

RESEARCH AND THEORY NOTES

DEMOGRAPHIC IMPLICATIONS OF THE NEW UNITED STATES CERTIFICATES

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RESUMEN

Rara atender al desarrollo de una información uniforme de sucesos vitales en los cincuenta estados, junto con Puerto Rico y las islas Vírgenes, el gobierno de los Estados Unidos prepara certificados estandar de nacimientos, muertes fetales, muertes, matrimonios y divorcios. Estos modelos son revisados aproximadamente cada diez años con asistencia de todos los estados. Actualmente se está preparando una revisión por parte del Centro Nacional para las Estadísticas de la Salud la cual regirá a partir de Enero primero de 1968. Nuevo material para fuente de información demográfica será introducido.

La mayoría de los cambios aparecerán en el certificado de nacidos vivos y en el de muertes fetales. Un ítem sobre educación del padre y de la madre proporcionará datos adicionales sobre fertilidad y educación. La fecha del último hijo nacido vivo y de la muerte fetal dará información sobre el resultado del embarazo previo y sobre el espaciamiento de los hijos. El registro del número de hijos nacidos vivos y muertos en partos múltiples hará fácil la comparación entre los certificados de nacidos vivos y muertes fetales, para la preparación de tabulaciones detalladas de este tipo de partos. Algunos ítems nuevos relacionados con la salud de la madre y del niño han sido añadidos.

No se planearon cambios significativos para el certificado de defunción.

El certificado de matrimonio incluirá como nuevos ítems el de educación de los esposos, la fecha de terminación del último matrimonio y la especificación del tipo de ceremonia, civil o religiosa. El certificado de divorcio o anulación obtendrá información sobre la educación de la pareja, la fecha aproximada de separación, la forma de disolución del matrimonio anterior y el número total de hijos vivos.

Se espera que todos los estados incluirán los nuevos ítems en los certificados. El Centro Nacional de Estadísticas de la Salud impartirá instrucciones para la tabulación relacionada con estos ítems empezando en el año 1968.

Los demógrafos están haciendo uso creciente de las estadísticas vitales y al mismo tiempo están prolongando sus contratos con el Departamento de salud de los estados. en algunos de ellos se han implantado proyectos cooperativos. Debido a la importancia que tienen los documentos primarios, que en algunos casos no han sido explotados completamente los demógrafos deberán aumentar sus contactos con las oficinas que elaboran, recogen y procesan informes en relación con estadísticas vitales. Los demógrafos pueden estimular la aceptación de los nuevos conceptos y colaborar en el mejoramiento de los registros vitales con propósitos investigativos.

SUMMARY

To assist in developing uniform reporting of vital events among the fifty states, Puerto Rico, and the Virgin Islands, the United States government prepares standard certificates of birth, fetal death, death, marriage, and divorce. These model forms are revised, with the assistance of the states, approximately every ten years. Revisions are now being prepared by the National Center for Health Statistics which will become effective beginning January 1, 1968. Important new source material for demography will be introduced.

Most changes will appear in the Standard Certificate of Live Birth and in the Standard Certificate of Fetal Death. An item on education of father and mother will provide detailed national data on education and fertility. The date of the last live birth to the mother and the date of the last fetal death will provide information on previous pregnancy outcome and on child-spacing. The recording of state file numbers for mates born alive and dead in the same delivery will make it easier to match live birth and fetal death certificates for the preparation of detailed tabulations on multiple births. Several new items related to maternal and child health have also been added.

No significant changes were planned for the Standard Certificate of Death.

The Standard Certificate of Marriage will include as new items the education of the bride and groom, the date on which the last marriage, if any, ended, and specification of the officiant as a religious or civil official. The Standard Certificate of Divorce or Annulment will obtain information on the education of husband and wife, the approximate date on which the couple separated, the mode of dissolution of the previous marriage, and the total number of living children.

