn given surfactant replacement therapy</li> <li><input type="checkbox"/> Antibiotics received by the newborn for suspected neonatal sepsis</li> <li><input type="checkbox"/> Seizure or serious neurologic dysfunction</li> <li><input type="checkbox"/> Significant birth injury (skeletal fracture(s), peripheral nerve injury, and/or soft tissue/solid organ hemorrhage which requires intervention)</li> <li><input type="checkbox"/> None of the above</li> </ul>
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*The instruction (Occurring within 24 hours of delivery) was deleted as a result of the testing which found that the vast majority of these conditions were reported within 48 hours, but not within 24 hours.*

*In addition, the item was modified to “Check all that apply,” rather than responding to yes/no for each specific factor for ease of completion and to make it consistent with other check box items on the certificate.*

*“If yes, (specify)” was dropped from the Significant birth injury check box because accurate reporting for this item would require clinical knowledge on the part of the individual completing the worksheet. The Workgroup therefore decided it was not likely to result in useful quality data.*

**ITEMS INCLUDED ON 3/15/2001 DRAFT  
CERTIFICATE OF LIVE BIRTH**

**ITEMS INCLUDED ON 9/18/2001 DRAFT  
CERTIFICATE OF LIVE BIRTH**

56. CONGENITAL ANOMALIES OF THE NEWBORN (Check all that apply)(Observed within 24 hours of delivery)

- Neural tube defect
- Cyanotic congenital heart disease
- Congenital diaphragmatic hernia
- Anterior abdominal wall defect
  - Omphalocele
  - Gastroschisis
- Limb reduction defect (excluding congenital amputation and dwarfing syndromes)
- Orofacial defect/cleft
- Suspected chromosomal disorder
  - Karyotype confirmed     Yes    No
  - Karyotype pending       Yes    No
- Hypospadias
- None of the anomalies listed above

55. CONGENITAL ANOMALIES OF THE NEWBORN (Check all that apply)

- Anencephaly
- Meningomyelocele/Spina bifida
- Cyanotic congenital heart disease
- Congenital diaphragmatic hernia
- Omphalocele
- Gastroschisis
- Limb reduction defect (excluding congenital amputation and dwarfing syndromes)
- Cleft Lip with or without Cleft Palate
- Cleft Palate alone
- Down Syndrome
  - Karyotype confirmed
  - Karyotype pending
- Suspected chromosomal disorder
  - Karyotype confirmed
  - Karyotype pending
- Hypospadias
- None of the anomalies listed above

*The instruction "Observed within 24 hours of delivery" was deleted as a result of the testing which found that the vast majority of these anomalies were reported within 48 hours, but not within 24 hours. The results of special testing of this item revealed that information can be successfully collected separately for spina bifida and anencephalus and separately for Down syndrome and other suspected chromosomal disorder. Therefore, this item was modified to collect the more detailed data.*

**ITEMS INCLUDED ON 3/15/2001 DRAFT  
CERTIFICATE OF LIVE BIRTH**

**ITEMS INCLUDED ON 9/18/2001 DRAFT  
CERTIFICATE OF LIVE BIRTH**

58. IS INFANT LIVING AT TIME OF REPORT?

Yes  No  Transferred

57. IS INFANT LIVING AT TIME OF REPORT?

Yes  No  Infant transferred, status

*The check box for transfer was modified to indicate that the infant was transferred, status unknown because the original question did not have mutually exclusive response categories, for example, the status could be known even if the infant was transferred.*

**ADDENDUM TO THE REPORT OF THE PANEL TO EVALUATE THE U.S. STANDARD CERTIFICATES  
- CERTIFICATE OF DEATH**

Differences between the 3/15/2001 draft certificate of death (included in panel report) and the 11/01/2001 draft certificate of death are listed below. These changes were made after further deliberations by the Implementation Work Group, comprised of the Chairs of the Subgroups of the Panel to Evaluate the U.S. Standard Certificates.

