Digging into Death Certification Data to Uncover Family History and Family Health Treasures – A Physician's Perspective

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Introduction

Death documentation in the US can be a gold mine of information for the person interested in family history. Information such as date of birth, date of death, birthplace, parents, surviving spouse, can be used to identify people and link them to family trees. Recording our cause of death is a relatively recent human endeavor as we shall see and of the 50 million people who die worldwide each year, only half will have their death officially documented. Even in the 21st century, those living in the less developed countries are likely to not have their death recorded let alone cause of death. (1)

From a medical perspective, collecting causes of death on a national level helps shape medical research, health care funding, and public health policy. Life expectancy in the US in 1820 from birth was 44 years and in 2020 had increased to almost 80 years in good part due to the collection and analysis of death data.

Recognizing medical conditions that are common in your family using death registration information might prove useful to identify risk of developing certain diseases in time to modify that risk. With our current medical and epidemiological understanding of disease, our ancestors can speak to us from the dust and warn us disease if we will take the time to find the right information.

Our purpose in this review is to discuss the fascinating history of death recording, discuss the death data collected in the US that includes cause of death such as mortality schedules, state and county death registries, and the modern death certificate. Finally, we will review some of the common diseases that have a strong genetic component which the family historian should look for during their work to understand and potentially modify their own

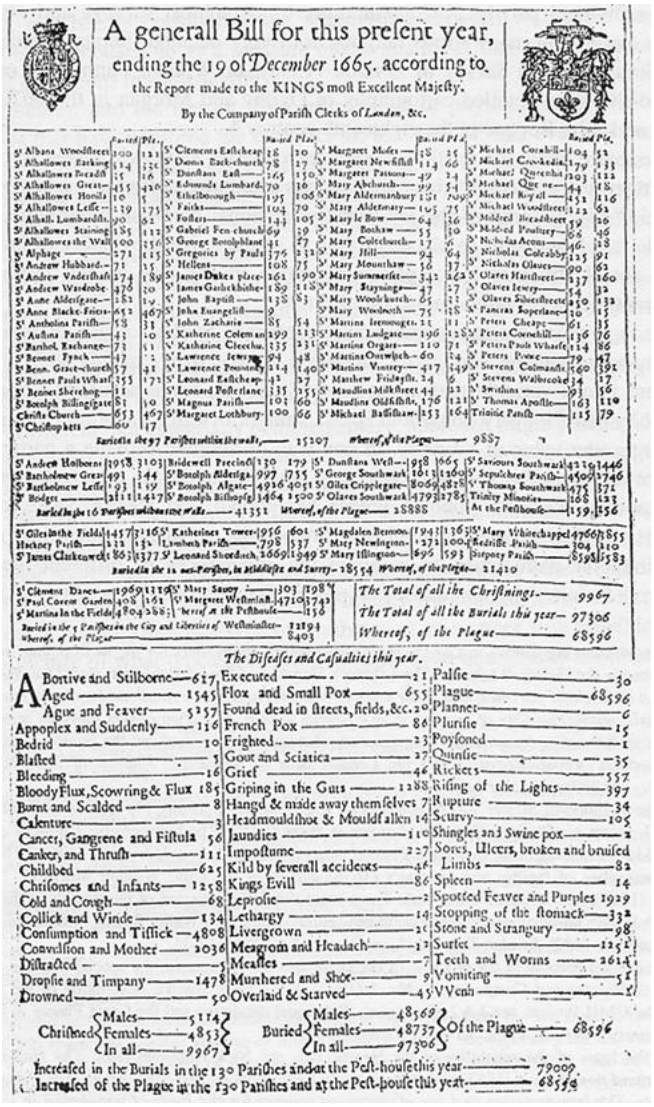
medical future as well as the medical future of their descendants. To do that we will discuss creating your own family medical portrait that allows us to calculate risk of common genetically influenced diseases. Because of this end goal we will restrict our discussion to death information where cause of death and other medical information is available.

Section 1: History of Recording Death and Causes of Death

One would think that civilizations that could build pyramids like the Egyptians, mastered philosophy, mathematics, and medicine like the Greeks, or who were able to administer the largest empire of the ancient world and were exceptional builders and engineers like the Romans, would have recognized the potential benefit of recording causes of death. We often have dates of death for prominent ancient personalities but rarely their cause of death. There are notable exceptions such as Gaius Julius Caesar who died on March 15, 44 BC whose immediate cause of death on a modern US death certificate would be hemorrhage as a consequence of multiple stab wounds and the manner of death would be listed as homicide. Ancient physicians such as Galen wrote about, and modern science have identified common diseases afflicting people who lived anciently. We also know from historical writings of the episodic plagues that decimated civilizations. A good example is the so-called the Antonine plague also known as Galen's plague, that lasted from AD 162-180 and killed an estimated 10% of population of the Roman Empire. The plague was named after the then Emperor of Rome (not a great thing to be remembered for) and was thought to be caused by smallpox or possibly measles and was descried by the Greek born physician named Galen. In general, there is no systematic accounting for causes of death for individuals or groups of people anciently (3).

Likewise, the Christian church, though recording a person's death, did not record cause of death. It has been suggested that the church was more concerned about the fate of the soul than the fate of the body thus no collection of death information was made (1). That changed in the year 1532 in the Church of England parishes in and around London.

The first known attempts to identify, tabulate, and report causes of death were known as Bills of Mortality that first appeared in 1532 with the number of deaths documented initially and sporadically. In 1603 this changed to weekly reporting (1). In 1629, during the reign of King James I, **cause of death** was added to the weekly report and thus became the first systematic data collection of why we die. Data for the Bills was collected only for persons buried in parish churches in the London area initially and later expanded to other areas (4). The guild known as the Worshipful Company of Parish Clerks were charged with collecting this information and submitting it to local authorities. When a person died the sexton, who was responsible for preparing the grave, alerted the searchers, usually pairs of older women paid by the parish to determine the cause of death (Boyce N. Bills of mortality. Tracking disease in early London. Lancet 2020;395:1186-1187). They were had no particular medical training but picked up the skills while on the job. Information had to be collected and submitted by 6 pm on a Tuesday. The data was collated and printed on the printing presses owned by the Company of Parish Clerks, and by Thursday copies were made available to the King and Privy Council, London Mayor and Alderman, and then made available to the public. You could buy an annual subscription in 1631 for 4 shillings a year. Figure 1 (4) is an example of a Bill of Mortality for the year 1665. It provides the number of people who had died by location of burial and causes of death. As an arthritis specialist, I take special note that 27 people were reported to have died of gout and



A generall Bill for this present year, ending the 19 of December 1665. according to the Report made to the KINGS most Excellent Majesty.

By the Company of Parish Clerks of London, &c.

The Total of all the Christnings — 9967

The Total of all the Burials this year — 97306

Whereof, of the Plague — 68596

The Diseases and Casualties this year.

Abortive and Stilborne	617	Executed	21	Palsie	30
Aged	1545	Flox and Small Pox	655	Plague	68596
Ague and Feaver	5257	Found dead in streets, fields, &c.	20	Planet	6
Appoplex and Suddenly	116	French Pox	86	Plurisie	15
Bedrid	10	Frighted	23	Poysoned	1
Blasted	5	Gout and Sciatica	27	Quinsie	35
Bleeding	16	Grief	46	Rickets	557
Bloody Flux, Scowring & Flux	185	Griping in the Guts	1288	Rising of the Lights	397
Burnt and Scalded	8	Hangd & made away themselves	7	Rupture	34
Calenture	3	Headmouldshot & Mouldfallen	14	Scurvy	105
Cancer, Gangrene and Fistula	56	Jaundies	110	Shingles and Swine pox	2
Canker, and Thrush	111	Impostume	227	Sores, Ulcers, broken and bruised	
Childbed	625	Kild by severall accidents	46	Limbs	82
Chrisomes and Infants	1258	Kings Evill	86	Spleen	14
Cold and Cough	68	Leprosie	2	Spotted Feaver and Purples	1929
Collick and Winde	134	Lethargy	14	Stopping of the stomack	332
Consumption and Tisick	4808	Livergrown	26	Stone and Strangury	98
Convulsion and Mother	2036	Meagrom and Headach	12	Surfet	1251
Distracted	5	Measles	7	Teeth and Worms	2614
Dropsie and Timpany	1478	Murthered and Shot	9	Vomiting	58
Drowned	50	Overlaid & Starved	45	VVenn	2

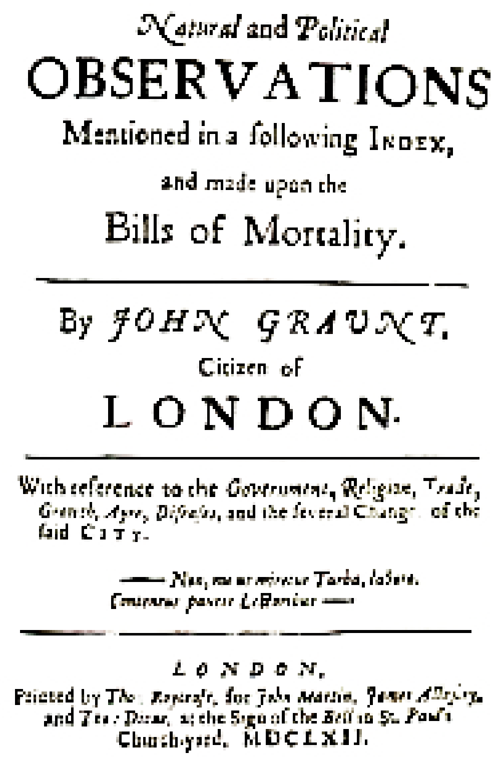
Christned	Males 5114	Buried	Males 48569	Of the Plague 68596
	Females 4853		Females 48737	
	In all 9967		In all 97306	

Increased in the Burials in the 130 Parishes and at the Pest-house this year — 79009

Increased of the Plague in the 130 Parishes and at the Pest-house this year — 68544

sciatica in 1665 (must have been impressive cases of gout!). Also, look at the number of people in London area reported to have died of the plague that year (68,596). London was hit by a major episode of plague in 1665 -1666 and we know exactly how many members in good standing of the Church of England in the London area died of the plague and other causes. If you were a dissenter from the church, or Jewish, or Roman Catholic, or some other faith, and thus not buried in a Church of England sanctioned parish graveyard your cause of death was not recorded. Bills of Mortality were not collected for the whole realm as noted but it was a start. The Bills ceased being collected and reported in 1858 because something better was happening.

