

Utah's Vital Statistics
100 Year Anniversary
1905 to 2005

Utah Department of Health
Center for Health Data





Utah's Vital Statistics

100 Year Anniversary

1905 to 2005

Utah Department of Health
Center for Health Data
Office of Vital Records and Statistics

March 9, 2005

ACKNOWLEDGMENTS

This report was developed and prepared by the following individuals:

Barry E. Nangle, PhD, Director, Center for Health Data

Kim Neerings, Center for Health Data

Jeffrey D. Duncan, MS, Director, Office of Vital Records and Statistics

Michelle Muirbrook, Office of Vital Records and Statistics

Lois M. Haggard, PhD, Director, Office of Public Health Assessment

Vital Records and Statistics Centennial Planning Committee

Chair: Jeffrey D. Duncan, MS, Director, Office of Vital Records and Statistics

Linda Adams, Office of Vital Records and Statistics

Marie Aschliman, Office of Vital Records and Statistics

Mylitta Barrett, Office of Vital Records and Statistics

Margaret Bowen, Office of Vital Records and Statistics

John Brockert, MPH, Former Director, Office of Vital Records and Statistics

Kathy Cook, Office of Vital Records and Statistics

Leisa Finch, Office of Vital Records and Statistics

Betty Foster, Office of Vital Records and Statistics

Carolyn Lucas, Office of Vital Records and Statistics

Steve McDonald, MSS, Office of Public Information and Marketing

Michelle Muirbrook, Office of Vital Records and Statistics

Barry E. Nangle, PhD, Director, Center for Health Data

Cathy Reily, Office of Vital Records and Statistics

Cynthia Robison, Office of Vital Records and Statistics

TABLE OF CONTENTS

Acknowledgments

History of Vital Statistics in Utah

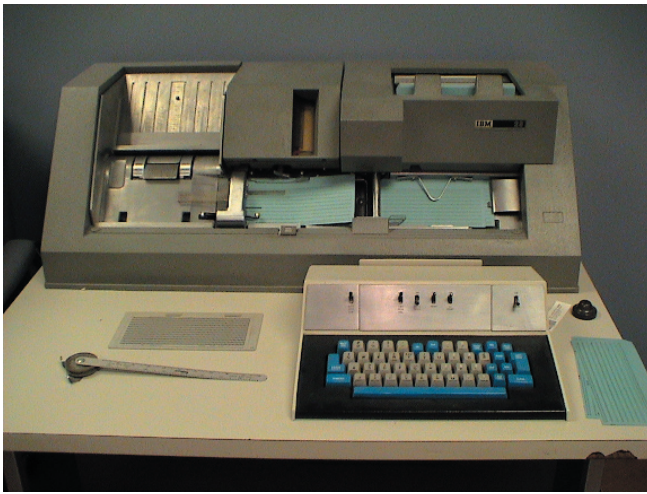
Origins of the National Vital Statistics System

A Century of Vital Statistics

Record Holdings of the Utah Office of Vital Records and Statistics

The Future of Utah Vital Records and Statistics

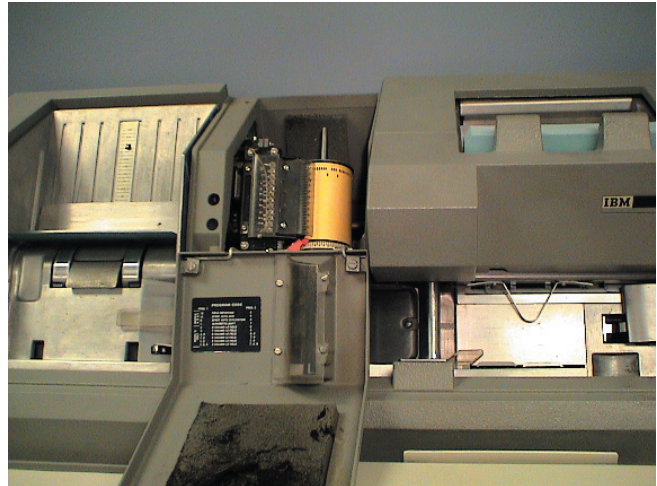
Notes



CARD PUNCH MACHINE

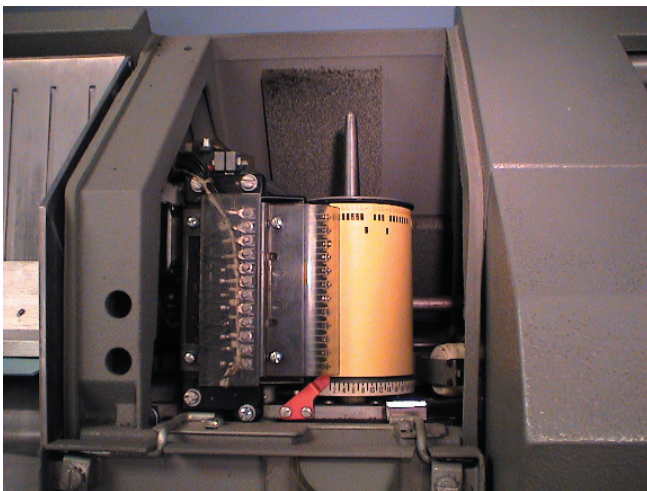
Prior to the actual period of computers the automatic data processing was handled mainly by punched card machines. Punched cards are a medium on which data are recorded by punching out holes.

It was possible to duplicate individual cards by using this machine. The machine is equipped with a mechanical needle printer, that decodes the information from the card directly on top of the card. The machine can be programmed by using the programming drum.



PROGRAM DRUM

For repeated data entry with a fixed card format, the card punch could be set up to skip certain columns, wait for key input, or duplicate information from the previous card. Program cards were punched on the same keypunch, removed, wrapped around the drum, and inserted in the keypunch above the punch position. Control by the card could be enabled and disabled by the operator with a lever.



HISTORY OF VITAL STATISTICS IN UTAH

Many people think vital statistics—the basic data of birth, death and other vital human events—have always existed and come about more or less automatically. Today, all manner of demographic statistics for the people of Utah are retrievable over the Internet from the comfort of home or office in a matter of minutes. Enter “Utah vital statistics” in a search engine and one is literally two mouse clicks away from an impressive array of tabular data and figures showing population, birth and infant mortality statistics, and leading causes of death for Utah residents.