**ITEMS INCLUDED ON 3/15/2001 DRAFT  
CERTIFICATE OF DEATH**

**ITEMS INCLUDED ON 11/01/2001 DRAFT  
CERTIFICATE OF DEATH**

To be completed by Funeral Director (Margin area information)		To be completed/verified by Funeral Director (Margin area information)	
<i>Information in the margin area was modified to include “verified” because it was felt that funeral directors also verify the completeness and accuracy of certain items completed by the hospital.</i>			
To be completed by Certifier (Margin area information)		To be completed by Medical Certifier (Margin area information)	
<i>Certifier was changed to “Medical Certifier” for clarity in emphasizing who specifically completes the medical portion of the death certificate.</i>			
To be completed by pronouncer (Margin area information)		Items 24-28 must be completed by person who pronounces or certifies death.	
<i>“To be completed by pronouncer” was deleted from the margin area because it was felt that the term “pronouncing” was confusing and any instructions pertaining to the “pronouncer” should be included in the medical certifier section.</i>			
20. PLACE OF DEATH		14. PLACE OF DEATH	
IF DEATH WAS PRONOUNCED IN A HOSPITAL:  <input type="checkbox"/> Inpatient <input type="checkbox"/> Emergency Room/Outpatient <input type="checkbox"/> Dead on Arrival	IF DEATH WAS PRONOUNCED SOMEWHERE OTHER THAN A HOSPITAL:  <input type="checkbox"/> Residence <input type="checkbox"/> Hospice facility <input type="checkbox"/> Nursing home/Long term care facility <input type="checkbox"/> Other (Specify) _____	IF DEATH OCCURRED IN A HOSPITAL:  <input type="checkbox"/> Inpatient <input type="checkbox"/> Emergency Room/Outpatient <input type="checkbox"/> Dead on Arrival	IF DEATH OCCURRED SOMEWHERE OTHER THAN A HOSPITAL:  <input type="checkbox"/> Hospice facility <input type="checkbox"/> Nursing home/Long term care facility <input type="checkbox"/> Decedent’s home <input type="checkbox"/> Other (Specify) _____
<i>“Pronounced” was changed to “occur” because it was felt relative to place of death, the term “occur” was a more familiar term to those completing the death certificate. Also, the checkbox for “residence” was changed to “decedent’s home” to better obtain specific decedent information if death occurred someplace other than a hospital. “PLACE OF DEATH” item was moved from the certifier/pronouncer section to the section, “To be completed/verified by funeral director” because funeral directors generally complete this item.</i>			

**ITEMS INCLUDED ON 3/15/2001 DRAFT  
CERTIFICATE OF DEATH**

**ITEMS INCLUDED ON 11/012001 DRAFT  
CERTIFICATE OF DEATH**

26. Signature of person pronouncing death	Signature of person pronouncing death (only when applicable)
<i>“Only when applicable” was added to indicate that this item could be left blank dependent upon whether the physician who certifies death and physician who pronounces death are the same.</i>	
FOR STATISTICAL USE ONLY	Deleted
<i>“For statistical use only” was deleted because of concerns that having a “for statistical use only” section may hinder the collection of this information and jeopardize data quality.</i>	
<p><b>32. CAUSE OF DEATH (See instructions and examples)</b></p> <p><b>PART I.</b> 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. DO NOT ABBREVIATE.</p>	<p><b>32. CAUSE OF DEATH (See instructions and examples)</b></p> <p><b>PART I.</b> 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.</p>
<i>“Without showing etiology” was added at the suggestion of the Council of State Territorial Epidemiologists (CSTE). “Enter only one cause on a line” and “Add additional lines if necessary” was added to be consistent with instructions that were included on the 1989 US Standard Certificate of Death.</i>	
44. If transportation injury, specify:	44. If transportation accident, specify:
<i>“Injury” was changed to “accident” upon recommendation from one of the focus groups reviewing this item.</i>	

**ITEMS INCLUDED ON 3/15/2001 DRAFT  
CERTIFICATE OF DEATH**

**ITEMS INCLUDED ON 11/012001 DRAFT  
CERTIFICATE OF DEATH**

<p>45. To the best of my knowledge, the circumstances surrounding death were as indicated in the Certifier Section</p> <p><input type="checkbox"/> Certifying physician</p> <p><input type="checkbox"/> Pronouncing &amp; Certifying physician</p> <p><input type="checkbox"/> Medical Examiner/Coroner</p> <p>Signature of certifier:</p>	<p>45. CERTIFIER (Check only one):</p> <p><input type="checkbox"/> Certifying physician-To the best of my knowledge, death occurred due to the cause(s) and manner stated.</p> <p><input type="checkbox"/> Pronouncing &amp; 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.</p> <p><input type="checkbox"/> 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.</p> <p>Signature of certifier:</p> <p>_____</p>
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*It was decided to change the certifier statement section back to the format that was included on the 1989 Standard Certificate of Death because it was determined that the 1989 "certifier statement" was more specific and precise relative to the individual who completes the cause of death.*

