When Mother is a Drunkard.

Out of Every 100 Children
24 die when mother is sober.
33 to 72 die when mother drinks.

Drinking Exhausts Mother
Surviving Children are Predisposed to
Neuroses - Alcoholic and Drug Habits
Criminal Tendencies.

### 444 Children of Drunken Mothers
show the following death rate

<table>
<thead>
<tr>
<th>Cases</th>
<th>Per cent born dead</th>
<th>Per cent dying before 6 yrs.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Births</td>
<td>80</td>
<td>6.2</td>
<td>27.5</td>
</tr>
<tr>
<td>2nd</td>
<td>80</td>
<td>11.2</td>
<td>40.8</td>
</tr>
<tr>
<td>3rd</td>
<td>80</td>
<td>7.6</td>
<td>45.</td>
</tr>
<tr>
<td>4th to 5th Birth</td>
<td>111</td>
<td>10.8</td>
<td>54.9</td>
</tr>
<tr>
<td>6th to 10th</td>
<td>93</td>
<td>17.2</td>
<td>54.8</td>
</tr>
</tbody>
</table>
Chapter 8

Health

Exhibit linking infant mortality with alcohol consumption during pregnancy, circa 1915.

Courtesy of Chicago Historical Society.
Infant mortality, the ratio of deaths to live births in the first year of life, was very high in 1900, as the upper chart shows. About one of every six infants died before the first birthday. By the end of the century, only one of every 141 infants died before the first birthday (see page 4).

Much of this improvement predated the introduction of antibiotics and sophisticated obstetric methods. The most important factors in the decline of infant mortality included better nutrition and housing, central heating, pure drinking water, the shift of births from home to hospital, and the availability of feeding supplements. During the second half of the century, antibiotics, immunization, and new techniques for keeping premature infants alive drove infant mortality still lower.

Diphtheria, measles, and pertussis (whooping cough) were the leading killers of children early in the century. In 1920, more than 30,000 children died from one or the other. More than 200,000 cases of diphtheria were reported in 1921, almost 300,000 cases of pertussis in 1934, and 900,000 cases of measles in 1941. Many more cases probably went unreported.

By 1960, as the lower chart shows, the death rates for all three diseases had been reduced to zero. Diphtheria was becoming rare; measles and pertussis were still common but no longer lethal. By 1995, the incidence of measles and pertussis had fallen significantly, and not a single case of diphtheria was reported in the continental United States that year.

Other communicable childhood diseases—rubella (German measles), scarlet fever, and mumps, for example—followed similar trajectories, first becoming less dangerous and then all but disappearing. The outbreaks of acute poliomyelitis that frightened parents throughout the country every summer ended abruptly when an effective vaccine was developed in the 1950s.
**Infant Mortality**
Infant deaths in first year of life per thousand births

- **1900** = 165
- **1997** = 7

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**Common Childhood Diseases**
Deaths per 100,000 population per year

- **1900** = 40
- **1900** = 13
- **1900** = 12

**Diphtheria**
**Pertussis**
**Measles**

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The infectious diseases that killed great numbers of adults in the early part of the century were largely brought under control. Cancer and cardiovascular diseases became the major killers of adults.

In 1900, tuberculosis caused more deaths than cancer. Equally lethal were the diseases known collectively as “influenza/pneumonia.” Typhoid fever took thousands of lives every year. Children were by no means immune from these infections, but the majority of victims were adults. As happened with the common diseases of childhood, these diseases became much less lethal during the early part of the century, and typhoid fever, like diphtheria, was nearly eliminated by 1960.

Although the death rate from tuberculosis was close to zero, the number of new cases reported every year did not change much after 1960. New strains of the tuberculosis bacterium that are resistant to the usual antibiotics appeared in the 1990s.

Influenza/pneumonia—a catchall category rather than a single, reportable disease—included the three main types of viral influenza and several types of viral, bacterial, and fungal infections that cause pneumonia. Influenza epidemics are not uncommon; the worldwide influenza epidemic of 1918 was one of the most destructive in history. Approximately 20 million people died, including about half a million Americans. Separate death rates for influenza and pneumonia are available for the 1990s, but not for earlier years. These data indicate that pneumonia in the 1990s was about one hundred times more life threatening than influenza.