Few people are really aware of the organized processes that go on to produce the records on which vital statistics are based. Fewer still probably realize that systematic collection of vital event data in Utah and the United States generally did not come into its own until the twentieth century.

In fact, the year of this publication, 2005, marks the centennial of the birth of the vital registration system in the state of Utah. The Senate Journal of the Sixth Session of the Utah Legislature has this entry for March 9, 1905:

Committee Room, March 9, 1905.

Mr. President:—Your Committee on Engrossed and Enrolled Bills, to whom was referred S. B. No. 102, by Walton, entitled “An Act Providing for Registration of all Births and Deaths Within the State, and Defining the Duties of the State Board of Health, and of the Secretary Thereof, in relation Thereto, Providing for the Division of the State into Registration Districts and the Appointment of Local Registrars, Defining their Duties and Fixing their Compensation, and Providing the Issuance of Birth and Death Certificates, and Burial Permits, Making an Appropriation to Carry the Provisions of this Act into Effect, and Providing Penalties for Violation Thereof, and Repealing Sections 2029, 2030, 2031, 2032, 2033, 2034, 2035, and 2036, of the Revised Statutes of Utah, 1898, and Sections 19, 20, 21, 22, and 23, of Chapter 45, Laws of Utah, 1899,” beg leave to report that we have carefully engrossed and enrolled the same, and herewith present the act for your signature.

HOLLINGSWORTH, Chairman.¹

A reading of the law enrolled in the Utah Legislature that date is instructive, since it established at the outset some of the features of the system of vital registration and vital statistics that have endured for these 100 years.

The dual legal/public health function of vital records. Responsibility for registering all births and deaths occurring in Utah was assigned to the State Registrar, who was also the secretary of the State Board of Health and Vital Statistics. In contrast to civil registration systems in much of the world at the time, registering vital events in Utah (and other states) was specifically assigned to the public health authorities, and the law contained many specifics about the forms to be used and other details of data collection that show the health statistics purpose of the data collected. At the same time, the law called for issuance of birth and death certificates to individuals as legal documents that “shall be prima facie evidence in all courts and places of the facts therein stated.”² The Utah Legislature of 1905 reinforced the dual function of the new Vital Records office by providing an appropriation for

the office to the State Board of Health (\$1,500 for 1905 and 1906), but entitling the State Registrar to collect a fee of \$1.00 from the applicant for a copy of a birth or death record. Interestingly, the fee was to be collected for “any search of the files and record, when no certified copy is made,”² a sometimes annoying feature of vital records fee collection that has remained to the present.

Responsibility to report vital events rests with key Utah businesses. In contrast to European civil registration systems in which families report births and deaths to local authorities, the U.S. system that was established in Utah in 1905 required businesses and professionals to report vital events: physicians, midwives, birthing facilities, and undertakers. The law instructed the State Registrar to maintain a separate registry of physicians, midwives, and undertakers and to supply them with standardized forms for registering the births and deaths they attended. The current system for assuring a detailed cause of death certification for every death in Utah was established in the 1905 law, which gave undertakers the responsibility for obtaining on the death certificate an appropriate cause of death from the attending physician before disposition of the remains of the deceased.

Registration Districts. The law directed that the commissioners of each county appoint a local registrar of vital statistics for each local registration district. While the local authorities made these appointments, local registrars were paid, in part, by the State Board of Health, and could be removed from office if the State Registrar found that they had failed to make prompt and complete returns of births and deaths to the state. Governance of vital records and statistics today remain a partnership between state and local government in Utah.

**State Registrars and Directors of Vital Records and Statistics
Utah, 1905–2005**

T. B. Beatty	1905 to 1935
Eva W. Ramsey	1939 to 1940
Edward Titus	1940 to 1963
John Wright	1963 to 1969
John Brockert	1969 to 1995
Barry Nangle	1995 to 2003
Jeffrey Duncan	2003 to Present

ORIGINS OF THE NATIONAL VITAL STATISTICS SYSTEM

The essential motivation for the enactment of a birth and death registration law in Utah in 1905 was pressure from the federal government at the beginning of the twentieth century to establish a national vital statistics system for the United States. The following article from the Ogden Standard-Examiner on April 8, 1903 reflects the political climate at the time surrounding this issue. Prior to the 1905 state law, counties in Utah registered vital events, apparently in a somewhat uneven manner.

Despite the fact that Utah did not gain statehood until 1896, the state was a relatively early addition to the official U.S. Vital Registration area. In 1900, only ten states had standardized and sufficiently thorough death registration to be included in the national registration area, upon which U.S. vital statistics were based. Utah began statewide birth and death registration in 1905, and was included in the national death registration area in 1910, the twentieth state to join the registration area. The national birth registration area was formed in 1915, and Utah became a part of the area in 1917.

The United States system of vital registration and vital statistics is unique in the world in two respects: (1) vital registration in the United States is a state government rather than a federal government function, and (2) vital registration in America is an aspect of public health.⁵ The first vital records in the United States were the records of funerals, christenings, and marriages that were maintained according to English customs in the original American colonies. These records were primarily of legal use in court proceedings around issues of inheritance and parentage.

Vital records became a government function when vital statistics became a useful tool in combating communicable disease and the unsanitary human conditions that emerged in cities in the wake of the industrial revolution. The origin of the practice of public health itself was closely associated with the analysis of death records to show the association of death rates, social conditions, and public hygiene. Studies in the nineteenth century by Pierre Villermé in France, and later Edwin Chadwick and William Farr in England, used vital statistics to advocate for sanitary reform.

The findings of studies of public health using vital statistics in nineteenth century Europe greatly influenced the practitioners of the fledgling public health profession in the United States. Here, there was no national system for the registration of births and deaths, only disparate state systems

THEY WANT BIRTHS AND DEATHS REGISTERED

STATE BOARD OF HEALTH WRITES TO CLERK HOLLINGSWORTH.