49. Date signed	49. Date certified
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*Change in word made to facilitate electronic data collection which will still need authentication but not necessarily a physical signature.*

**ADDENDUM TO THE REPORT OF THE PANEL TO EVALUATE THE U.S. STANDARD CERTIFICATES  
- FETAL DEATH REPORT**

Differences between the 3/15/2001 draft report of fetal death (included in panel report) and the 9/18/2001 draft report of fetal death are listed below. These changes were made after testing the worksheets and further deliberations by the Implementation Work Group, comprised of the Chairs of the Subgroups of the Panel to Evaluate the U.S. Standard Certificates.

**ITEMS INCLUDED ON 3/15/2001 DRAFT  
REPORT OF FETAL DEATH**

**ITEMS INCLUDED ON 9/18/2001 DRAFT  
REPORT OF FETAL DEATH**

<p>18a. INITIATING CAUSE/CONDITION</p> <p>Maternal Conditions/Diseases (Specify) _____</p> <p>Complications of Placenta, Cord, or Membranes</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Rupture of membranes prior to onset of labor</li> <li><input type="checkbox"/> Abruptio placenta</li> <li><input type="checkbox"/> Placental insufficiency</li> <li><input type="checkbox"/> Prolapsed cord</li> <li><input type="checkbox"/> Chorioamnionitis</li> <li><input type="checkbox"/> Other (Specify)_____</li> </ul> <p>Other Obstetrical or Pregnancy Complications (Specify)_____</p> <p>Fetal Anomaly (Specify)_____</p> <p>Fetal Injury (Specify)_____</p> <p>Fetal Infection (Specify)_____</p> <p>Other Fetal Conditions/Disorders (Specify)_____</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Unknown</li> </ul>	<p>18a. INITIATING CAUSE/CONDITION</p> <p>(AMONG THE CHOICES BELOW, PLEASE SELECT THE <u>ONE</u> WHICH MOST LIKELY BEGAN THE SEQUENCE OF EVENTS RESULTING IN THE DEATH OF THE FETUS)</p> <p>Maternal Conditions/Diseases (Specify) _____</p> <p>_____</p> <p>Complications of Placenta, Cord, or Membranes</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Rupture of membranes prior to onset of labor</li> <li><input type="checkbox"/> Abruptio placenta</li> <li><input type="checkbox"/> Placental insufficiency</li> <li><input type="checkbox"/> Prolapsed cord</li> <li><input type="checkbox"/> Chorioamnionitis</li> <li><input type="checkbox"/> Other (Specify)_____</li> </ul> <p>Other Obstetrical or Pregnancy Complications (Specify)_____</p> <p>_____</p> <p>Fetal Anomaly (Specify)_____</p> <p>_____</p> <p>Fetal Injury (Specify)_____</p> <p>Fetal Infection (Specify)_____</p> <p>Other Fetal Conditions/Disorders (Specify)_____</p> <p>_____</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Unknown</li> </ul>
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***The instructional statement (AMONG THE CHOICES BELOW, PLEASE SELECT THE ONE WHICH MOST LIKELY BEGAN THE SEQUENCE OF EVENTS RESULTING IN THE DEATH OF THE FETUS) was added at the suggestion of physicians participating in the fetal death focus groups.***