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It is anticipated that most of the new items will be included in the certificates of all the states. The National Center for Health Statistics will provide detailed tabulations related to these items, beginning with data year 1968.

Demographers are making an increased use of vital records and at the same time are extending their contacts with state health departments; in some states collaborative projects have been undertaken. Because of the importance of the source documents, which in some cases have not been exploited fully, demographers should increase their contact with the state vital statistics offices which develop, collect, and process the records. By indicating an interest in vital registration and by making their research needs known, demographers can encourage the acceptance of new concepts and collaborate in the improvement of vital records for demographic research purposes.

National data on the basic demographic events—birth and death—and on the related events—marriage and divorce—are obtained through a decentralized vital statistics system. Under this system the states collect the information on certificate forms and transmit microfilm copies to the National Center for Health Statistics which prepares and processes the data. The forms used by the various states differ in design and content; the considerable degree of uniformity that exists is largely the result of the United States standard certificates of birth, fetal death, death, marriage, divorce, and annulment, which serve as models for state adoption. With a few exceptions and modifications, the items on the standard certificates are adopted by all the states. While some states include many additional items, the federal government routinely publishes only data based on the items shown on the standard certificates. To comply with changing demands for information and to develop uniform standards, the standard certificates are revised approximately every five or ten years.

A standard form for births and deaths was first prepared soon after the turn of the century; the revision years were 1910, 1915, 1918, 1930, 1939, 1949, and 1955.¹ A new revision is currently being prepared which will be issued for adoption by the states in 1968. The proposed changes will have several important implications for research in demography and related fields.

¹ For the history and organization of the vital statistics system, see U.S. Department of Health, Education, and Welfare, Public Health Service, *Vital Statistics of the United States*, I (1950), 2-19.

PROCESS OF REVISING THE STANDARD CERTIFICATES

Revising the standard certificates is a complex process, involving many persons, agencies, study groups, special conferences; reviews by the National Center for Health Statistics, the Public Health Service, the Department of Health, Education, and Welfare, and the Bureau of the Budget; and eventually legal action by the states. While the decision on the content to be recommended rests primarily with the National Center for Health Statistics, many individuals and organizations who complete, file, and otherwise work with the vital records must be consulted. Particularly is this true in the case of those who have the basic responsibility for collecting and maintaining the records—the officials of the various states. Without their agreement and co-operation, substantial uniformity of content would not be achieved. Each standard certificate therefore represents a compromise; for various reasons, some items which are of value to particular groups cannot be included.

The vital registration forms are severely limited for demographic statistics. Perhaps the first limitation is that of size; the record must generally conform to acceptable documentary form prescribed for state use. Unlike a household census or survey schedule, the standard certificate is strictly limited as to the number of items and as to the space for response. Basically, the records serve legal and identification purposes. They must also contain items required for planning and evaluating state health programs. The specific

data needed vary considerably among the states.

The amount of obtainable information is also restricted by the number of vital records which must be completed and processed each year—4,000,000 birth records; 1,900,000 death records; 1,800,000 marriage records; and 400,000 divorce records.

The National Center for Health Statistics must take all these factors into account; in the last analysis the items selected for inclusion must meet certain criteria: (1) the information is needed for personal identification or for establishing time and place of the event, or (2) the information has a high priority among the data needed for scientific or public program purposes, and (3) there is a basis for believing that it can be obtained with adequate completeness and accuracy with reasonable effort.²

In 1963, several study groups of the Public Health Conference on Records and Statistics were formed to advise and assist the National Center for Health Statistics on the form and content of the 1968 revisions. To obtain the opinion of informed persons, a detailed questionnaire on possible additions, deletions, and changes was developed. These questionnaires were mailed to some 1,200 persons or organizations; depending on their field of interest, they received the entire questionnaire or sections relating to birth and death, marriage and divorce, or death. Approximately 300 questionnaires relating to birth and death and 170 relating to marriage and divorce were returned.