Claim the Federal Authorities Are Pressing Them in the Matter.

The State Board of Health intends to enforce the law regarding the registration of births and deaths in each of the counties of the state. In Weber county, only about a half dozen births and deaths have been registered during the past four years. The following is a circular sent to County Clerk Hollingsworth:

"It is the intention of the State Board of Health to hereafter strictly enforce the law relating to the registration of vital statistics. (See sections 2029 to 2036 inclusive Revised Statutes). That we have heretofore been unable to furnish accurate and reliable statistics of this kind is a reflection upon the intelligence of the people of the state.

"The federal authorities are pressing us in the matter and those failing to comply with the law will hereafter be vigorously prosecuted in all instances where discovered. Will you kindly cooperate with us in this matter."³

that had evolved from the church-run registration systems in the original 13 colonies. People like Lemuel Shattuck of Massachusetts, who founded the American Statistical Association, lobbied state legislatures for effective vital registration laws so that states would have the data needed for disease control. In 1847 the newly formed American Medical Association (AMA) wrote letters to state legislatures on the need for laws directing the registration of births, deaths, and marriages. In 1855 the AMA adopted the following resolutions:

RESOLVED, That the members of the medical profession throughout the Union be urgently requested to take immediate and concerted action for petitioning their several legislative bodies to establish offices for the collection of vital statistics.

RESOLVED, That a committee of one from each State be appointed to report upon a uniform system of registration of marriages, births, and deaths.

It was 1869 before Massachusetts enacted the first comprehensive state health law that included statewide vital registration.

So, it really was the growing public health movement that swept across the United States at the end of the nineteenth century and the start of the twentieth that resulted in Utah adopting emerging national standards for the registration of vital events. That movement was fueled, in large measure, by the very high mortality from infectious diseases that accompanied the shift in the population during that period from country to city. The diseases of overcrowding and poor sanitation—pneumonia, tuberculosis, diphtheria, and diarrhea an enteritis—killed infants and children in greatly disproportionate numbers. In 1900 in the United States, 30.4% of all deaths occurred among children under five years of age.⁶ Vital statistics were one of the tools, along with food safety, sewage disposal, water treatment, public education, and other disease prevention activities used by public health to combat infectious diseases. The success of those measures in Utah is written in our state's vital statistics of the last 100 years.



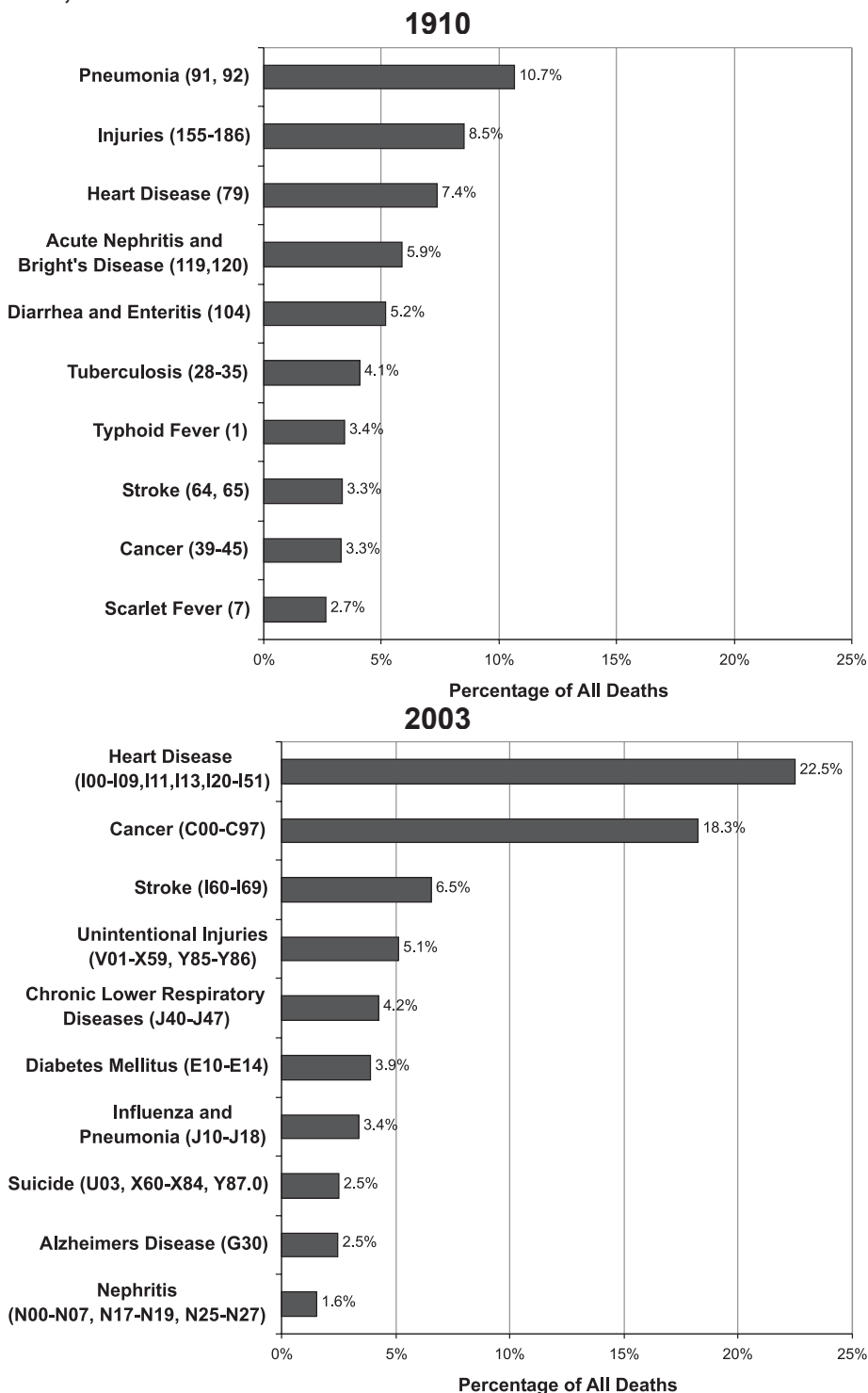
It's 1950 and these 11 men and women are operating an IBM electric accounting machine installation. Seen here (at left) is an IBM 523 gang summary punch, which could process 100 cards a minute and (in the middle) an IBM 82 high-speed sorter, which could process 650 punched cards a minute. (Credit: IBM Archives)