**ITEMS INCLUDED ON 3/15/2001 DRAFT  
REPORT OF FETAL DEATH**

**ITEMS INCLUDED ON 9/18/2001 DRAFT  
REPORT OF FETAL DEATH**

18c. WEIGHT OF FETUS (grams)	18c. WEIGHT OF FETUS (grams preferred, specify unit) _____ <input type="checkbox"/> grams <input type="checkbox"/> lb/oz
<i>This item was modified to be consistent with the birth certificate. See rationale in birth certificate addendum.</i>	
18d. OBSTETRIC ESTIMATE OF GESTATION  _____ (completed weeks)	18d. OBSTETRIC ESTIMATE OF GESTATION AT DELIVERY  _____ (completed weeks)
<i>“At delivery” was added at the suggestion of physicians participating in the fetal death focus groups.</i>	
18e. FETAL APPEARANCE AT DELIVERY <input type="checkbox"/> Structure and appearance normal <input type="checkbox"/> Obvious dysmorphic features Desquamation/maceration <input type="checkbox"/> Minimal to mild (<5% of body surface area) <input type="checkbox"/> Moderate to severe (≥5% of body and two anatomic areas) <input type="checkbox"/> Hydrops fetalis <input type="checkbox"/> Mummification	Item dropped
<i>This item was dropped because of concerns voiced by the states about the reporting burden on hospitals and states for collecting this information.</i>	
18f. PLACENTA APPEARANCE  <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal (Specify) _____	Item dropped
<i>This item was dropped because of concerns voiced by the states about the reporting burden on hospitals and states for collecting this information.</i>	
18g. ESTIMATED TIME OF FETAL DEATH <input type="checkbox"/> Dead at time of first assessment (admission to hospital) <input type="checkbox"/> Died during labor <input type="checkbox"/> Unknown time of fetal death	18e. ESTIMATED TIME OF FETAL DEATH  <input type="checkbox"/> Dead at time of first assessment, no labor ongoing <input type="checkbox"/> Dead at time of first assessment, labor ongoing <input type="checkbox"/> Died during labor, after first assessment <input type="checkbox"/> Unknown time of fetal death
<i>This item was modified because testing showed that the first two categories in the original wording could occur simultaneously.</i>	

18h. WAS AN AUTOPSY PERFORMED?  <input type="checkbox"/> Yes <input type="checkbox"/> No	18f. WAS AN AUTOPSY PERFORMED?  <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Planned
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ITEMS INCLUDED ON 3/15/2001 DRAFT  
REPORT OF FETAL DEATH

ITEMS INCLUDED ON 9/18/2001 DRAFT  
REPORT OF FETAL DEATH

*This item was modified to include "planned" as an option at the suggestion of physicians participating in the fetal death focus groups.*

18i. WAS A HISTOLOGICAL PLACENTAL EXAMINATION PERFORMED?  
 Yes  No

18g. WAS A HISTOLOGICAL PLACENTAL EXAMINATION PERFORMED?  
 Yes  No  Planned

*This item was modified to include "planned" as an option at the suggestion of physicians participating in the fetal death focus groups.*

20. WAS THE PRENATAL RECORD AVAILABLE FOR COMPLETION OF THE FETAL DEATH REPORT?  
 Yes  No

Item dropped

*This item was dropped to be consistent with the birth certificate. See rationale in birth certificate addendum.*

N/A

23b. DATE OF LAST PRENATAL CARE VISIT  
\_\_\_\_/\_\_\_\_/\_\_\_\_  
MM DD YYYY

*This item was added for consistency with the birth certificate. It was also added to handle a problem that was noted during the testing, namely, that the prenatal care record is sometimes sent to the hospital some time before delivery and therefore, the number of prenatal visits in the record are not complete. The date of the last prenatal care visit will help determine if all prenatal care visits have been noted in the records; a procedure for estimating additional visits that may have occurred after the prenatal records were sent to the hospital should be developed for consistency among all hospitals.*

**ITEMS INCLUDED ON 3/15/2001 DRAFT  
REPORT OF FETAL DEATH**

**ITEMS INCLUDED ON 9/18/2001 DRAFT  
REPORT OF FETAL DEATH**

26. FATHER'S EDUCATION (Check the box that best describes the highest degree or level of school completed at the time of delivery)

- 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)

Item dropped

*This item was dropped because of concerns voiced by the states about the reporting burden on hospitals and states for collecting this information.*

27. FATHER OF HISPANIC ORIGIN? (Check the box that best describes whether the father is Spanish/Hispanic/Latino. Check the "No" box if mother is not Spanish/Hispanic/Latino)

- No, not Spanish/Hispanic/Latino
- Yes, Mexican, Mexican American, Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, other Spanish/Hispanic/Latino

(Specify) \_\_\_\_\_

Item dropped

*This item was dropped because of concerns voiced by the states about the reporting burden on hospitals and states for collecting this information.*