As the toll of infectious diseases diminished, the majority of Americans at the end of the century lived long enough to die of the degenerative conditions common in older individuals, such as cardiovascular diseases (heart disease, stroke, and high blood pressure) and cancer. Progress in the treatment of these conditions was necessarily slower. Cardiac therapies, both surgical and chemical, made impressive advances. Cancer therapies improved more slowly.
Major Infectious Diseases
Number of deaths per 100,000 population per year

- Influenza epidemic of 1918
- Tuberculosis
- Influenza and pneumonia

1900 = 194
1900 = 202
1997 = 33
1997 = 0.4

Major Degenerative Diseases
Number of deaths per 100,000 population per year

- Major cardiovascular diseases (heart disease, stroke, high blood pressure)
- Cancer

1900 = 345
1997 = 352
1900 = 64
1997 = 201
As the upper chart shows, the incidence of syphilis increased sharply from 1920 to 1943, when the number of reported cases per hundred thousand people reached an all-time high, presumably because of the proliferation of commercial sexual activity around military bases. Penicillin and other antibiotics brought a steady decline in the incidence of syphilis per hundred thousand people from its peak of 447 cases in 1943 to 18 cases in 1997. The 1997 rate, the latest available at this writing, was the lowest on record for this country.

The incidence of gonorrhea followed a different trend. Its incidence, like that of syphilis, reached a peak during World War II and then declined. In the 1960s, the rate began to climb again, apparently because of the increase in premarital sexual activity. The incidence of gonorrhea per hundred thousand people peaked at 441 cases in 1980 and declined steadily to 121 cases in 1997.

The most severe of the sexually transmitted diseases—indeed one of the most severe diseases known to history—is AIDS. It was first recognized in 1981, although it is believed that the first victims were infected around 1950. Homosexual intercourse was the mode of transmission for about half of the cases. Needle-sharing by drug addicts accounted for another fourth. The remaining patients were infected by contaminated blood, in utero, by heterosexual contact, or by other routes. Eighteen percent of the patients diagnosed from 1981 through 1997 were women.

Until the last few years of the century, as the lower chart shows, a diagnosis of AIDS had been a death sentence without much hope of reprieve. Of the 641,000 Americans diagnosed with AIDS through December 1997, only 256,000 were still alive at the end of that year. Perhaps a million other Americans were infected with HIV. The number of new AIDS cases began to fall in 1994 and then declined quite sharply in 1996, presumably because more of the people at risk took preventive measures. At about the same time, new medications helped in the treatment of HIV and AIDS, and the number of deaths began to decline.
Sexually Transmitted Infections
Per 100,000 population per year

The AIDS Epidemic
Number of new cases and deaths per year

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As the chart shows, the suicide rate fluctuated sharply in the early part of the century, rising during recessions and dropping during economic expansions. The suicide rate reached a high of 17.4 per 100,000 people in the depths of the Depression. After 1945, it averaged 11.5 per 100,000 people, with little annual variation.

The number of suicides exceeded the number of homicide victims by nearly 60 percent. In 1997, there were 29,700 suicides and 18,800 homicide victims. (See page 214.)

The incidence of suicide was highest among whites and males. The suicide rate for whites was about twice as high as the rate for blacks, regardless of gender or age. This disparity was greater in the early years than the later years of the century. Male suicides were four times more numerous than female suicides. The gender disparity was also greater in the early years of the century. After age sixty-five, the propensity for suicide increased dramatically for men but declined slightly for women. Older white men have a suicide probability about 500 times higher than older black women.

The periodic surges in adolescent suicide reported in the media seem to be local phenomena. Although the adolescent suicide rate increased 11 percent from 1980 to 1997, it remained below the rate for any adult age group. Suicide attempts, however, were more frequent among adolescents. One authority estimated that 98 percent of adolescent suicide attempts were unsuccessful.