A CENTURY OF VITAL STATISTICS

Although statewide registration of vital events began in Utah in 1905, the earliest tabulations of mortality rates correspond to the 1910 Census when underlying population data became available for the computation of crude death rates. Figure 1, based on the mortality rates for Utah published by the Census for 1910, is a comparison of leading causes of death in 1910 and 2003. The differences are striking. In 1910 there were many “killers” lurking in the Utah of that day, with mortality rates somewhat evenly distributed among a variety of leading causes, including infectious diseases and injuries, as well as the diseases of advanced age, such as heart disease, cancer, and stroke. In 2003 the infectious killers of 1910 were no longer leading causes of death. By the twenty-first century, heart disease, cancer, stroke, and injury were responsible for most Utah deaths.

Public health efforts to control infectious diseases stem from the discovery in the nineteenth century that many serious diseases are the result of microorganisms. Control of infectious diseases came first with improvements in sanitation and hygiene, and were further controlled later in the century with the discovery of antibiotics and then universal childhood vaccination programs. Evident in the Utah vital statistics,

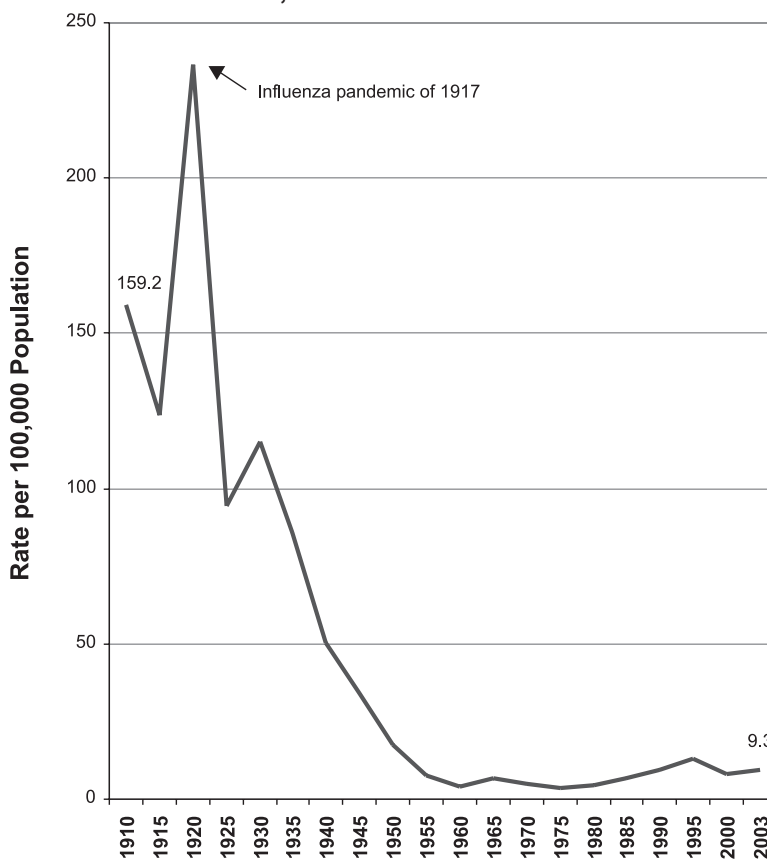
Figure 1. Top 10 leading causes of death as a percentage of all deaths—Utah, 1910 and 2003



Note: International Classification of Diseases (ICD) codes are listed next to causes of death: ICD-2 codes for 1910 and ICD-10 codes for 2003.

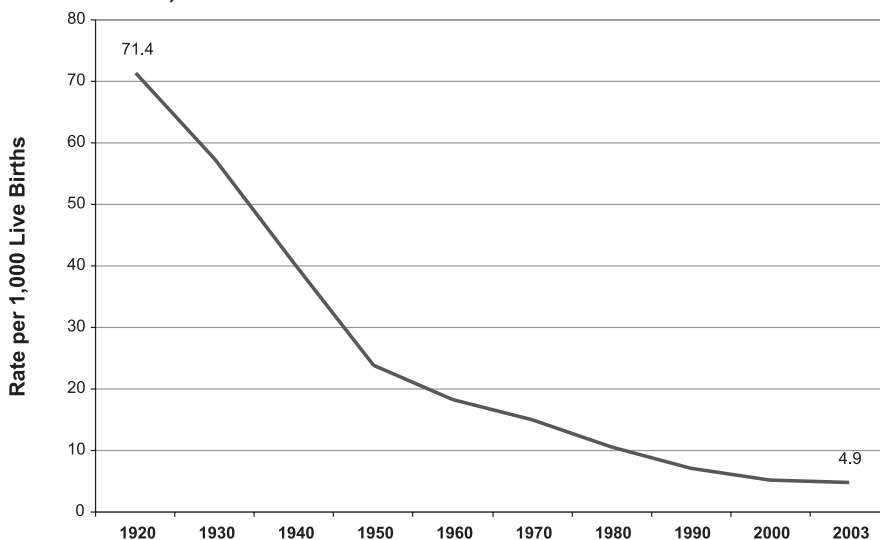
however, is that most of the decline in deaths due to infectious diseases occurred long before the first use of antibiotics in the 1940s. Figure 2 shows the trend 1910-2003 in rates of Utah deaths due to infectious diseases. Deaths due to this cause generally declined from a rate of 159.2 per 100,000 population in 1910, spiked briefly to 236.7 due to the influenza pandemic of 1917, then declined to 17.4 by 1950. Deaths to infectious diseases continued to decline through the third quarter of the twentieth century to a low of 3.4 in 1975. Since then Utah has seen a resurgence of deaths due to infectious disease as a result of the AIDS epidemic of the last quarter of the century, which appears to be itself on the decline more recently due to improved treatment of HIV infection.