**ITEMS INCLUDED ON 3/15/2001 DRAFT  
REPORT OF FETAL DEATH**

**ITEMS INCLUDED ON 9/18/2001 DRAFT  
REPORT OF FETAL DEATH**

31. MOTHER'S HEIGHT AND WEIGHT HEIGHT _____(inches)	25. MOTHER'S HEIGHT _____ (feet/inches)
31. MOTHER'S HEIGHT AND WEIGHT PREPREGNANCY WEIGHT _____(pounds) (or weight at first prenatal visit)	26. MOTHER'S PREPREGNANCY WEIGHT _____ pounds
31. MOTHER'S HEIGHT AND WEIGHT WEIGHT AT DELIVERY _____ (pounds) (or weight at last prenatal visit)	27. MOTHER'S WEIGHT AT DELIVERY _____ (pounds)
<p><i><b>This item was modified to be consistent with the birth certificate. See rationale in birth certificate addendum.</b></i></p>	
<p>32. PRINCIPAL SOURCE OF PAYMENT FOR THIS DELIVERY</p> <p><input type="checkbox"/> Private Insurance</p> <p><input type="checkbox"/> Medicaid</p> <p><input type="checkbox"/> Self-pay</p> <p><input type="checkbox"/> Other (Specify)</p> <p>_____</p>	Item dropped
<p><i><b>This item was dropped because of concerns voiced by the states about the reporting burden on hospitals and states for collecting this information.</b></i></p>	

**ITEMS INCLUDED ON 3/15/2001 DRAFT  
REPORT OF FETAL DEATH**

**ITEMS INCLUDED ON 9/18/2001 DRAFT  
REPORT OF FETAL DEATH**

**39. RISK FACTORS IN THIS PREGNANCY  
(Check all that apply)**

Diabetes

- Prepregnancy (Diagnosis prior to this pregnancy)
- Gestational (Diagnosis in this pregnancy)

Hypertension

- Prepregnancy (Chronic)
- Gestational (PIH, preeclampsia, eclampsia)

Autoimmune disorder

Vaginal bleeding during this pregnancy prior to the onset of labor

Pregnancy resulted from infertility treatment

Hemoglobinopathy

Uterine anomaly

Blood antigen isoimmunization

Motor vehicle accident

Other traumatic injury

Acute drug effect/Toxicity/Reaction

Prior incision of uterine wall

None of the above

Other (Specify): \_\_\_\_\_

**36. RISK FACTORS IN THIS PREGNANCY  
(Check all that apply)**

Diabetes

- Prepregnancy (Diagnosis prior to this pregnancy)
- Gestational (Diagnosis in this pregnancy)

Hypertension

- Prepregnancy (Chronic)
- Gestational (PIH, preeclampsia, eclampsia)

Previous preterm birth

Other previous poor pregnancy outcome (Includes, perinatal death, small-for-gestational age/intrauterine growth restricted birth)

Vaginal bleeding during this pregnancy prior to the onset of labor

Pregnancy resulted from infertility treatment

Mother had a previous cesarean delivery

If yes, how many \_\_\_\_\_

None of the above

*This item was modified to be consistent with the birth certificate. See rationale in birth certificate addendum.*

**ITEMS INCLUDED ON 3/15/2001 DRAFT  
REPORT OF FETAL DEATH**

**ITEMS INCLUDED ON 9/18/2001 DRAFT  
REPORT OF FETAL DEATH**

40. PREVIOUS ADVERSE PREGNANCY  
OUTCOMES

(Check all that apply)

- Previous preterm delivery
- Fetal death prior to 20 weeks
- Fetal death at 20 weeks or more
- SGA/UGR (Small-for-Gestational-Age/Intrauterine Growth Restricted)
- Neonatal Death
- Fetus/Infant with congenital delivery
- None of the above

Item dropped.

***This item group was dropped because of concerns voiced by the states about the reporting burden on hospitals and states for collecting this information. Previous preterm delivery and SGA/UGR are captured under RISK FACTORS IN THIS PREGNANCY.***