The information was tabulated and discussed at meetings of the study groups in December, 1963. First drafts of the standard certificates were revised, and second drafts were sent with an explanation and summary of the questionnaire results to the state vital statistics officials and other persons invited to the national

² R. D. Grove, "The New Standard Certificates of Vital Events" (paper delivered before the American Public Health Association, Chicago, October 21, 1965).

meeting of the Public Health Conference on Records and Statistics in June, 1964. Comments from these persons were taken into account in a further revision in 1965, which was mailed with a second questionnaire to 260 persons or agencies, selected on the basis of their demonstrated interest in vital statistics or their close relationship to the vital statistics process. Approximately half of these addressees responded. Further discussions in 1965 resulted in a final draft on January 1, 1966, which was approved by the National Center for Health Statistics and is now receiving further executive review. When the standard certificates are approved, they will be printed and sent to the states for adoption; in most states this will involve action by the state boards of health or legislatures in 1967. It is hoped that the standard certificates will be adopted for the recording of vital statistics information in all states beginning on January 1, 1968.

STANDARD CERTIFICATE OF LIVE BIRTH: A REVIEW

The first birth and death statistics published by the federal government concerned events in 1850 and were based on information collected during the decennial census of that year. Birth information continued to be collected by census enumerators through the census of 1900 but was recognized to be inaccurate and incomplete. No birth statistics were published from 1900 to 1914. In 1915, the Birth Registration Area was established with ten states and the District of Columbia. The Birth Registration Area represented those states and cities having adequate registration systems; copies of vital records were obtained by the Bureau of the Census from the vital statistics offices of those areas for processing. Publication of tabulations based on copies of vital records obtained from the states has been in effect since that time.

The eight standard certificates of birth that have been used have remained rela-

tively unchanged in content in the last fifty years; of the twenty-six items on the first standard certificate, twenty-three are in the 1955 version. New items added in subsequent years included the name of the hospital or institution where the birth occurred instead of street address (1918), length of pregnancy and birth weight (1949). Residence of father was deleted in the 1935 version and occupation of mother in the 1949 version. Other changes included more detailed specifications regarding children previously born to mother and more specific information on residence.

Since the appearance in 1917 of the first report based on certificates from the registration area, a wealth of detail on fertility has been available to demographers from this source.³ Of chief interest through the years have been those tabulations related to age and birthplace and residence of mother and father, month of birth, place of birth, order of birth, multiparous birth, legitimacy, and attendant at birth. National period rates of fertility, such as the crude birth rates, age-sex-adjusted rates, general fertility rates, total fertility rates, birth rates by age of mother and of father, period replacement rates, birth rates by live birth order, and others, have been provided on an annual basis. Cohort rates of fertility, prepared by P. K. Whelpton and A. A. Campbell, provide an uninterrupted schedule of cumulative fertility through completion of childbearing by age 50 for birth cohorts of American women from 1876 through 1915 and schedules of uncompleted cumulative fertility from 1916 through 1950.⁴

³ U.S. Department of Commerce, Bureau of the Census, *Birth Statistics for the Registration Area of the United States: 1915* (Washington, D.C.: Government Printing Office, 1917).

⁴ U.S. Department of Health, Education, and Welfare, Public Health Service, "Fertility Tables for Birth Cohorts of American Women," *Vital Statistics—Special Reports*, Vol. LI, No. 1 (January 29, 1960). Comparable later data are published annually in *Vital Statistics of the United States*, Vol. 1, beginning with 1963.

NEW ITEMS ADDED TO THE LIVE BIRTH CERTIFICATES

1. *Education of mother and father.*—The national offices of vital statistics have never processed routinely the item on usual occupation and kind of business or industry because of the difficulty and expense of classification and of obtaining the comparable population data. Further, it was not anticipated that this item, regardless of its value as a determinant of socioeconomic status, would be tabulated during the period represented by the new standard certificate. It was recommended that this item be dropped and that education be added. Aside from its obvious importance in fertility research, education would be easy to code, and comparable population data would be available from the Bureau of the Census for the computation of birth rates. As education had never appeared on the standard certificates, there was some opposition to the inclusion of this item, but the support for it was overwhelming from official and voluntary health agencies, from universities, and other groups. It is therefore included among the recommended additions.