Guns were the preferred means of suicide for both sexes, although by a lesser margin for women, who preferred poison until about 1970. There is considerable regional variation in suicide, with the highest rates in the Mountain and Pacific states and the lowest in the Mid-Atlantic and New England states.
Suicides
Per 100,000 population per year

1900 = 10.2
1997 = 11.1
No one knows exactly how much illegal alcohol was consumed from 1919 to 1933 when national prohibition was in force. The decline in the consumption of legal alcohol after 1980, the peak year for alcohol consumption in the United States, is well documented, however. Between 1980 and 1997, hard liquor consumption declined by about a third. Beer consumption (equivalent in 1997 to a twelve-ounce beer every day for every person in the country) declined slightly. Wine consumption remained roughly steady.

The decrease in per capita consumption of alcohol has been plausibly attributed to the aging of the adult population, the increase in the legal drinking age from eighteen to twenty-one, the campaign against drunk driving, and growing concern about alcohol's health effects. Between 1972 and 1996, the proportion of young adults of both sexes who had some experience with alcohol rose from 82 percent to 90 percent, but heavy drinking seemed to decline.

Alcohol was an important element in American rituals of sociability. The great majority of American adults and a large minority of adolescents drank on frequent occasions in the company of friends and relatives. Five to 10 percent became physiologically addicted to alcohol, typically with conspicuous damage to their health, their work, and their relationships. About the same percentages engaged in antisocial actions such as drunk driving and impulsive assault. A study by the National Institute on Alcohol Abuse and Alcoholism estimated that 107,400 Americans died in 1992 from the effects of alcohol, about a third from drinking-related injuries, and the remainder from alcohol-related diseases. A large proportion of the injuries involved sober persons who got in the way of a drunk driver or someone on a binge.
Cigarette consumption increased enormously during the first half of the century but declined when the health effects became known.

The cigarette habit spread from a small circle of urban men in 1900 to about half of the adult population in 1950. The per capita consumption of cigarettes in 1950 was sixty-six times greater than in 1900. Among twenty-five- to forty-four-year-olds in 1955, seven of ten men and four of ten women were smokers. Among other factors, this reflects the adoption of smoking by women; the substitution by men of cigarettes for cigars, chewing tobacco, and snuff; and the impetus given to smoking by the free distribution of brand-name cigarettes to members of the armed forces during World War II.

The consumption of cigarettes staggers the imagination. The 48 million smokers in the United States in 1997—about 25 percent of the adult population—consumed an average of about twenty-seven cigarettes per day. By coincidence, there were also 48 million smokers in the United States in 1970—37 percent of the adult population at that time—and they averaged about thirty cigarettes per day.

As research evidence of the harmful effects of smoking emerged, it became clear that cigarettes were far more dangerous to their users than any other legal consumer product. By the end of the century, about 430,000 deaths were attributed to smoking annually. Lung cancer, other pulmonary diseases, and cardiovascular diseases caused most of these deaths. Various studies reported that the life expectancy of nonsmokers exceeded that of smokers by six to nine years. One study found that lifelong nonsmokers lived eighteen years longer than lifelong smokers.

After the first Surgeon General's warning in 1964, smoking came under increasing regulatory pressure. Cigarette advertising was dropped from television and radio in 1971. Smokers began to be segregated in restaurants and hotels, and on common carriers around 1983. By 1990, smoking was barred altogether on commercial aircraft and soon afterward in most offices, stores, and schools. The U.S. military, which had distributed free cigarettes for decades, became a virtually smoke-free organization.

As smoking slowly declined in response to this pressure, it developed an inverse correlation with income and education. On average, smokers at the end of the century had lower incomes and much less education than nonsmokers.
Cigarette Consumption
Number of cigarettes per capita per year

Smokers
Percentage of adults

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The popularity of psychotropic substances fluctuated.

Although marijuana was never unknown in the United States, it was not widely popular until the 1960s, when it became symbolic of the counterculture. As the chart shows, the number of first-time marijuana users grew dramatically in the 1960s and early 1970s, then declined to a somewhat lower level until the early 1990s, when it turned sharply upward again.