One person caught the vision of what could be gained from the information contained in the Bills of Mortality. John Graunt, a London haberdasher or clothing merchant, published Natural and Political Observations Made on the Bills of Mortality in 1662. He systematically went through the information contained in the Bills and may be considered the first epidemiologist (6). He reported among other things that one-third of children died before the age of five, documented the rise of rickets (bone disease due to vitamin D deficiency) in the London area, and described the impact of the plague. It became the talk of London when it was published, and he was inducted into the newly formed Royal Society. Unfortunately, he did not contribute anything further to the field, was later ostracized due to his conversion to Roman Catholicism, and his haberdashery burned down in 1666 during the Great Fire of London. He died a pauper in 1674. But the possibilities of vital statistics on death had been demonstrated.


Natural and Political
OBSERVATIONS
Mentioned in a following INDEX,
and made upon the
Bills of Mortality.

By *JOHN GRAUNT*,
Citizen of
LONDON.

With reference to the *Government*, *Religion*, *Trade*, *Growth*, *Ayre*, *Diseases*, and the several Changes of the said CITY.

—— *Non, me ut miretur Turba, laboro,*
Contentus paucis Lectoribus ——

LONDON,
Printed by *Tho: Roycroft*, for *John Martin*, *James Allestry*, and *Tho: Dicas*, at the Sign of the *Bell* in *St. Paul's* Church-yard, MDCLXII.

So why did it take so long in the course of human history to document causes of death? My own experience in medicine has taught me that humans rarely collect information until the information can be put to some practical use. For example, methods for assessing the efficacy

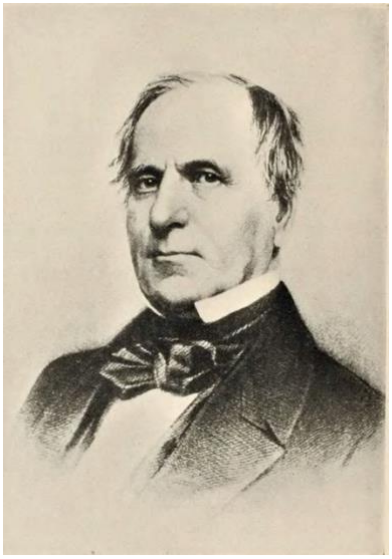
of medications to treat rheumatoid arthritis were only developed in response to the development of highly effective medications used to treat the disease. What was the motivation for the Bills of Mortality? It was likely over concern for the plague. The Bills of Mortality documented location of the cases of plague by parish and thus is it possible that they helped the living steer clear of those locations. The 1629 order from the Court of King James for collecting all causes of death is less clear. Maybe someone was simply curious. The understanding of disease processes and methods for intervention that developed in the late 19th and early 20th centuries likely was the driving force behind the detailed death certification that began in the middle of the 19th century and continues today.

The next milestone in death reporting occurred again in England in 1838 with the appointment of William Farr as Compiler of Abstracts to the General Register Office, an office he held for 40 years. He was responsible for systematizing the collection of mortality data and using the data to understand disease processes. The power of such dry but important information was then used to understand the epidemiology of cholera as it occurred in England, a truly landmark breakthrough in public health. His other important contribution to the science of death was to provide for the International Statistical Congress in 1853 a list of the causes of death to be used for standardizing mortality worldwide. His classification system included 139 causes of the then understood ways of dying . The list included conditions such teething which in the 21st century we know is not fatal but may result in parents wishing they were dead due to lack of sleep from a crying child keeping them up at night. "Teething" deaths likely occurred when the child was being weaned from mothers' milk and unpasteurized animal milk was being introduced to the diet and thus the death was an infectious one. I am certain that 100 years from now someone will look back at our misattributions and shake their heads in wonder.

In 1891 this process of categorizing disease was taken to the next step. Jacques Bertillon, Chief of Statistical Services of the City of Paris chaired a committee of the International Statistical Institute and under his direction the first **International Disease Classification (ICD)** was born with the first ICD being published in 1893. It documented not just causes of death but disease in general.

From this first ICD in 1893 we currently have the distant grandchild of that effort in the overly complex International Statistical Classification of Disease and Related Health Problems version 11 aka ICD-11 that health care providers and insurance companies use for coding of illness and payment to health care systems and providers use to code for death. It's 17,000 coded diseases and causes of dying and 120,000 ways of coding those possibilities might make Farr turn over in his grave at Bromley Common in Southeast London, but we now know with exacting detail why we get ill and why we die.

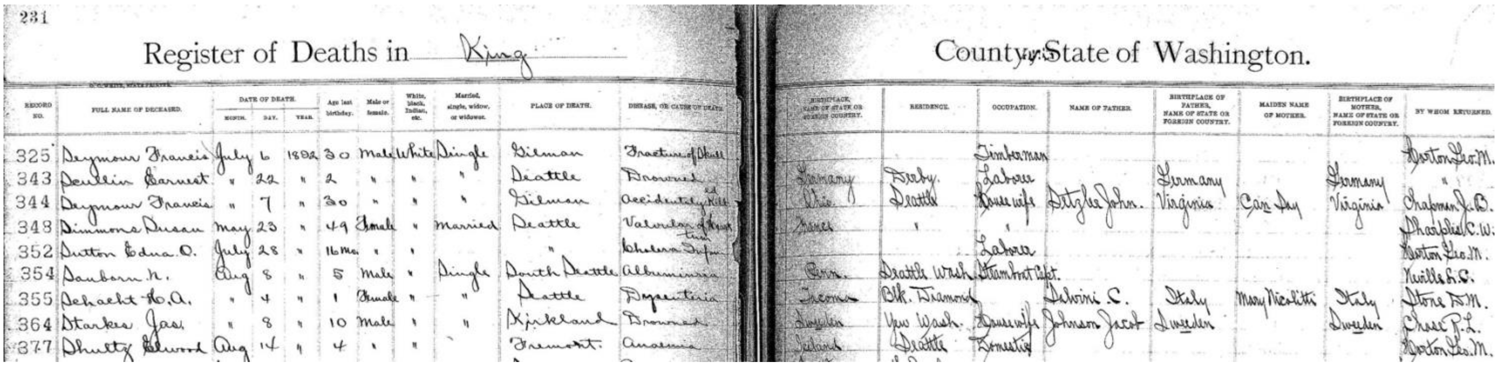
In the New World, the English colonists likely brought the Bills of Mortality experience with them. In 1632 the Virginia Grand Assembly passed a law requiring parishes to keep records of christenings, marriages, and burials. In 1639 the Massachusetts Bay Colony did something similar but with two important differences; The records would be kept by a government official and not the clergy, and the record would be of events i.e., births, marriages, and deaths and not just ceremonies. The next major step forward also occurred again in Massachusetts 200 years later by Lemuel Shattuck (Figure 3), a member of the American Antiquarian Society which was devoted to all things regarding American History, and a future founding member of the New England Historic Genealogical Society. Somehow, he was able to retire at age 45 and founded yet another important society, the American Statistical Association, in 1839. He realized as one interested in vital statistics and genealogy that a government sponsored effort was needed to record societies vital information. He was instrumental in passing a law in Massachusetts that enabled the state government to collect vital statistics including causes of death which became a model for other states. Of interest, Massachusetts was the first state to issue death certificates in the year 1841. Shattuck's crowning achievement was as Chair of the Massachusetts Sanitary Commission that issued a report in 1850 on the health of the state and included 50 recommendations for improving public health that are now standard components of American public health practice.



At about the same time, the American Medical Association (AMA) began to promote the need for national mortality statistics and in 1847 lobbied state legislatures to collect information on vital events. There was an attempt to use the national census that took place every 10 years to identify causes of death for individuals. This every 10 years death registry is known as the United States Census Mortality Schedules and collected information of people who died between June 1st in the year prior to the census and ended May 31st in the year of the census. This national effort to collected causes of death happened from 1850 through 1900 (10). In 6 states, Colorado, Florida, Nebraska, New Mexico, North Dakota, and South Dakota a federal census took place in 1885 as well and included mortality schedules. We do not have the 1890 mortality schedules as these were destroyed along with most of the 1890 census population data during a fire in the US Commerce Department Building that occurred in January 1921. Actually, fire destroyed 25% of the forms, water used to put out the fire damaged another 37%, and the remaining 38% undamaged records from the 1890 census were subsequently destroyed by the government in 1934 for some reason. The 1900 mortality schedules were ordered destroyed by congress with the exception that the Minnesota mortality schedules somehow survived and have been published by the Minnesota Historical Society. We will discuss the nuts and bolts of using and accessing mortality schedules in more detail in the next section.