The limitations of space and the fact that hundreds of persons, untrained in eliciting responses, would be recording the information posed the problem of adequate and precise wording. Consultation with the Bureau of the Census resulted in asking for "Education: Highest Grade Completed (specify)," with the following categories: Elementary 1, 2, 3, or . . . 8; High School 1, 2, 3, or 4; and College 1, 2, 3, 4, or 5 plus. These categories will, in general, conform to census population groupings.

The natality tabulations including this variable will prove of great interest to demographers and provide detailed national annual data on education and fertility which are at present provided only occasionally through the special reports of the Bureau of the Census.

2. *Date of last live birth.*—It was recommended that items be added for the pur-

pose of measuring fertility intervals. Two specific suggestions were discussed—"date of first marriage of mother" and "date of termination of last previous pregnancy," with a request to specify if the pregnancy ended in a live birth or a fetal death.

The first item would provide the interval between first marriage and first birth. When combined with already available information on the total number of children born to the mother, it would also provide invaluable data on fertility by duration of marriage. Many respondents to the first questionnaire supported this item, and it was endorsed by the U.S. National Committee on Vital and Health Statistics.⁵ One noted demographer commented in his response, "Until this item is added, the United States will continue to be a backward nation as far as its birth certificate is concerned."

Unfortunately, this item was strongly opposed for several reasons. There were objections related to confidentiality; it was assumed that mothers who had previous marriages or premarital pregnancies would be reluctant to respond. Some states, which do not now have an item on illegitimacy on the state certificate, could not legally include it. When the new items were tested in Minnesota in 1965, considerable controversy was reported regarding this item. Whereas the item on education had been completed by 95 percent of the mothers, only 60 percent responded to the item on date of first marriage. On the basis of this experience, Minnesota decided to drop the item from future certificates. The National Center for Health Statistics reluctantly decided not to include it on the new standard certificate, while recognizing the value of the information to demographers.

However, there was general acceptance of the item on date of previous pregnancy

⁵ U.S. Department of Health, Education, and Welfare, Public Health Service, "Fertility Measurement: A Report of the United States National Committee on Vital and Health Statistics," *Vital and Health Statistics*, Series 4, No. 1 (September, 1965).

outcome, and it was finally simplified to "Date of last live birth" and "Date of last fetal death."

The inclusion of this item will make it possible for the first time through the vital records to determine the average spacing between successive births. This will contribute to our understanding of the forces underlying the current decline in fertility. By ascertaining the outcome of the previous pregnancy, demographers will also be able to see the effect of a previous live birth or a previous fetal death on the timing of subsequent births.

3. *Multiple births.*—Because it has not been expedient annually to match all live births and fetal deaths in multiparous deliveries, and because of problems related to the 50 percent sample of births used in national tabulations, detailed data on cases of multiple births have not been available for the United States since 1958. To provide these data, the new standard certificate requests that in the margin of the certificate the state file numbers for mates born alive and dead in the same delivery be recorded. Certificates for these related births and fetal deaths will be retrieved and matched, and detailed tabulations will be published

4. *Health related items.*—A number of new items of medical information have been added largely because of the increased interest in maternal and child health and because many states, in some cases most states, now include these items on their certificates. These items are complications related to pregnancy, complications not related to pregnancy, complications of labor, birth injuries to child, and congenital malformations or anomalies. These items will be of lesser interest to most demographers who may be interested in fertility per se, but there are other implications for demography in these items. One of the goals of research in this field, for example, is to reduce the number of fetal and infant deaths; presumably such a reduction would affect

the number of additional planned pregnancies. For these demographers working in the fields of child health and human development, the data will be of considerable value.