Figure 2. Crude death rates per 100,000 population for infectious diseases—Utah, 1910-2003



Another dramatic shift in public health evident in Utah Vital Statistics is the decline in infant mortality over the century data have been collected (Figure 3). If the infant mortality rate prevalent in Utah in 1920 had persisted until the present, there would have been 3,558 infant deaths in 2003. As it turned out, only 242 Utah infants died that year. According to the Centers for Disease Control and Prevention, the dramatic decline in infant mortality that took place throughout the United States in the twentieth century was due to a variety of factors, including environmental interventions, improvements in nutrition, advances in clinical medicine, improvements in access to health care, and improvements in the overall standard of living.⁷ In the early part of the century, the same public health interventions that were behind the control of infectious disease were primarily responsible for the sharp decline in infant mortality. In more recent decades, advances in medical care have been the chief source of improved infant survival.

Figure 3. Infant mortality: number of infant deaths per 1,000 live births—Utah, 1920-2003



Though not as dramatic as the change in certain death rates, the birth rate in Utah

has also declined over the period that birth statistics have been tabulated. In 1920, the first year that the crude birth rate is available for Utah, there were 31.2 births per 1,000 population. Even then, Utah had one of the highest rates of birth among all of the states in the Birth Registration area. Of course, the phenomenon of high Utah birth rates has persisted into the present. The state of Utah is still ranked among the top two or three states each year when it comes to birth rates, along with Alaska and California. Still, the long term trend in the Utah birth rate, like the nation as a whole, has been downward. In 2003 there were 20.9 births per 1,000 population in Utah.

High birth rates and a declining death rate have meant enduring natural increase in the state of Utah. Figure 4 shows the exponential growth of the Utah population since 1850. The Governor's Office of Planning and Budget estimated the Utah population on July 1, 2004 to be 2,469,230.⁸

Although the state of Utah as a whole has experienced dramatic population growth over the last 100 years, the geographic distribution of the population and vital events has been anything but constant. Births and deaths were much more evenly distributed around the state in the early part of the nineteenth century than they are now, because the population of Utah has become much more concentrated in a few population centers. Figure 5 shows the percent change in population from 1920-2000 by county in Utah. Over this long period, Davis County has experienced almost a 2000%