**ITEMS INCLUDED ON 3/15/2001 DRAFT  
REPORT OF FETAL DEATH**

**ITEMS INCLUDED ON 9/18/2001 DRAFT  
REPORT OF FETAL DEATH**

41. CHRONOLOGY OF LABOR AND DELIVERY

Item dropped

H. Facility admission that included delivery

\_\_\_\_ / \_\_\_\_ / \_\_\_\_\_ at \_\_\_\_\_

MM DD YYYY 24 hour clock

Delivery not in facility

I. Rupture of membranes occurred on:

\_\_\_\_ / \_\_\_\_ / \_\_\_\_\_ at \_\_\_\_\_

MM DD YYYY 24 hour clock

Not applicable  Unknown date and time

J. Onset of labor occurred on:

\_\_\_\_ / \_\_\_\_ / \_\_\_\_\_ at \_\_\_\_\_

MM DD YYYY 24 hour clock

Not applicable  Unknown date and time

K. Full cervical dilation occurred on:

\_\_\_\_ / \_\_\_\_ / \_\_\_\_\_ at \_\_\_\_\_

MM DD YYYY 24 hour clock

Not applicable  Unknown date and time

***CHRONOLOGY OF LABOR AND DELIVERY item was dropped because the facility testing results for the chronology item revealed an unacceptably high level of missing or inaccurate data. Times and dates were often not reported in the specified place in the records, or if reported, were difficult for personnel to read and transcribe accurately.***



**ITEMS INCLUDED ON 3/15/2001 DRAFT  
REPORT OF FETAL DEATH**

**ITEMS INCLUDED ON 9/18/2001 DRAFT  
REPORT OF FETAL DEATH**

<p>42. CHARACTERISTICS OF LABOR AND DELIVERY</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Induction of labor             <ul style="list-style-type: none"> <li><input type="checkbox"/> Yes <input type="checkbox"/> No</li> </ul> </li> <li><input type="checkbox"/> Augmentation of labor             <ul style="list-style-type: none"> <li><input type="checkbox"/> Yes <input type="checkbox"/> No</li> </ul> </li> <li><input type="checkbox"/> Non-vertex presentation             <ul style="list-style-type: none"> <li><input type="checkbox"/> Yes <input type="checkbox"/> No</li> </ul> </li> <li><input type="checkbox"/> Steroids (glucocorticoids) for fetal lung maturation received by the mother prior to delivery             <ul style="list-style-type: none"> <li><input type="checkbox"/> Yes <input type="checkbox"/> No</li> </ul> </li> <li><input type="checkbox"/> Antibiotics received by the mother during labor             <ul style="list-style-type: none"> <li><input type="checkbox"/> Yes <input type="checkbox"/> No</li> </ul> </li> <li><input type="checkbox"/> Clinical chorioamnionitis diagnosed during labor or maternal temperature <math>\geq 38^{\circ}\text{C}</math> (<math>100.4^{\circ}\text{F}</math>)             <ul style="list-style-type: none"> <li><input type="checkbox"/> Yes <input type="checkbox"/> No</li> </ul> </li> <li><input type="checkbox"/> Moderate/heavy meconium staining of the amniotic fluid             <ul style="list-style-type: none"> <li><input type="checkbox"/> Yes <input type="checkbox"/> No</li> </ul> </li> <li><input type="checkbox"/> Fetal intolerance of labor such that one or more of the following actions was taken: in-utero resuscitative measures, further fetal assessment, or operative delivery             <ul style="list-style-type: none"> <li><input type="checkbox"/> Yes <input type="checkbox"/> No</li> </ul> </li> <li><input type="checkbox"/> Epidural or spinal anesthesia during labor             <ul style="list-style-type: none"> <li><input type="checkbox"/> Yes <input type="checkbox"/> No</li> </ul> </li> </ul>	<p>Dropped</p>
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*This item was dropped because of concerns voiced by the states about the reporting burden on hospitals and states for collecting this information.*

<p>43. MATERNAL MORBIDITY (Check all that apply) (Observed within 24 hours of delivery)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Maternal transfusion</li> <li><input type="checkbox"/> Third or fourth degree perineal laceration</li> <li><input type="checkbox"/> Ruptured uterus</li> <li><input type="checkbox"/> Unplanned hysterectomy</li> <li><input type="checkbox"/> Admission to intensive care unit</li> <li><input type="checkbox"/> Unplanned operating room procedure following delivery</li> <li><input type="checkbox"/> None of the above</li> </ul>	<p>39. MATERNAL MORBIDITY (Check all that apply) (Complications associated with labor and delivery)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Maternal transfusion</li> <li><input type="checkbox"/> Third or fourth degree perineal laceration</li> <li><input type="checkbox"/> Ruptured uterus</li> <li><input type="checkbox"/> Unplanned hysterectomy</li> <li><input type="checkbox"/> Admission to intensive care unit</li> <li><input type="checkbox"/> Unplanned operating room procedure following delivery</li> <li><input type="checkbox"/> None of the above</li> </ul>
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*This item was modified to be consistent with the birth certificate. See rationale in birth certificate addendum.*