OLD ITEMS DELETED AND OTHER CHANGES IN THE LIVE BIRTH CERTIFICATE

In addition to occupation and industry of father, the item "Is residence on a farm?" was dropped. At the time of the 1955 version it was believed that this item, corresponding to the 1950 Census question on farm residence, would result in data which would aid in the study of the health and fertility behavior of the farm population. The census definition of farm changed, and comparable information could not be obtained on vital records.

Of interest to demographers is the retention of the item on race; the Population Association of America passed a firm resolution on this item in its 1963 annual meeting. It has been repositioned in the confidential sections of the certificates. This is intended to indicate that this question should not be used for discriminatory identification purposes and to emphasize its use for scientific research purposes.

STANDARD CERTIFICATE OF FETAL DEATH

The Standard Certificate of Stillbirth, as it was then called, was introduced in 1930; it was similar in form to the Standard Certificate of Birth which, up to that time, served for both live births and fetal deaths. In the latter event, a death certificate was also filed. In the 1955 revision, the title was changed to the Standard Certificate of Fetal Death, and the cause of death item was changed to conform to the recommended World Health Organization format. The revisions which have been discussed above regarding the Standard Certificate of Live Birth are applicable to the Standard Certificate of Fetal Death.

STANDARD CERTIFICATE OF DEATH

Although a national registration area for deaths was established in 1880, the annual collection of mortality information for the area did not begin until 1900. The Death Registration Area then consisted of ten states, the District of Columbia, and a number of cities in non-registration states; it was not complete for the United States until 1933. A comparison of the first Standard Certificate of Death and the present version shows that thirty-three items have been retained. The majority of the twenty-four items introduced since 1900 were added in 1930 and 1935 and relate to details concerning cause, manner, place of death, and disposition of the body. The basic variables of sex, race, age, marital status, occupation, place of birth, and the details on the death itself have remained unaltered to the present time.

Few changes in content were found to be necessary or feasible at this time, and the death certificate is so crowded that there is little or no room for additional items. One item that was dropped caused some concern among statisticians interested in deaths occurring on farms. This question was, "Is residence on a farm?" previously discussed. Information on farm accidents will still be available from another item—"Place of injury"—which records information on whether the injury occurred in or about the home, farm, factory, street, office building, and so forth.

Name and age of surviving spouse were considered on the basis that information on the termination of marriage as a result of the death of one of the marital partners would supplement information on the termination of marriage by divorce or annulment. The item on age was opposed on the grounds of controversy, and only the name of the surviving spouse was retained. This may be useful in followback studies, although the age of the surviving spouse would have been of greater interest to demographers.

STANDARD CERTIFICATES OF MARRIAGE
AND DIVORCE AND ANNULMENT

Although estimates of the number of marriages and divorces in the United States had been made on the basis of field surveys beginning with the period 1867-86, it was not until the last decade that routine collection of transcripts of these events through state vital statistics offices was established. In 1955 a Standard Record of Marriage and a Standard Record of Divorce or Annulment were introduced, for the first time making available model reporting forms for the use of the states. A Marriage Registration Area was established in 1957 and a Divorce and Annulment Registration Area in 1958. Today, the MRA consists of thirty-eight states and the DRA of twenty-two states. The criteria for admission to these areas are maintenance of a centralized file, adoption of report forms containing items on the standard record, regular reporting by all local areas to the state office of vital statistics, and conduct of a test of completeness and accuracy of registration and of the information on the report form. Marriage data are available for the registration areas on the age of bride and groom, marriage order, race, previous marital status, type of ceremony, and date of marriage. Divorce data are available on the age of husband and wife at marriage, number of children involved, duration of marriage, and other data of importance to demographers.