Outside of the federal attempts to collect death information, individual states and counties become involved in collecting vital statistics including death information on an ongoing basis. The first state to do so as noted was Massachusetts in 1841 and the last state to do so was New Mexico in 1920.

Many of the states/counties were collecting information in the form of death registries before the states actually mandated death data collection. Below is a death registration for



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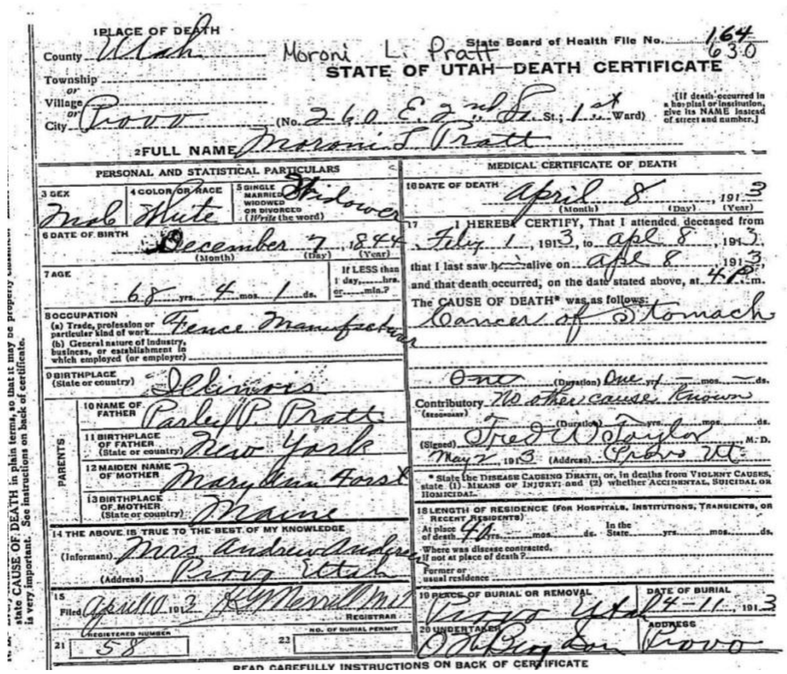
Register of Deaths in King County of State of Washington.

RECORD NO.	FULL NAME OF DECEASED.	DATE OF DEATH. MONTH.	DAY.	YEAR.	Age last birthday.	Male or female.	White, black, Indian, etc.	Married, single, widow, or widower.	PLACE OF DEATH.	DISEASE, OR CAUSE OF DEATH.
325	Seymour Francis	July	6	1892	30	Male	White	Single	Gilman	Fracture of Skull
343	Seullin Earnest	"	22	"	2	"	"	"	Seattle	Drowned
344	Seymour Francis	"	7	"	30	"	"	"	Gilman	Accidentally Killed
348	Simmons Susan	May	23	"	49	Female	"	Married	Seattle	Valvular of Heart
352	Sutton Edna O.	July	28	"	16 Mo.	"	"		"	Cholera Infan
354	Sanborn N.	Aug	8	"	5	Male	"	Single	South Seattle	Albuminuria
355	Schacht H. A.	"	4	"	1	Female	"	"	Seattle	Dysenteria
364	Starkes Jas.	"	8	"	10	Male	"	"	Kirkland	Drowned
377	Shutty Elwood	Aug	14	"	4	"	"		Fremont.	Anaemia

BIRTHPLACE, NAME OF STATE OR FOREIGN COUNTRY.	RESIDENCE.	OCCUPATION.	NAME OF FATHER.	BIRTHPLACE OF FATHER, NAME OF STATE OR FOREIGN COUNTRY.	MAIDEN NAME OF MOTHER.	BIRTHPLACE OF MOTHER, NAME OF STATE OR FOREIGN COUNTRY.	BY WHOM RETURNED.
		Timberman					Horton Geo. M.
Germany	Seaby.	Laborer		Germany		Germany	"
Ohio	Seattle	Housewife	Setzler John.	Virginia	Carr Sq	Virginia	Chapman J. B.
France	"	"					Shoaplie C. W.
		Laborer					Horton Geo. M.
Penn.	Seattle Wash.	Steamboat Capt.					Neville S. C.
Tacoma	Blk. Diamond		Salvini C.	Italy	Mary Nicoletti	Italy	Stone D. M.
Sweden	New Wash.	Housewife	Johnson Jacob	Sweden		Sweden	Chase R. L.
Ireland	Seattle	Domestic					Horton Geo. M.

King County, Washington in 1893. The state of Washington mandated certification did not occur until 1907. The information contained in the county registry is fantastic! Includes name, date of death, age, sex, race, marital status, place of death, **cause of death**, place of birth, location of residence, occupation, name of parents and place of birth of parents and name of the informant! A family history gold mine! I have had a chance to review registries from other states at this time period and the data collection is very similar and mirrors the data collected in the mortality schedules including cause of death.



1 PLACE OF DEATH
County Utah
Moroni L. Pratt
State Board of Health File No. 164 630
STATE OF UTAH—DEATH CERTIFICATE
Township or Village or City Provo (No. 260 E. 2nd St.; 1st Ward) [If death occurred in a hospital or institution, give its NAME instead of street and number.]
2 FULL NAME Moroni L. Pratt

PERSONAL AND STATISTICAL PARTICULARS
3 SEX Male
4 COLOR OR RACE White
5 SINGLE, MARRIED, WIDOWED OR DIVORCED (Write the word) Widower
6 DATE OF BIRTH December 7, 1844 (Month) (Day) (Year)
7 AGE 68 yrs. 4 mos. 1 ds. If LESS than 1 day, ...hrs. or ...min.?
8 OCCUPATION (a) Trade, profession or particular kind of work Fence Manufacturer
(b) General nature of industry, business, or establishment in which employed (or employer)
9 BIRTHPLACE (State or country) Illinois
PARENTS
10 NAME OF FATHER Parley P. Pratt
11 BIRTHPLACE OF FATHER (State or country) New York
12 MAIDEN NAME OF MOTHER Mary Ann Frost
13 BIRTHPLACE OF MOTHER (State or country) Maine
14 THE ABOVE IS TRUE TO THE BEST OF MY KNOWLEDGE
(Informant) Mrs Andrew Anderson
(Address) Provo Utah
15 Filed April 10 1913 [illegible] Registrar
21 Registered Number 58
22 No. of Burial Permit

MEDICAL CERTIFICATE OF DEATH
16 DATE OF DEATH April 8, 1913 (Month) (Day) (Year)
17 I HEREBY CERTIFY, That I attended deceased from Feby 1, 1913, to apl 8, 1913, that I last saw him alive on apl 8, 1913, and that death occurred, on the date stated above, at 4 P.m.
The CAUSE OF DEATH* was as follows:
Cancer of Stomach
One (Duration) One yr. — mos. — ds.
Contributory (secondary) No other cause known (Duration) ... yrs. ... mos. ... ds.
(Signed) Fred W. Taylor M.D.
May 2, 1913 (Address) Provo Ut.
*State the DISEASE CAUSING DEATH, or, in deaths from VIOLENT CAUSES, state (1) MEANS OF INJURY; and (2) whether ACCIDENTAL, SUICIDAL OR HOMICIDAL.
18 LENGTH OF RESIDENCE (FOR HOSPITALS, INSTITUTIONS, TRANSIENTS, OR RECENT RESIDENTS)
At place of death 40 yrs. ... mos. ... ds. In the State ... yrs. ... mos. ... ds.
Where was disease contracted, if not at place of death?
Former or usual residence
19 PLACE OF BURIAL OR REMOVAL Provo Utah
DATE OF BURIAL 4-11, 1913
20 UNDERTAKER O. H. Berg Son
ADDRESS Provo
N.B.—Every item of information should be carefully supplied. AGE should be stated EXACTLY. PHYSICIANS should state CAUSE OF DEATH in plain terms, so that it may be properly classified. Exact statement of OCCUPATION is very important. See instructions on back of certificate.
READ CAREFULLY INSTRUCTIONS ON BACK OF CERTIFICATE

In 1902 the US Bureau of the Census was made a permanent agency of the federal government and an effort was undertaken to collect death vital statistics at a national level. A few years before, the Bureau issued a recommended national death reporting form and thus was born the US Standard Certificate of Death. Figure 4 is an example of the version of the 1900 certificate. It is for Moroni Pratt (note his famous father) who died in 1913 and in general includes information basically similar to the current version of the US Standard Death Certificate but