**ITEMS INCLUDED ON 3/15/2001 DRAFT  
REPORT OF FETAL DEATH**

**ITEMS INCLUDED ON 9/18/2001 DRAFT  
REPORT OF FETAL DEATH**

<p>44. METHOD OF DELIVERY</p> <p>A. Was delivery attempted with forceps and/or vacuum extraction?              Attempted forceps           <input type="checkbox"/> Yes   <input type="checkbox"/> No              Attempted Vacuum           <input type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p>B. Fetal presentation at birth              <input type="checkbox"/> Cephalic              <input type="checkbox"/> Breech              <input type="checkbox"/> Other</p> <p>C. Final route and method of delivery (Check one)              Vaginal:                  <input type="checkbox"/> Spontaneous                  <input type="checkbox"/> Forceps                  <input type="checkbox"/> Vacuum              Or,                  <input type="checkbox"/> Cesarean                  If cesarean, was a trial of labor attempted?   <input type="checkbox"/> Yes              <input type="checkbox"/> No</p> <p>D. Has the mother had a previous cesarean delivery?              <input type="checkbox"/> Yes   If yes, how many _____              <input type="checkbox"/> No</p>	<p>38. METHOD OF DELIVERY</p> <p>A. Was delivery with forceps attempted but unsuccessful?              <input type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p>B. Was delivery with vacuum extraction attempted but unsuccessful?              <input type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p>C. Fetal presentation at birth              <input type="checkbox"/> Cephalic              <input type="checkbox"/> Breech              <input type="checkbox"/> Other</p> <p>D. Final route and method of delivery (Check one)              <input type="checkbox"/> Vaginal/Spontaneous              <input type="checkbox"/> Vaginal/Forceps              <input type="checkbox"/> Vaginal/Vacuum              <input type="checkbox"/> Cesarean                  If cesarean, was a trial of labor attempted?                      <input type="checkbox"/> Yes                      <input type="checkbox"/> No</p>
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***This item was modified to be consistent with the birth certificate. See rationale in birth certificate addendum.***

<p>45. OBSTETRIC PROCEDURES (Check all that apply)</p> <p><input type="checkbox"/> Cervical cerclage  <input type="checkbox"/> Tocolysis</p> <p>External cephalic version:              <input type="checkbox"/> Successful              <input type="checkbox"/> Failed</p> <p><input type="checkbox"/> None of the above</p>	<p>Item dropped</p>
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***This item was dropped because of concerns voiced by the states about the reporting burden on hospitals and states for collecting this information.***

**ITEMS INCLUDED ON 3/15/2001 DRAFT  
REPORT OF FETAL DEATH**

**ITEMS INCLUDED ON 9/18/2001 DRAFT  
REPORT OF FETAL DEATH**

47. CONGENITAL ANOMALIES OF THE FETUS  
(Observed within 24 hours of delivery)(Check all that apply)

- Neural tube defect
- Congenital heart disease
- Congenital diaphragmatic hernia
- Anterior abdominal wall defect
  - Omphalocele
  - Gastroschisis
- Limb reduction defect (excluding congenital amputation and dwarfing syndromes)
- Orofacial defect/cleft
- Suspected chromosomal disorder
  - Karyotype confirmed     Yes     No
  - Karyotype pending       Yes     No
- Hypospadias
- None of the anomalies listed above
- Other (Specify) \_\_\_\_\_

40. CONGENITAL ANOMALIES OF THE FETUS  
(Check all that apply)

- Anencephaly
- Meningomyelocele/Spina bifida
- Cyanotic congenital heart disease
- Congenital diaphragmatic hernia
- Omphalocele
- Gastroschisis
- Limb reduction defect (excluding congenital amputation and dwarfing syndromes)
- Cleft Lip with or without Cleft Palate
- Cleft Palate alone
- Down Syndrome
  - Karyotype confirmed
  - Karyotype pending
- Suspected chromosomal disorder
  - Karyotype confirmed
  - Karyotype pending
- Hypospadias
- None of the anomalies listed above
- Other (Specify) \_\_\_\_\_

*This item was modified to be consistent with the birth certificate. See rationale in birth certificate addendum.*