It was decided to delete the items on usual occupation and kind of business or industry and to substitute education of bride and groom and husband and wife. It was felt that, especially for young persons of marriageable age, this item was a more stable indicator of socioeconomic status and more comparable with census information.

On the marriage certificate, specification of the officiant as a religious or as a civil official was added. "Number of this marriage" was substituted for "Number of previous marriages." An item on the

date on which the last marriage ended will provide information on the length of time during which persons of various ages, education levels, and so forth, are widowed or divorced before marrying again. It will also provide the basis for constructing marriage "life tables" showing "life expectancies" for periods of widowhood and divorce, as well as for marriage.

On the divorce certificate, an item on the approximate date couple separated was added to divide the married life of divorced couples into two distinct intervals, the period between successive marriages and the period between final separation and divorce. A new question on mode of dissolution of previous marriages will provide information on the frequency of divorce "repeaters."

In the 1955 version, only the number of children under 18 was asked for. In the new version, both the total number of living children and the number of children under 18 are included.

Both marriage and divorce forms have been divided into two parts, with the introduction of a confidential section that contains personal information items.

CONSIDERATION FOR THE FUTURE

The 1968 versions of the United States standard certificates may be in use for another ten years or for a shorter time, depending upon changing program requirements and the needs of health and demographic research.

Demographers should increase their contact with the state vital statistics offices to make known their data needs. Collaborative projects with state health departments should be undertaken; some beginnings have already been made along these lines, notably in California and New York. There is a need for detailed analysis of fertility, mortality, marriage, and divorce trends at state and local levels. Demographers can encourage acceptance by state and local officials of new data, new methods of research, and new methods of analysis.

In those states not now members of

the Marriage and Divorce Registration Areas, demographers can work with vital statistics offices, county officials, and state legislators to encourage the acceptance of the registration concept, to recommend the establishment of a central file, and to provide the justifications so often necessary for the initiation of new programs. There is considerable ignorance of the need for demographic information, and the demographer has a responsibility to make his needs known.

It must not be thought that once established a vital statistics system will last forever or that wanted information will be provided until the end of time. Demographers were shocked when New Jersey removed the race item from its certificates in 1962, and only later moved with others to request the reinstatement of the item. Each year legislation is introduced in states that, if passed, would delete from the record forms some items in which demographers have a real interest. Demographers would be much better informed concerning these activities if they cultivated the officials in health departments and vital statistics offices and occasionally took an interest in the source from which the data they use are derived.

Nor does the final development of standard certificate forms for 1968 mean that every item will be accepted by all the states. The legitimacy item, by law, does not appear on sixteen state certificates. Demographers, as consumers of data, are in a unique position to indicate their scientific and research interests that will be served by the inclusion of items.

The vital records cannot be expected to provide all the data demographers require in the vital statistics area. For example, there has been much interest in

obtaining information on religion and income; information on both are difficult to obtain on the standard certificates. (As for the states, none have income on any vital forms, and only Iowa and Indiana obtain information on religion on the marriage certificates.) Additional information is now being obtained by the National Center for Health Statistics and others by means of followback studies using birth and death certificate samples. Because of the expense involved, only small samples have been used, but additional socioeconomic information has been obtained which is not available from the vital records.

Increased interest in the fertility of American women, family planning patterns in the United States, and the effectiveness of birth control programs—information which cannot be obtained from the vital records—has caused the National Center for Health Statistics to propose a continuing national fertility survey on a two-year-cycle basis. This proposed survey, which would begin with a GAF-type survey for the year 1968, would periodically obtain basic information related to previous surveys. It would propose eventually to obtain information on abortion and illegitimacy, two of the most difficult areas of scientific investigation which have many implications for health and fertility research.

The standard certificates of live birth, fetal death, death, marriage, and divorce have been the models through which the states have provided important demographic data for births, deaths, marriages, and divorces in the twentieth century. The new items on the proposed 1968 versions will provide much new and needed data for demography.