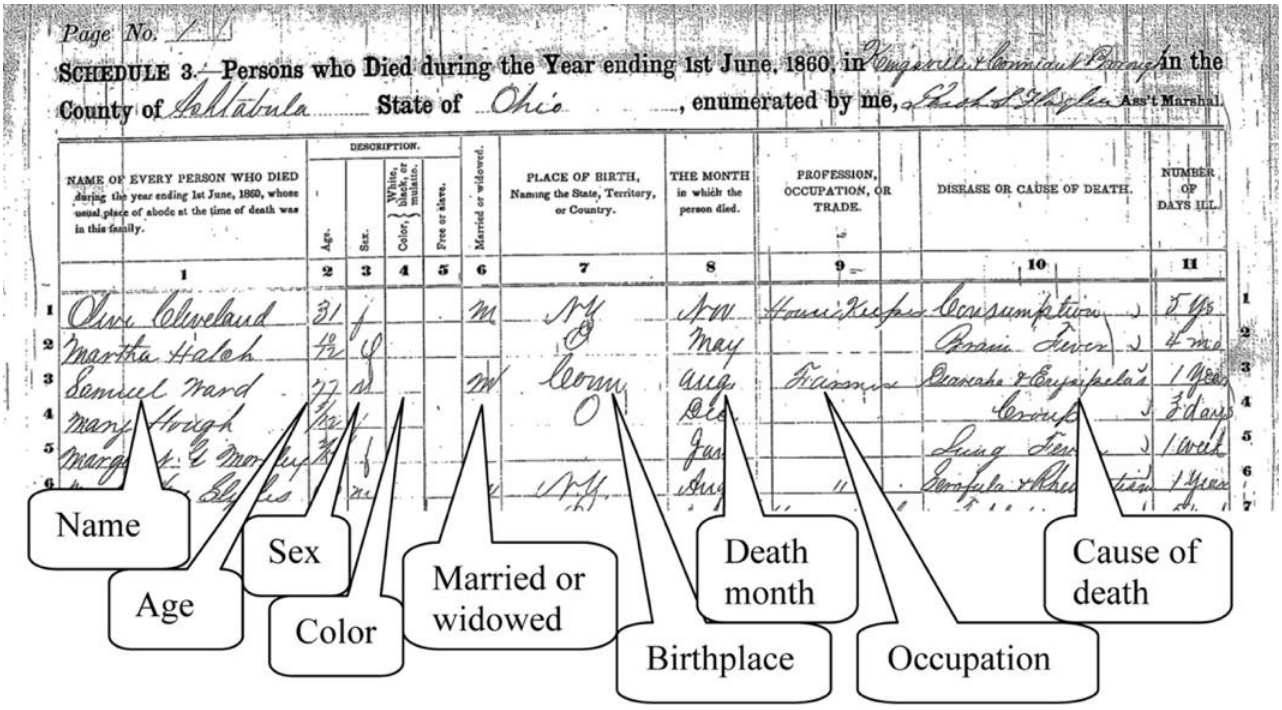
with a less detail as will be seen. If you are Gen Z you may not be able to read Moroni's certificate since it is in cursive writing, but your boomer grandparent will be able to interpret it for you. The modern death certificate in the US tries to capture the sequence of events leading to death and provide a more comprehensive picture of our graduation from mortality.

Section 2: Additional Information on US Mortality Schedules, Death Registries, and Death Certificates and How to Access the Data

First, I want to give you an excellent site that provides a glossary of medical terms used in the 18th and 19th century as it will help you understand why your ancestor died. It can be accessed at: https://www.thornber.net/medicine/html/medgloss.html

Mortality Schedules

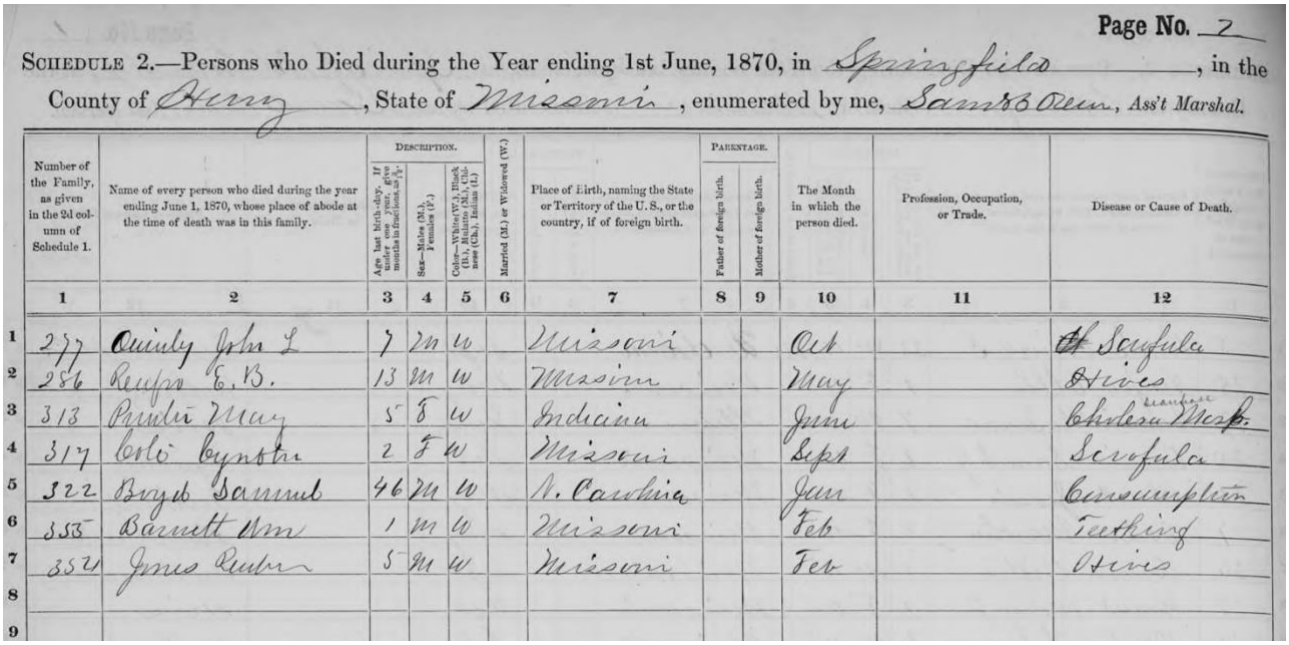
The US mortality schedules are limited in scope and likely underestimate actual deaths, but they provide an interesting family history and medical picture of the US for us. The 1850 and 1860 mortality schedules included name of deceased, age at death, sex, color, status (free or enslaved), marital status, birthplace, month of death, occupation, cause of death or disease, and number of days ill. With the passage of the 13th amendment in December 1865 which abolished slavery, future schedules of mortality did not include free or enslaved information



nor were the number of days ill collected. Whether mother or father were foreign born and house number on the general census was added to 1870 schedules onward.

An example of the mortality schedule from 1850-1860 from FamilySearch Wiki demonstrates the information available to the family historian and is seen in figure 4. Not labeled but important from a medical standpoint is the days ill on the far-right column. Also note the enumerator or collector is designated as an assistant marshal and this is seen in all the mortality schedules I have reviewed. The assistant marshal was responsible for the collecting all census data at this period of time.

Below is an example of the mortality schedule from 1870 onward. It is a mortality schedule entry for Jun 1, 1869 to May 31, 1870 for Springfield, Henry County, Missouri.



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SCHEDULE 2.—Persons who Died during the Year ending 1st June, 1870, in Springfield, in the County of Henry, State of Missouri, enumerated by me, Sam'l Owen, Ass't Marshal.

Number of the Family, as given in the 2d column of Schedule 1.	Name of every person who died during the year ending June 1, 1870, whose place of abode at the time of death was in this family.	Description. Age last birth-day. If under one year, give months if under 1 yr.	Sex—Males (M.), Females (F.)	Color—White (W.), Black (B.), Mulatto (M.), Chinese (Ch.), Indian (I.)	Married (M.) or Widowed (W.)	Place of Birth, naming the State or Territory of the U. S., or the country, if of foreign birth.	Parentage. Father of foreign birth.	Mother of foreign birth.	The Month in which the person died.	Profession, Occupation, or Trade.	Disease or Cause of Death.
1	2	3	4	5	6	7	8	9	10	11	12
1	277 Quinly John L	7	m	w		Missouri			Oct		Scrofula
2	286 Rufus E.B.	13	m	w		Missouri			May		Hives
3	313 Pinkie May	5	f	w		Indiana			June		Cholera Infantum
4	317 Cole Cynthia	2	f	w		Missouri			Sept		Scrofula
5	322 Boyd Samuel	46	m	w		N. Carolina			June		Consumption
6	353 Barnett Wm	1	m	w		Missouri			Feb		Teething
7	354 Jones Reuben	5	m	w		Missouri			Feb		Hives
8											
9											

Mortality schedule data is listed by state and county that existed at the time of the data collection. It is death registration for 7 persons including Samuel Boyd, possibly one of my distant relatives. He is designated as **family 322** from the household number noted in the 1870 census record. The household number can be very helpful if you want to confirm that this is your relative as you can go to the actual census record for and look up the household and see who is there. Beginning with the 1850 census every member of the household was listed while prior census data only included head of house. Sam Boyd's age at death, sex, race, place of

birth, and the month that he died (January 1870) as well as the cause are all listed. He died of consumption or tuberculosis, a common cause of death in the 19th century. Sam O'Brien , the assistant marshal omitted listing Sam Boyd's occupation unfortunately and thus are missing a key element in understanding Sam Boyd's life. Beginning with the 1870 mortality schedules days ill is no longer collected. Question as to whether either of his parents were foreign born is added. Do note that little William Barrett from household 355 died at one year of age of "teething", one of Farr's 139 recognized causes of death.