Figure 4. Population growth—Utah, 1850-2000

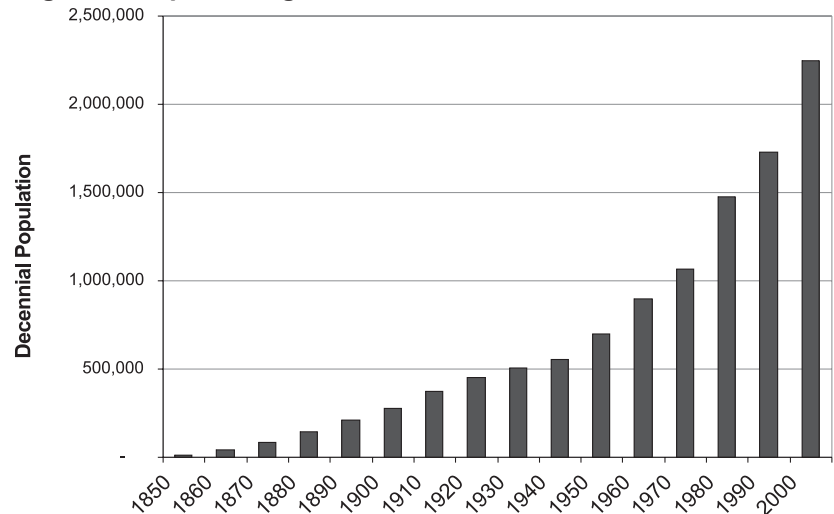
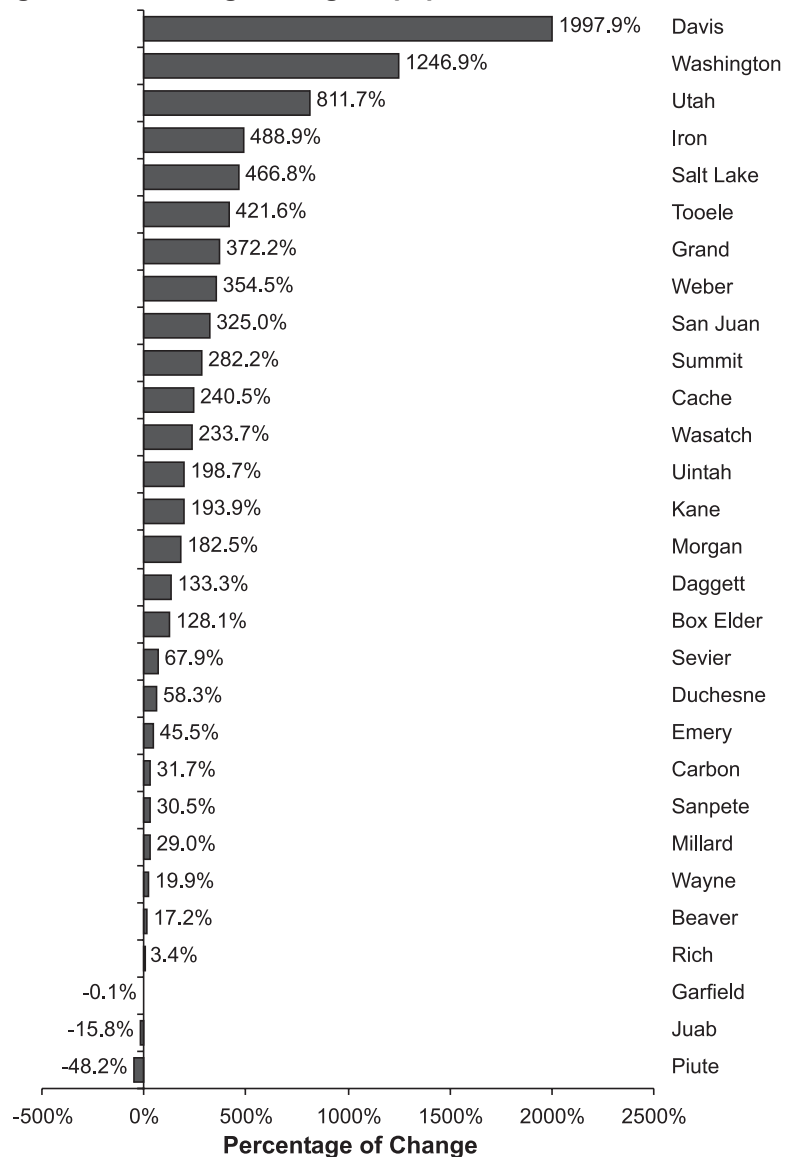
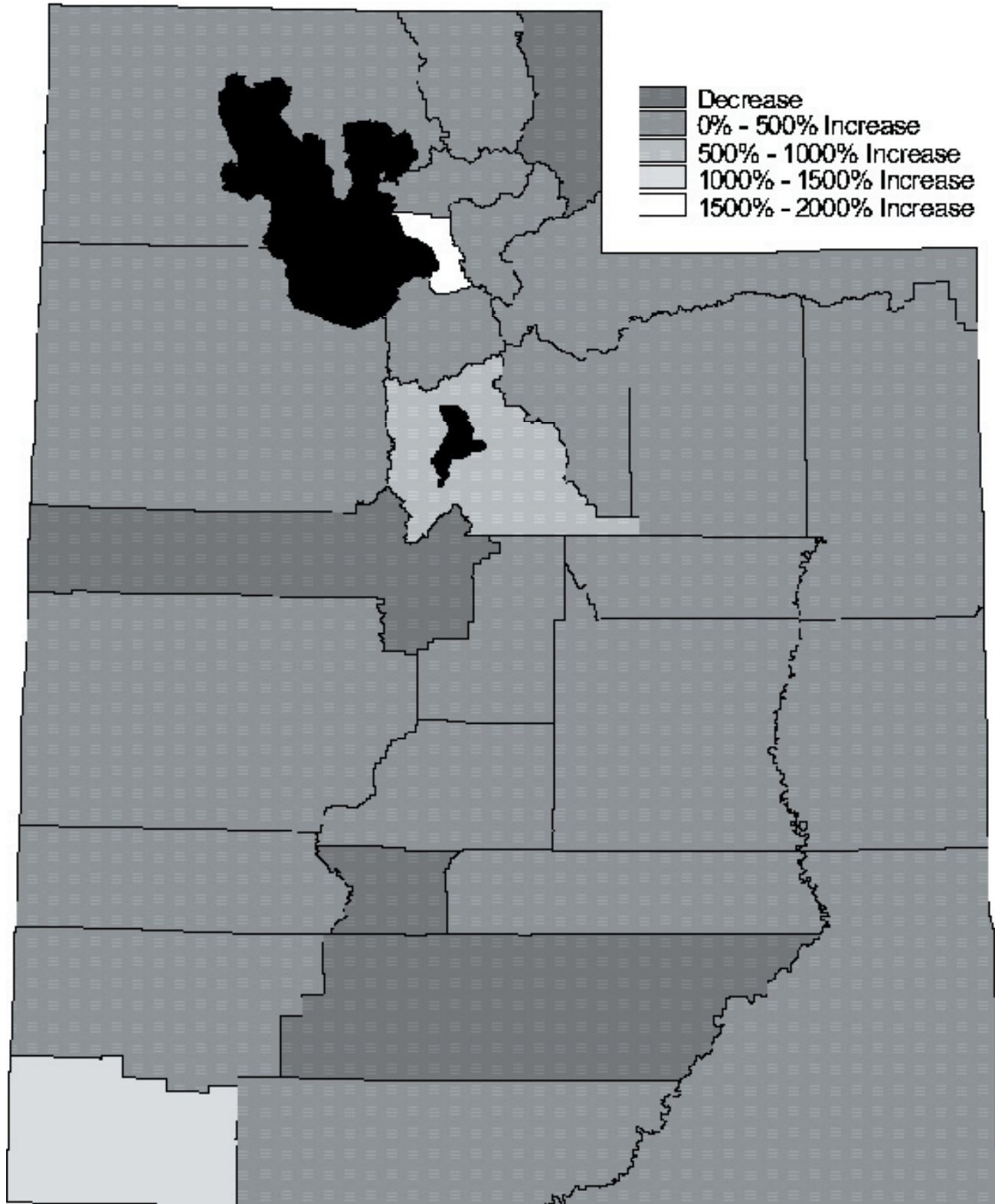


Figure 5. Percentage change in population—Utah, 1920 to 2000



increase in population, while some rural counties, such as Juab and Piute Counties, have actually declined in population since 1920. The shift of the Utah population to urban areas can be seen graphically in Figure 6, which maps the growth/decline in population by county.

Figure 6. Percentage change in population by county—Utah, 1920 to 2000



RECORD HOLDINGS OF THE UTAH OFFICE OF VITAL RECORDS AND STATISTICS

Since its creation in 1905, the current Utah Office of Vital Records and Statistics has registered and permanently stored a vast collection of vital records. Taken together, these records represent a significant information resource of the state of Utah, in continuous use by public health officials, medical and genealogical researchers, and Utah families. The Utah collection of vital records has been amassed and maintained by dedicated public servants whose stewardship has been, not simply to preserve the collection, but to maximize the use of the records to improve the health of the population and secure the legal rights of the citizenry.

This section of the report details the extent of the present holdings of the Office of Vital Records and Statistics. The evolution of information technologies used to create, store, and retrieve information over the last century—from microfilm to soundex indexing to digitized data—is evident in the variety of media that hold the current collection of records.⁹

Paper Records

Birth Certificates

Birth Certificates 1905–1976

Cannon Health Building, 288 N 1460 W, Salt Lake City, UT

Records for births 1905–1919 are hard-bound in binders. Later records are in post binders. Records for births 1922–1975 are held in secure storage in proximity to the customer window. Entire series is used to provide certified photocopies of birth certificates to the public.