Mortality schedules have been suggested useful on various sites to explore possible downstream disease risk. From my perspective, they are marginally useful due to time limited data collection and definitive disease diagnosis. We will discuss disease terms both old and new that might help the family historian later. We will also discuss diseases to look out for in mortality schedules, in death registries, and death certificates.

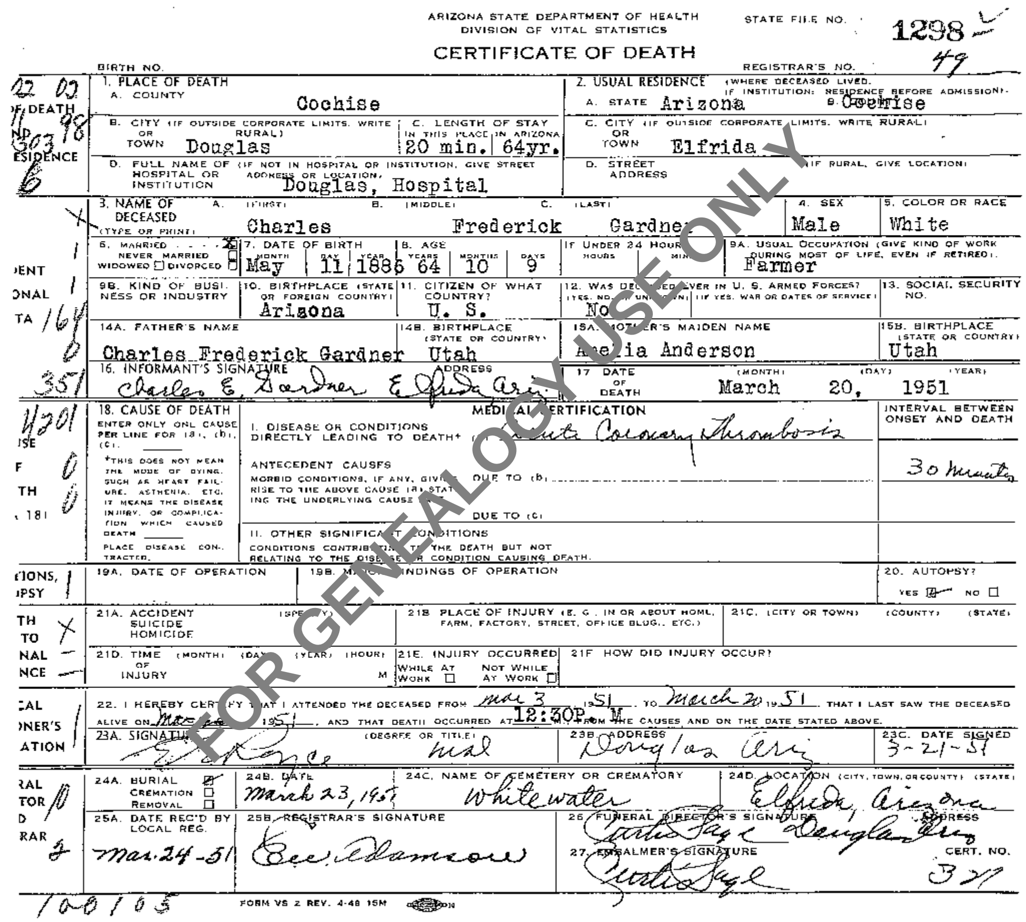
Death Registries

Death registries were kept by the states and counties although I do not yet understand how pervasive an effort was placed in collecting the data nationwide. The machinery for collecting the death information seems to have grown out of the mortality schedules that started in 1850 and it appears the local governments continued to collect much of the same information collected during the mortality schedule activities including cause of death. These registries are more likely to provide useful information to construct a family health profile than the mortality schedules since they are collected on an ongoing basis and more likely to capture a consistent health picture. They still suffer from useful diagnoses due to the level of 19th century medical sophistication.

Death Certificates

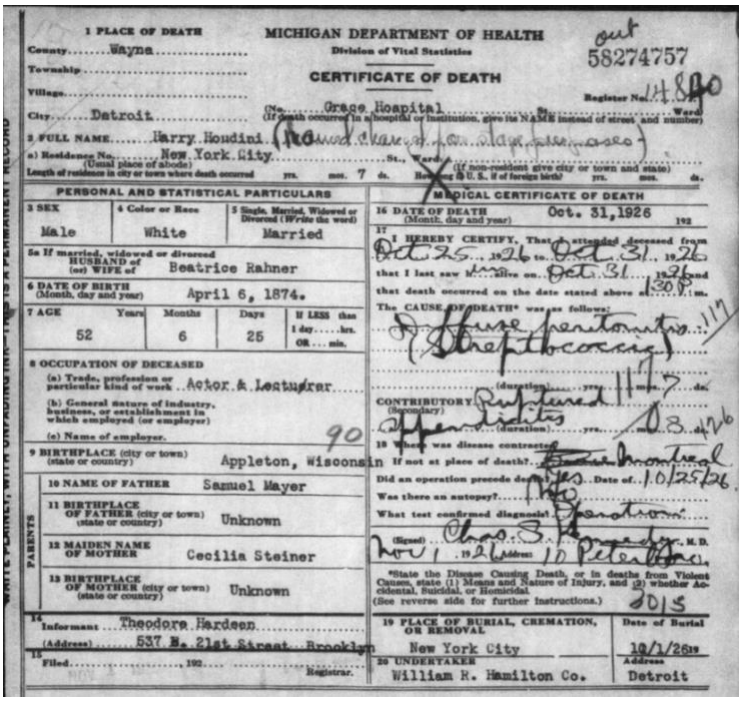
Currently death recording in the US is under state jurisdiction and then sent to the CDCs National Center for Health Statistics. Most if not all states have adopted the standard US Standard Death Certificate version 2003 that will we review. Death certificates are certified i.e. can be used for legal purposes to settle probate etc. or informational for use by family

historians. Let's first review an older version of the certificate with its pearls and pitfalls. It is the death certificate of my paternal grandfather who I never got the chance to meet. It contains important demographic data (name, birthdate, marital status etc. useful to the family historian), plus the cause of death which was listed as acute coronary thrombosis or heart attack. The certifier can comment on other medical information that can be very important to the family historian (me in this case) trying to develop a family health portrait, but it is not provided for my grandfather . The cause of death is a superficial description of why my grandfather died. It lacks the important sequence we need to fully understand his graduation from mortality. I know that right before he died, he fractured his ankle while building a new church meeting house and was thus immobile and likely developed a DVT that then sent a large pulmonary embolus to his lungs as the cause of death, but I am looking in hindsight as a physician.


ARIZONA STATE DEPARTMENT OF HEALTH
DIVISION OF VITAL STATISTICS
CERTIFICATE OF DEATH
STATE FILE NO. 1298
REGISTRAR'S NO. 49
1. PLACE OF DEATH A. COUNTY Cochise
B. CITY OR TOWN Douglas C. LENGTH OF STAY IN THIS PLACE 20 min. IN ARIZONA 64yr.
D. FULL NAME OF HOSPITAL OR INSTITUTION Douglas, Hospital
2. USUAL RESIDENCE A. STATE Arizona B. COUNTY Cochise
C. CITY OR TOWN Elfrida
D. STREET ADDRESS
3. NAME OF DECEASED (TYPE OR PRINT) A. (FIRST) Charles B. (MIDDLE) Frederick C. (LAST) Gardner
4. SEX Male 5. COLOR OR RACE White
6. MARRIED, NEVER MARRIED, WIDOWED, DIVORCED
7. DATE OF BIRTH May 11 1886 8. AGE 64 YEARS 10 MONTHS 9 DAYS
9A. USUAL OCCUPATION Farmer
9B. KIND OF BUSINESS OR INDUSTRY
10. BIRTHPLACE Arizona 11. CITIZEN OF WHAT COUNTRY? U. S.
12. WAS DECEASED EVER IN U. S. ARMED FORCES? No
13. SOCIAL SECURITY NO.
14A. FATHER'S NAME Charles Frederick Gardner 14B. BIRTHPLACE Utah
15A. MOTHER'S MAIDEN NAME Amelia Anderson 15B. BIRTHPLACE Utah
16. INFORMANT'S SIGNATURE Charles E. Gardner ADDRESS Elfrida Ariz
17. DATE OF DEATH March 20, 1951
18. CAUSE OF DEATH MEDICAL CERTIFICATION
I. DISEASE OR CONDITIONS DIRECTLY LEADING TO DEATH (a) Acute Coronary Thrombosis
ANTECEDENT CAUSES DUE TO (b) DUE TO (c)
II. OTHER SIGNIFICANT CONDITIONS
INTERVAL BETWEEN ONSET AND DEATH 30 minutes
19A. DATE OF OPERATION 19B. MAJOR FINDINGS OF OPERATION
20. AUTOPSY? YES NO
21A. ACCIDENT SUICIDE HOMICIDE 21B. PLACE OF INJURY 21C. (CITY OR TOWN) (COUNTY) (STATE)
21D. TIME OF INJURY 21E. INJURY OCCURRED WHILE AT WORK / NOT WHILE AT WORK 21F. HOW DID INJURY OCCUR?
22. I HEREBY CERTIFY THAT I ATTENDED THE DECEASED FROM Mar 3 1951 TO March 20 1951, THAT I LAST SAW THE DECEASED ALIVE ON Mar 20 1951, AND THAT DEATH OCCURRED AT 12:30P.M. FROM THE CAUSES AND ON THE DATE STATED ABOVE.
23A. SIGNATURE (DEGREE OR TITLE) md 23B. ADDRESS Douglas Ariz 23C. DATE SIGNED 3-21-51
24A. BURIAL CREMATION REMOVAL 24B. DATE March 23, 1951 24C. NAME OF CEMETERY OR CREMATORY Whitewater 24D. LOCATION Elfrida, Arizona
25A. DATE REC'D BY LOCAL REG. Mar. 24-51 25B. REGISTRAR'S SIGNATURE Ace Adamson
26. FUNERAL DIRECTOR'S SIGNATURE Curtis Page ADDRESS Douglas Ariz
27. EMBALMER'S SIGNATURE Curtis Page CERT. NO. 37
FORM VS 2 REV. 4-48 15M

The other important issue for the family historian is who is providing the information i.e. the **informant**. In this case it was his son so the demographic information is likely good. If the informant is a grandchild or nephew (second degree relative) the information might be less than perfect. They might not know date of birth or location of birth or even correct name

especially if the person used their middle name all their life. **So, make sure you do not count on the death certificate as the final word on important dates.**



MICHIGAN DEPARTMENT OF HEALTH
Division of Vital Statistics
CERTIFICATE OF DEATH

58274757

1 PLACE OF DEATH
County: Wayne
City: Detroit
(No.) Grace Hospital
2 FULL NAME: Harry Houdini
3 SEX: Male
4 Color or Race: White
5 Single, Married, Widowed or Divorced: Married
6 DATE OF BIRTH (Month, day and year): April 6, 1874.
7 AGE: Years 52, Months 6, Days 25
8 OCCUPATION OF DECEASED: (a) Actor & Lecturer
9 BIRTHPLACE (city or town) (state or country): Appleton, Wisconsin
10 NAME OF FATHER: Samuel Mayer
11 BIRTHPLACE OF FATHER: Unknown
12 MAIDEN NAME OF MOTHER: Cecilia Steiner
13 BIRTHPLACE OF MOTHER: Unknown
14 Informant: Theodore Hardeen, (Address) 537 E. 21st Street, Brooklyn
15 Filed
MEDICAL CERTIFICATE OF DEATH
16 DATE OF DEATH (Month, day and year): Oct. 31, 1926
17 I HEREBY CERTIFY, That I attended deceased from Oct 25 1926 to Oct 31 1926 that I last saw him alive on Oct 31 1926 and that death occurred on the date stated above at 1:30 P.M.
The CAUSE OF DEATH* was as follows:
1a Acute peritonitis
b Ruptured appendix
CONTRIBUTORY (Secondary)
(duration) 7 days
18 Where was disease contracted? Montreal
If not at place of death?
Did an operation precede death? Yes Date of 10/25/26
Was there an autopsy? No
What test confirmed diagnosis? Peritonitis
(Signed) Chas. S. Hoyt, M. D.
Nov 1 1926 Address 10 Peterboro
*State the Disease Causing Death, or in deaths from Violent Causes, state (1) Means and Nature of Injury, and (2) whether Accidental, Suicidal, or Homicidal. (See reverse side for further instructions.)
19 PLACE OF BURIAL, CREMATION, OR REMOVAL: New York City
Date of Burial: 10/1/26
20 UNDERTAKER: William R. Hamilton Co.
Address: Detroit

To the right is another issue you may run into when reviewing death certificates. It is the death certificate for Harry Houdini the famous escape artist. His cause of death is a bit better described i.e. acute peritonitis as a result of a ruptured appendix. **But what are all the numbers on the death certificate?** These are the **ICD codes** for disease that we discussed earlier and in this care are from ICD 3 (1920) listing his diagnoses: **90** is the code for heart disease (not written on the certificate), **117** is appendicitis, **126** is peritonitis. The ruptured appendix and peritonitis are not likely useful information for a family health portrait **BUT** the fact that he is said to have heart disease at the tender age of 52 might have downstream implications for his descendants. You can look up the ICD numbers from all versions of the ICD based on when the death certificate was issued at this excellent website: **http://www.wolfbane.com/icd/**

Finally let's look at a current 2003 version of the death certificate and discuss pearls and pitfalls. A full copy of the current death certificate is after the references for you to review. All standard demographic information are listed including surviving spouse name. A question about the role of tobacco in the death is asked as is information on possible pregnancy related death. More information is also asked about relationship to injury, the education of the decedent, and ethnicity and race.

The cause of death has specific instructions on how to be filled out and should follow a specific sequence **which many medical articles lament is not followed. The mechanism of death should be followed by the sequential conditions leading up to cause death and should**

look something like this: ruptured myocardium (heart wall) as the mechanism of death, as a result of myocardial infarction (heart attack), the cause of the ruptured heart wall, as a result of coronary artery disease (hardening of the arteries supplying the heart) the predisposing issue that led to the heart attack.

For the family historian trying to develop a family health portrait the actual terminal event may be less important than the contributing factors that lead up to the death. The heart attack and long-standing coronary artery disease as well as the information in **other significant conditions** listed separately on the death certificate will be most helpful. Death certificates are probably the most helpful piece of information for the family historian to become a medical genealogist only second to getting such information from a living relative although I have found that many of us don't know that information even for first degree relatives.

How to Access Mortality Schedules, Death Registries, and Death Certificates

Mortality Schedules

All the mortality schedule data was offered back to the states in 1918-1919 by the Bureau of the Census and some took the information, and some did not. For the states that were uninterested, the forms were placed in the library of the Daughters of the American Revolution in Washington, D.C. The US Census Bureau has a 5-page PDF of where the actual mortality schedule data resides and if any exists. For example, some current states such as Colorado were not included in the census and thus mortality schedules until 1870 due to the fact Colorado was not a US territory until 1861 and a state in 1876. **Here is the link for the Bureau of Census that tells you basic information on the mortality schedules.**
https://www.census.gov/history/www/genealogy/other_resources/mortality_schedules.html

Ancestry.com apparently has the most complete online collection of mortality data and a smaller listing is available on FamilySearch.org. I note that Florida has made available all of its original mortality data online and is available for those interested at:
https://www.floridamemory.com/discover/historical_records/mortality-schedules/
Indiana and other states have done the same so look up mortality schedule and state you are interested in to see if an online collection exists. With time, more of the data will be digitized

and available to the interested family historian. Remember that to be listed, the person you are looking for had to die in a one-year window prior to the June census.

Accessing state and county death registries can be challenging but doable. Listings can be found on all major genealogy sites including FamilySearch and a reasonable place to start is on FamilySearch Wiki on death records and you may just get lucky:
https://www.familysearch.org/en/wiki/How_to_Find_United_States_Death_Records
I do note that the digitized death records on FamilySearch **DO NOT INCLUDE CAUSE OF DEATH** which of course I think is a major lost opportunity. **You can find it though if you go to the original document attached to the digitized document**. Ancestry.com also has a searchable database of death records that includes registries and again cause of death is not included on the digitized result record. I also found what looks like to be a regularly updated listing of death indexes in the USA that included fee
based and free sites at: https://www.germanroots.com/deathrecords.html.

Death certificates

Many of the same sources for mortality schedules and death registries will get you to information on death certificates. Some states restrict access while others consider them public information. Some states will release a copy to you for a fee. Most first-degree relatives will have a copy of the death certificate for legal purposes of settling the estate. **I am a strong advocate for placing death certificates on your genealogical site of choice connected to your relatives to make it easy for descendants to create a family health portrait.** I do so whenever I can find one. There are certainly cases where the cause of death might be a sensitive issue and there may be reluctance to put a death certificate on a public site. As will be seen, to create a reasonable family health portrait and determine risk of disease one needs medial information on at least parents, siblings, aunts, uncles and grandparents but the more the merrier.

Section 3: Common Genetically Associated Illnesses and How to Create You Own Medical Pedigree and Calculate Disease Risk

Let's review some of the common illness in which family history is important. If there is concern about an increased risk of any of these diseases, you should consult your care provider to discuss the concern. Link to the CDC site and information on these illnesses is located at: **https://www.cdc.gov/genomics/famhistory/famhist_chronic_disease.htm**

Heart and Blood Vessel Disease

This is a big one. It accounts for 1 in 5 deaths in the US every year. Determining risk of heart disease and blood vessel disease is dependent on it being present through several generations and is useful to look for on death records. The history could be listed as heart attack (myocardial infarction, MI, coronary thrombosis coronary artery disease), heart failure (dropsy is an old term for heart failure), cardiovascular, arteriosclerosis, stroke (cerebrovascular accident, CVA, or apoplexy old term for stroke), or hypertension. Risk factors for developing heart and vascular disease include besides family history, smoking, hypertension or high blood pressure, being overweight, high cholesterol, heavy alcohol use, and diabetes. Modifying these risk factors will reduce your risk of developing heart and blood vessel disease.

One of the above terms will show up on death records and if it shows up frequently and early i.e. earlier than age 60 it should definitely be on your radar and talk to your health care provider about what you find.

Breast and Ovarian Cancer

A woman with a family history of breast or ovarian cancer especially in a parent, sibling or child is at an increased risk of developing one of these cancers. If you have had one of these cancers other family members need to know. The presence of these cancers might require starting screening at an earlier age than usual and may trigger a genetic test for BRCA1 or BRCA2 genes. The things you can do to lower your risk of breast cancer include maintaining a healthy weight, exercise on a regular basis, avoid alcohol, and have a discussion with your

health care provider about hormone therapy if you are on or contemplating use. No know way to modify risk for ovarian cancer at the current time. Cancer of the breast was first appeared a distinct diagnosis on ICD2 in 1909. Before that likely lumped into tumor or cancer. Cancer of female genital organs also show up in ICD2 but the ovary specifically appears in ICD 6 in 1948.