Birth Certificates 1977–1998

Utah State Archives, 346 S Rio Grande, Salt Lake City, UT

Records for births from this period have been imaged and the data entered into the birth master database. Certified copies are available from electronic media, so paper records have been archived. (Records 1999–present are electronic registrations.)

Delayed Birth Certificates Pre-1905 to Present

Cannon Health Building

These are birth records recorded more than one-year after the birth occurrence. A large number of these records were created in the 1930s and early 1940s to document unregistered births, so that people could obtain social security benefits, which first became available in 1935. Delayed births continue to be filed, and approximately 90 volumes of these records (39,850) are maintained in post binders.

Court-ordered Delayed Births 1978–Present

Cannon Health Building

There are approximately 1,900 of these birth records, most of which are for foreign-born individuals who have been adopted by Utah residents. These result from a court order that establishes the facts of birth for an adoptee having no original birth certificate, and orders the creation of a Utah birth certificate.

Adoption Records

Adoption Records 1938–2001

Utah State Archives

These are the sealed records of Utah births for individuals who have been adopted. The files typically contain the original birth certificate and the court order of adoption indicating the adoptive parents and the child's new name. The adoptive information appears on the Supplementary Birth Certificate which, under Utah Law, is used for issuance of any copy of the adoptee's birth certificate. Since 1987, non-identifying health, genetic, and social histories of the adoptee's biological parents have been filed with these records, and are available without a court order to the adoptee, along with the Supplementary Certificate.

(continued from previous page)

Adoption Records 2001–Present

Cannon Health Building

Current adoption records are maintained in the vital records office.

Birth Indexes

Birth Indexes 1905–1934

Cannon Health Building

Birth records for this time period were coded with a phonetic index, called soundex, by the Works Projects Administration in the late 1930s and early 1940s. They are further indexed alphabetically by father's last name. The indexes are in large bound volumes in the Certification section of the vital records office.

Birth Indexes 1935–1976

Cannon Health Building

This series exists in several media, 3x5 index cards through 1956, then bound sheets through 1960, and finally "green-bar" computer printouts for most of the 1960s and 1970s. The indexes, sorted by name, are used to locate the paper birth records, which are stored by year and county of birth, and later by State File Number.

Death Certificates

Death Certificates 1904–1956

Utah State Archives

Death records from roughly the first half of the twentieth century are available for issuing certified copies only from microfilm. The paper records are archived. Under Utah law, after 50 years death records become public records.

Death Certificates 1957–1994 and 2003–Present

Cannon Health Building

Recent death records are kept in the vital records office. (Records for 1992–2002 are available for issuance from electronic images, so paper records for these years are also stored at State Archives.)

Court-ordered Delayed Death Certificates 1972–Present

Cannon Health Building

A 1972 law permitted filing of death certificates for an individual presumed dead, but for which a body is not found. The law permits a Utah District Court to order death certificates, in cases such as the 1984 Wilberg Mine Disaster, in which recovery of remains is impossible. These records are maintained in one volume in the vital records office.

Stillbirth/Fetal Death Records 1940–Present

Cannon Health Building

Records of fetal deaths exist for the entire period, 1905 to present, but these have only been maintained as a series since 1940. Prior to that time records were filed with both birth and death records.

Death Indexes

Death Indexes 1904–1934

Cannon Health Building

As with birth records for this same period, the Works Projects Administration created this soundex index. However, all deaths were indexed in a computer file in 1985, so this index is not often used.

Death Indexes 1935–1956

Cannon Health Building

Card index in the vital records office that, like the index for the earlier years, has been rarely used since the computer death index became available.

(continued from previous page)

Electronic Records

Birth Master

In the early 1990s the Utah Bureau of Health Statistics began issuing computer abstract of electronic records for legal purposes. A series of projects, many dependent on outside funding from partners interested in birth data for selected years, were undertaken over the last decade to computerize paper birth records. The result is the following series of fully legal electronic records:

- ♦ Birth Master 1882–1956 (Utah County Only) **Cannon Health Building**
- ♦ Birth Master 1957–1959 (All Counties) (Back-up stored at Perpetual Storage Inc., 6279 E
- ♦ Birth Master 1960–1962 (Utah County Only) Little Cottonwood Canyon Road,
- ♦ Birth Master 1963–1969 (All Counties) Sandy, Utah 84092, Fax 942-1952)
- ♦ Birth Master 1970–1974 (Utah County Only)
- ♦ Birth Master 1975–Present (All Counties)

Birth Images

Birth Images 1977–1998

These records are scanned and digitized images of paper birth certificates.

Cannon Health Building
(Back-up stored at Perpetual Storage Inc.)

Statistical Data Files

Birth Certificate Statistical Files

Birth Certificate Statistical Files 1980–2003

Birth certificate statistical files from 1980–1999 are stored on mainframe tapes at the State of Utah ITS Mainframe.

**Information Technology Services,
Department of Administrative Services**

Birth certificate statistical files from 1999–2003 are stored in PC SAS datasets on the DOH LAN.

Cannon Health Building

Death Certificate Statistical Files

Death Certificate Statistical Files 1956–2003

Death certificate statistical files from 1956–1999 are stored on mainframe tapes at the State of Utah ITS Mainframe.

**Information Technology Services,
Department of Administrative Services**

Death certificate statistical files from 1956–2003 are stored in PC SAS datasets on the DOH LAN.

Cannon Health Building

Marriage Statistical Files

Marriage Statistical Files 1978–2003

Marriage certificate statistical files from 1978–1998 are stored on mainframe tapes at the State of Utah ITS.

**Information Technology Services,
Department of Administrative Services**

Marriage certificate statistical files from 1978–2003 are stored in PC SAS datasets on the DOH LAN.

Cannon Health Building

Divorce Statistical Files

Divorce Statistical Files 1978–2003

Divorce statistical files from 1978–1998 are stored on mainframe tapes at the State of Utah ITS.

**Information Technology Services,
Department of Administrative Services**

Divorce statistical files from 1978–2003 are stored in PC SAS datasets on the DOH LAN.