Colon Cancer

Having several family members with colon cancer especially if colon cancer was diagnosed before age 50 years of age are at an increased risk of developing colon cancer. If so, screening needs to start at age 40 rather than 45 and have more frequent screening at the recommendation of your health provider. Screening should be colonoscopy rather than other methods to look for cancer cells that are advertised on TV

Lynch syndrome is hereditary form of colon cancer and people with the Lynch syndrome genetic abnormality are at increased risk of not only colon, but also uterine, stomach, liver, kidney, and brain tumors. Look out for cancers in ancestors at an early age but also living relatives.

Cancer of the intestines and other abdominal organs shows up in ICD 2 of 1909 but cancer of the large intestine first appears in ICD 6 in 1948.

Diabetes

Diabetes was able to be diagnosed at least as far back as the 1600's. Physicians would note the symptoms (frequent urination and thirst) and taste the urine for sweetness (yikes). There are four different versions of diabetes. **Prediabetes** (those at risk for developing type 2 diabetes) affects around 96 million people in the US. People with prediabetes have a high risk for the disease but have not yet developed the disease and modification of risk factors might prevent every developing diabetes. **Type 1 diabetes** is autoimmune disease where the immune system attacks the pancreas and the insulin producing cells are destroyed and can no longer produce sufficient insulin to control blood sugar. Type 1 diabetes requires insulin therapy. It affects approximately 3-5 million people in the US. The majority of the 37 million people with diabetes have **Type 2 diabetes**. The pancreas still produces some insulin but due to insulin

resistance it does not meet the body's insulin needs. Finally, a transient form of diabetes can occur during pregnancy called **gestational diabetes**. Having gestational diabetes increases your risk of Type 2 diabetes in later life.

If you have a parent or sibling with type 2 diabetes your risk is high for developing this form of diabetes. Ways to help prevent Type 2 diabetes include maintaining a healthy weight, focus on a healthy diet (less processed foods, sweets, starchy vegetables, fast foods, sweetened drinks etc.), exercise, and regular check up with your health care provider. Monitoring the hemoglobin A1c level can also be helpful.

Look for diabetes or diabetes mellitus on death records or in significant medical condition on death certificates.

Osteoporosis

Osteoporosis, or weakening of the bones, affects 20% of women and 5% of men over age 50. It can be detected with an X-ray test called a DEXA and screening generally starts at age 65 for women or earlier if there a family history of osteoporosis/fracture. Ways to prevent osteoporosis include eating healthy that include calcium containing foods or a supplement (1000 mg) and vitamin D supplement of at least 1000 u daily. Also, avoid tobacco and alcohol and participate in weight bearing exercise on a regular basis. Use of medications like prednisone or having a chronic inflammatory disease like rheumatoid arthritis also contribute to the risk of osteoporosis.

Osteoporosis is a more recent medical term and first shows up in ICD 8 in 1965. The risk of osteoporosis is associated with the condition in a woman's close female relatives so one does not have to look far back in the records for the diagnosis or for fracture as a potential cause of death in an older female ancestor.

Hemochromatosis

Finally, a disease called hemochromatosis has a strong genetic link. It is found in 1 out of every 300 people of northern European descent (blame the Celts). It is a disease in which the body does not cycle iron properly and it accumulates in the body especially in the heart, liver pancreas, and joints. It can also affect the thyroid gland and even the testis. In untreated cases the skin may take on a bronze color. It can also lead to liver cancer in some affected people. Symptoms my first show up in men in their 40s-50s and women after menopause. The disease can cause heart failure, liver damage or cirrhosis, osteoarthritis especially in unusual joints, and diabetes. Look for multiple family members with diabetes, heart or liver disease on death records. It can be diagnosed with simple blood tests and can be treated by scheduled removal of blood from the body to remove excess iron.

Hemochromatosis is a recent term so as noted look for multiple family members with the above noted conditions and possibly more than one of these conditions in one ancestor. People with hemochromatosis should let close relative know about the diagnosis.

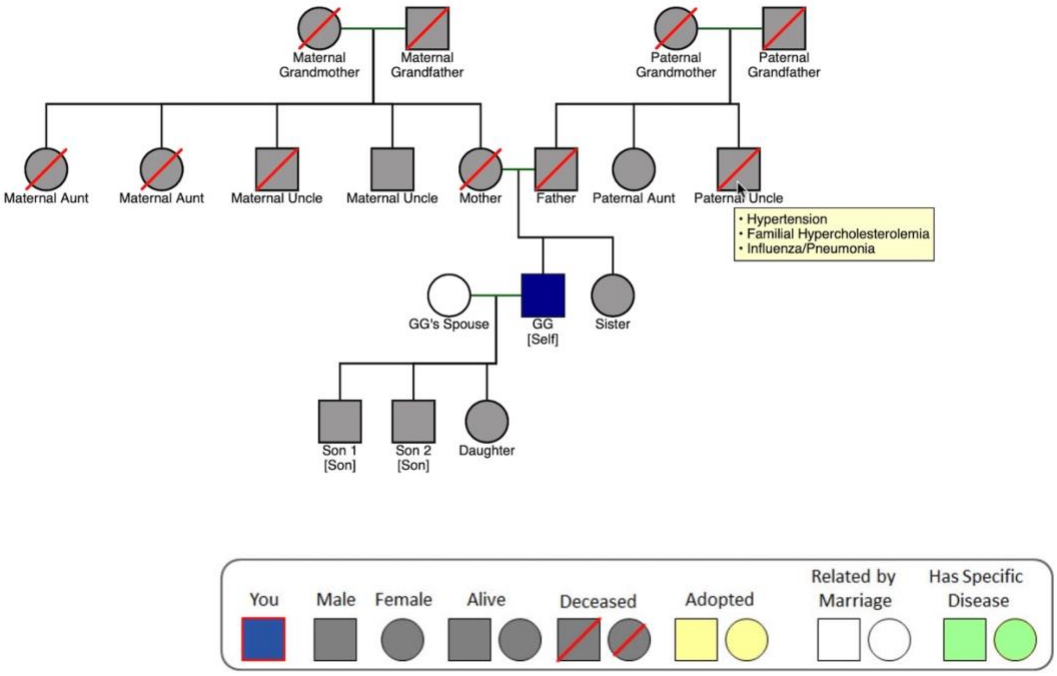
Creating your own medial portrait

The CDC has a fascinating website that include a program to create a family medical portrait that generates both a chart with important family history that you can share with your health provider and your family members and a medial pedigree that gives visual representation of your family's health. You can find it at and will need to cut and paste this address into your browser.

http://kahuna.clayton.edu/jqu/FHH/html/index.html

It also generates a risk profile for some of the diseases we have covered. You save the file to your computer in an XML format (not in the cloud) and you can change the file as you find more information. You apparently can add any number of ancestors. You start the pedigree with you, siblings, parents, grandparents, uncles and aunts. Below is an example of what you can do using a made-up family. If you have the information in front of you can count on 30 minutes to 1 hour or so to enter the data and generate the reports.

Example of a medical pedigree generated



You can put the mouse arrow on anyone in the pedigree and their health issues are shown as noted for the paternal uncle. It also generates a family health table, a portion of which is shown below, and can be printed and provided to your health care provider or shared with other family members.

Table of Family Diseases and Conditions

Top Close

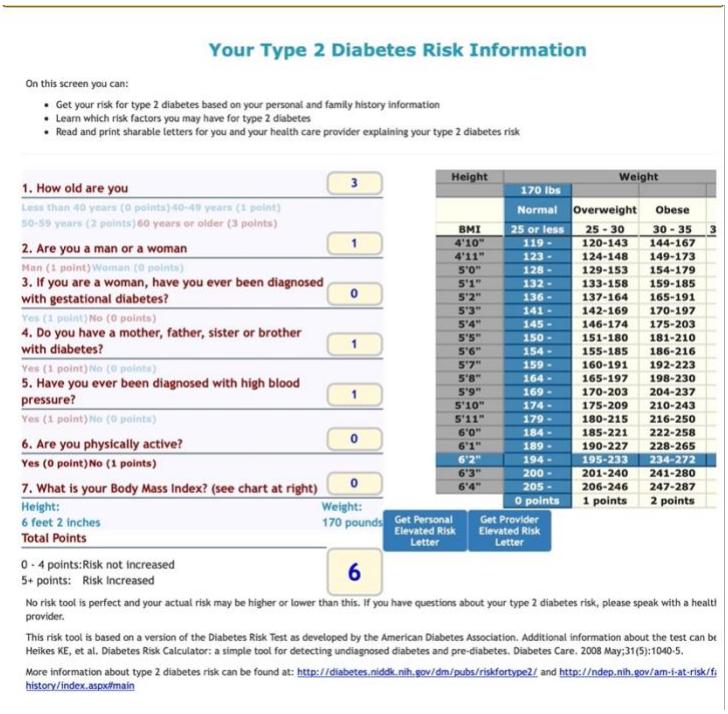
My Personal Information			
Age: 67	Height: 74 inches	Weight: 170 pounds	BMI: 21.83
Date of Report: Tuesday, September 20, 2022, 1:58 PM			

Print Save To Image

Show Full Width View (Six common conditions your doctor should know about are always shown)

Name & Relationship	Still Living, cause of death (age)	Heart Disease	Stroke/Brain Attack	Diabetes	Colon Cancer	Breast Cancer	Ovarian Cancer/Fallopian Tube Cancer	Other Diseases
GG (Self)	Yes							Familial Hypercholesterolemia (50-59 years); Hypertension (40-49 years); Asthma (In Childhood); Colon Polyp (50-59 years)
Father	No, Influenza/Pneumonia (60 years or older)	60 years or older						Influenza/Pneumonia (60 years or older)
Mother	No, Heart Attack (60 years or older)				50-59 years			Type 2 Diabetes (50-59 years); Coronary Artery Disease (60 years or older); Heart Attack (60 years or older)
Maternal Grandfather	No, Heart Attack (60 years or older)		60 years or older					High Cholesterol (60 years or older)
Maternal Grandmother	No, Heart Attack (60 years or older)							Hypothyroidism (50-59 years)
Paternal Grandfather	No, Heart Attack (60 years or older)							
Paternal Grandmother	No, Heart Attack (60 years or older)							Dementia/Alzheimer's (60 years or older)

Finally, it will assess your risk of certain illnesses and for diabetes gives you a risk score as noted below. The more ancestors you add, the more complete the picture will be and you and the program may recognize some consistent illness or uncover unusual diseases that run through several generations that might suggest rare conditions like Lynch syndrome that will need to be discussed with your care provider.



Your Type 2 Diabetes Risk Information

On this screen you can:

- Get your risk for type 2 diabetes based on your personal and family history information
- Learn which risk factors you may have for type 2 diabetes
- Read and print sharable letters for you and your health care provider explaining your type 2 diabetes risk

1. How old are you — 3
   Less than 40 years (0 points) 40-49 years (1 point) 50-59 years (2 points) 60 years or older (3 points)
2. Are you a man or a woman — 1
   Man (1 point) Woman (0 points)
3. If you are a woman, have you ever been diagnosed with gestational diabetes? — 0
   Yes (1 point) No (0 points)
4. Do you have a mother, father, sister or brother with diabetes? — 1
   Yes (1 point) No (0 points)
5. Have you ever been diagnosed with high blood pressure? — 1
   Yes (1 point) No (0 points)
6. Are you physically active? — 0
   Yes (0 point) No (1 points)
7. What is your Body Mass Index? (see chart at right) — 0

Height: 6 feet 2 inches
Weight: 170 pounds
Total Points: 6

0 - 4 points: Risk not increased
5+ points: Risk Increased

Get Personal Elevated Risk Letter | Get Provider Elevated Risk Letter

Height	Weight		
	170 lbs		
	Normal	Overweight	Obese
BMI	25 or less	25 - 30	30 - 35
4'10"	119 -	120-143	144-167
4'11"	123 -	124-148	149-173
5'0"	128 -	129-153	154-179
5'1"	132 -	133-158	159-185
5'2"	136 -	137-164	165-191
5'3"	141 -	142-169	170-197
5'4"	145 -	146-174	175-203
5'5"	150 -	151-180	181-210
5'6"	154 -	155-185	186-216
5'7"	159 -	160-191	192-223
5'8"	164 -	165-197	198-230
5'9"	169 -	170-203	204-237
5'10"	174 -	175-209	210-243
5'11"	179 -	180-215	216-250
6'0"	184 -	185-221	222-258
6'1"	189 -	190-227	228-265
6'2"	194 -	195-233	234-272
6'3"	200 -	201-240	241-280
6'4"	205 -	206-246	247-287
	0 points	1 points	2 points

No risk tool is perfect and your actual risk may be higher or lower than this. If you have questions about your type 2 diabetes risk, please speak with a health provider.

This risk tool is based on a version of the Diabetes Risk Test as developed by the American Diabetes Association. Additional information about the test can be Heikes KE, et al. Diabetes Risk Calculator: a simple tool for detecting undiagnosed diabetes and pre-diabetes. Diabetes Care. 2008 May;31(5):1040-5.

More information about type 2 diabetes risk can be found at: http://diabetes.niddk.nih.gov/dm/pubs/riskfortype2/ and http://ndep.nih.gov/am-i-at-risk/fa history/index.aspx#main

Suggestions on how to gather important family health information :

1. Include important illness in personal and family member life histories
2. Discuss important family illness at family reunions if comfortable doing so and discuss the reasoning behind it
3. Lobby major family history sights for digitizing important health information from causes of death from mortality schedules, death registries, and death certificates

To wrap it up, I hope that our discussion has been useful to you and will encourage you to be more interested in adding death and medical informaton to your family history as such information can truly benefit the living and the dead !

References

1. Kathryn Schultz. Final Forms. The New Yorker. April 7, 2014 Issue
2. Antonine Plague. Wikipedia Wikipedia Foundation 30 July 2022 https://en.wikipedia.org/wiki/Antonine_Plague
3. Bills of mortality. Wikipedia. Wikipedia Foundation 23 April 2022. https://en.wikipedia.org/wiki/Bills_of_mortality
4. John Graunt. Wikipedia, Wikipedia Foundation 23 June 2022. https://en.wikipedia.org/wiki/John_Graunt
5. Musaed Ali Alharbi, Godfrey Isouard & Barry Tolchard | (2021) Historical development of the statistical classification of causes of death and diseases, Cogent Medicine, 8:1, 1893422, DOI: 10.1080/2331205X.2021.1893422.
6. Rothman KJ. The rise and fall of epidemiology 1950-2000. Int Journal of Epidemiology 2007;36:708-710.
7. Siri MJ, Cork DL. Vital statistics: summary of a workshop. National Research Council. The National Academies Press, Washington, DC. 2009
8. Lemuel Shattuck. Wikipedia, Wikipedia Foundation 20 May 2022. https://en.wikipedia.org/wiki/Lemuel_Shattuck

9. Winkelstein, W. Lemuel Shattuck: Architect of American public health. Epidemiology 2008; 19:634. doi:10.1097/EDE.0b013e31817307f2

10. Thomas MacEntee Bring out your dead: a look at mortality schedules. Archives. October 13 2013. https://www.archives.com/experts/macentee-thomas/bring-out-your-dead-a-look-at-mortality-schedules.html

11. Moroni Pratt State of Utah Death Certificate. Jared Pratt Family Association. http://jared.pratt-family.org/parley_family_histories/moroni-w-pratt-death.html

12. Tsao CW, Aday AW, Almarzooq ZI, Beaton AZ, Bittencourt MS, Boehme AK, et al. Heart disease and stroke statistics -2022 update: a report from the American Heart Association Circulation 2022;145(8):e153-e639)http://www.ancestryinsider.org /2009/02/fire-water-ice-destroy-1890-census.html

13. **http://www.wolfbane.com/icd/index.html** great website for ICD codes past and present

14. **https://www.thornber.net/medicine/html/medgloss.html** website for old medical terms

15. **http://www.cdc.gov/nchs/howto/w2w/w2welcom.htm** helpful is you want a copy of death certificate that is not online

16. **https://www.cdc.gov/genomics/famhistory/famhist_chronic_disease.htm** website discussing important familial diseases

17. **http://kahuna.clayton.edu/jqu/FHH/html/index.html** website to develop your own family history portrait

U.S. STANDARD CERTIFICATE OF DEATH

LOCAL FILE NO. STATE FILE NO.

NAME OF DECEDENT _____
For use by physician or institution

To Be Completed/ Verified By: FUNERAL DIRECTOR:

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

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

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

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

8. EVER IN US ARMED FORCES? ☐ Yes ☐ No

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

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

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

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

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

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

IF DEATH OCCURRED IN A HOSPITAL: ☐ Inpatient ☐ Emergency Room/Outpatient ☐ Dead on Arrival

IF DEATH OCCURRED SOMEWHERE OTHER THAN A HOSPITAL: ☐ Hospice facility ☐ Nursing home/Long term care facility ☐ Decedent's home ☐ Other (Specify):

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

18. METHOD OF DISPOSITION: ☐ Burial ☐ Cremation ☐ Donation ☐ Entombment ☐ Removal from State ☐ Other (Specify):_____

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

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

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

ITEMS 24-28 MUST BE COMPLETED BY PERSON WHO PRONOUNCES OR CERTIFIES DEATH

24. DATE PRONOUNCED DEAD (Mo/Day/Yr) | 25. TIME PRONOUNCED DEAD

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

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

CAUSE OF DEATH (See instructions and examples)

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

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

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

33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No

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

To Be Completed By: MEDICAL CERTIFIER

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

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

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

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

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

43. DESCRIBE HOW INJURY OCCURRED:

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

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

Signature of certifier:_____

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

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

To Be Completed By: FUNERAL DIRECTOR

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

52. DECEDENT OF HISPANIC ORIGIN? Check the box that best describes whether the decedent is Spanish/Hispanic/Latino. Check the "No" box if decedent is not Spanish/Hispanic/Latino.
☐ No, not Spanish/Hispanic/Latino
☐ Yes, Mexican, Mexican American, Chicano
☐ Yes, Puerto Rican
☐ Yes, Cuban
☐ Yes, other Spanish/Hispanic/Latino (Specify) _____

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)_____

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

55. KIND OF BUSINESS/INDUSTRY