Cannon Health Building

(continued from previous page)

Vital Records in the Utah Population Database

Vital Records comprise much of the data in the Utah Population Database (UPDB). For 30 years, researchers have used this resource to identify and study families that have higher than normal incidence of cancer or other diseases, to analyze patterns of genetic inheritance, and to identify specific genetic mutations.

Data	Number of Records
Birth Certificates 1915–1921 and 1947–2003	1.9 million
Marriage Certificates 1978–2002	497,000
Divorce Certificates 1978–2002	220,000
Death Certificates 1904–2003	681,000



ELECTRIC PUNCHED CARD SORTING MACHINE

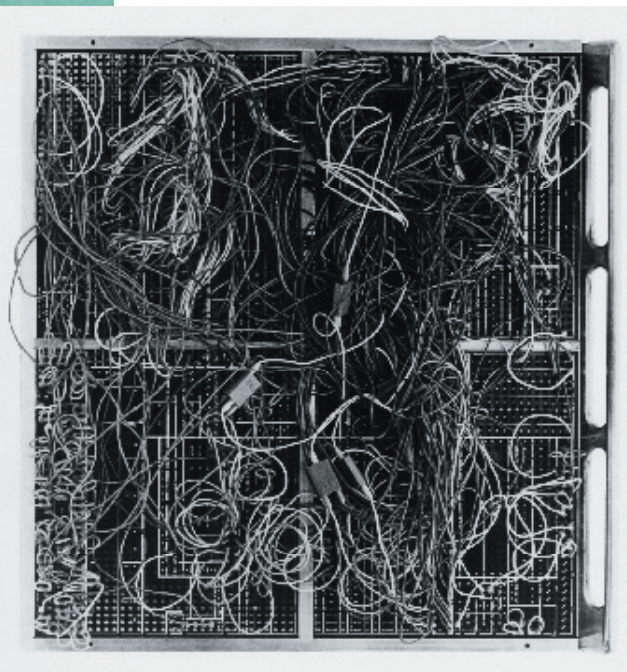
This is the first horizontal card sorter, introduced by IBM in 1925 to operate at almost twice the speeds of the older Type 70 vertical sorter. This machine uses a direct magnetically operated control for the chute blades which replaced a much more complex mechanical device in the older machine. The Type 80 grouped all cards of similar classification (such as “sales by products”) and at the same time arranged such classifications in numerical sequence. With 10,200 units on rental at the close of 1943, the Type 80 had the largest inventory for any machine at that time.

(Credit: IBM Archives)

PLUGBOARD

A perforated board into which plugs or pins were placed to control the operation of punch card tabulating equipment. Also known as control panels, plugboards allowed machine operators to ‘program’ the equipment to perform specific tasks such as addition, subtraction, and multiplication. An example of a plugboard is shown above.

(Credit: IBM Archives)



THE FUTURE OF UTAH VITAL RECORDS AND STATISTICS

Although vital records and statistics are among the oldest tools of public health, they have never been of more use than they are today. Disease prevention efforts in Utah currently focus on promoting healthy lifestyles and reducing premature deaths due to today's leading causes of death, such as heart disease, cancer, stroke, and injuries. Mortality statistics are still the key to understanding what measures should be taken at the individual and community level to enhance human health. Modern medicine is pushing the frontiers of infant survival, and the health data collected through birth certificates is increasingly detailed and sophisticated, designed to help identify risk factors for infant morbidity and mortality.

The use of vital records by families is also increasing. Most Utah families obtain a birth certificate for a newborn child before his or her third birthday, many immediately after the child's birth. Birth certificates are often used as travel documents, especially for young children who have no other identification documents. As the world becomes a smaller place, Utahns have more occasions than ever before in which they are asked for documentation of American citizenship, a status derived from the fact of one's birth in Utah.

As people use vital records more often to obtain passports and other official documents, more attention must be paid to the security of the records. Cases of the fraudulent use of birth and death certificates to steal others identities or defraud insurance companies crop up in the popular media with some regularity. Utahns have a right to be concerned about the security of identifying information about them. As a response to growing public concern with identity fraud, especially as it relates to terrorism, in 2004 the United States Congress passed sweeping Intelligence Reform legislation that included provisions for assistance to states to improve the security of vital records.

The position of the National Association for Public Health Statistics and Information Systems (NAPHSIS), whose membership includes all of the State Registrars of Vital Statistics, is that the solution to both the increased need for vital records security and better support for public health surveillance is the same: electronic vital records.¹⁰ Information transmitted electronically can be transferred faster and more securely than information dependent on a paper process. Computerized information systems have their own security risks to be sure, but on the whole, the future prospects for secure, timely vital records lies in electronic data transmission, both for the capture of vital event information, and for the provision of vital records and statistics for public health and legal purposes.

NOTES

1. Series #409. Utah. Legislature. Senate. Senate Journal, session of the sixth Legislature of the State of Utah. Salt Lake City: The Deseret News, 1905, pp. 577-578.
2. Utah. Laws of the State of Utah passed at the sixth regular session of the Legislature of the State of Utah. Salt Lake City: The Star Printing Co., 1905, p. 217.
3. Ibid.
4. "They Want Births and Deaths Registered," *Ogden Standard Examiner*, April 4, 1903.
5. Halbert L. Dunn, *Vital Statistics of the United States 1950*, Vol. 1, *Analysis and Summary Tables With Supplemental Tables for Alaska, Hawaii, Puerto Rico, and Virgin Islands*, United States Government Printing Office, Washington, 1954, Chap. 1, "History and Organization of the Vital Statistics System," pp. 1-19.
6. Achievements in Public Health, 1900-1999: Control of Infectious Diseases. MMWR Vol 48 No. 29, July 30 1999, pp. 621-627
7. Achievements in Public Health, 1900-1999: Healthier Mothers and Babies. MMWR Vol 48 No. 38, October 1 1999, pp. 849-858.
8. Economic Report to the Governor p. 29.
9. This description of holdings owes a great deal to the research of Robert G. Jowett, a former employee of the Bureau of Health Statistics and his 1994 unpublished report, "Utah State Bureau of Vital Records: A survey of Record Holdings and their use."
10. <http://www.naphsis.org/>