After a flurry of popularity at the turn of the century, cocaine all but disappeared from the American drug scene until the late 1960s, when it reappeared in the form of a white powder to be inhaled. A smokable form of cocaine known as crack began to spread through the country in the 1980s. The growth of a mass market for cocaine is suggested by the rise in federal seizures of the drug—from 45 pounds in 1967 to 263,998 pounds in 1998.

Although precise figures are lacking, estimates indicate that there were relatively more opiate addicts in the United States in 1900 than there were at the end of the century. Most were older white women habituated to “tonics” that contained generous amounts of laudanum (tincture of opium). The self-administration of opiates was entirely legal at the time, and many doctors and nurses were addicted to morphine.

Heroin, a derivative of the opium poppy, is most often injected but can be inhaled or smoked. Heroin use remained localized in big cities, especially New York, until the 1960s, when the heroin habit spread to other parts of the country. The number of new users reached a peak in 1972 and then remained fairly stable until the early 1990s, when the number of first-time users rose to its highest recorded level, before beginning a descent in 1997.

The chart also shows the number of first-time users of two classes of illegal drugs: hallucinogens such as LSD, PCP, mescaline, psilocybin, and MDMA; and inhalants, such as amyl nitrite, toluene, ether, nitrous oxide, and various spray-can products. By 1997, new users of hallucinogens outnumbered new users of cocaine and heroin combined; the number of new users of inhalants came close.

The number of new users is an excellent measure of the spread and decline of various illegal drugs. Statistics on the number of people who currently use or have ever used a particular drug are also useful. For most illegal drugs, people who have ever tried the drug outnumbered current users by about ten to one. In 1997, there were 5 million current users of marijuana—by far the most commonly used illegal drug—but 33 million people had used marijuana at some point in their lives. For less common drugs, the ratio of current users to ever-users was higher. In 1997, 700,000 people reported current usage of cocaine, but 10.5 million people reported having used it at some other time in their lives.
Illegal Drug Use
Millions of new users per year

Marijuana 1965 = 601,000
Cocaine 1967 = 33,000
Hallucinogens 1965 = 87,000
Inhalants 1965 = 96,000
Heroin 1969 = 83,000

Marijuana 1997 = 2,110,000
Cocaine 1997 = 730,000
Hallucinogens 1997 = 1,094,000
Inhalants 1997 = 708,000
Heroin 1997 = 81,000
Life in America became much safer.

The death rate for nonvehicular accidents declined steadily from 94 per 100,000 people in 1907 to 19 in 1997. (See page 236 for a discussion of the decline in the motor vehicle accident rate and page 28 for a discussion of the decline in fatal accidents in dangerous occupations.)

As the chart shows, deaths from all of the most common types of home, street, and work accidents declined fairly steadily throughout the century. Accidental falls, for example, killed fifteen of every 100,000 Americans in 1910, ten in 1965, and only five in 1990. This is somewhat surprising because older people, who were proportionately about three times as numerous in 1990 as in 1910, are the most likely to suffer such falls.

Aside from vehicular accidents, falls were the leading cause of accidental death during the century. Other significant causes were drowning, fire, poisoning, and the accidental discharge of firearms. With the exception of poisoning, which shows no clear trend, accidents from all these causes declined significantly. Between 1950 and 1995, the rate of accidental drowning decreased by more than half and gun accidents by more than two-thirds, despite major growth in water sports and gun ownership.

The causes of declining accident rates have not been fully analyzed. Much of the credit must go to a better-educated population using better-engineered devices. Some credit must also go to more effective treatment of potentially lethal injuries, and to the safety-consciousness stimulated by government efforts and the litigation boom. The better-educated population using better-engineered devices presumably played the leading role, however, because most of the reduction in accidents occurred before recent advances in trauma therapy, prior to the creation of the Occupational Safety and Health Administration, and before the litigation boom.
Nonvehicular Accidental Deaths
Per 100,000 population per year

1900 = 72
1997 = 19
The use of general hospitals increased steadily from the beginning of the century to about 1980, when usage began to decline.

The hospitals that are the subject of this discussion are known variously as general or community or short-term hospitals, under either public or private management. The category excludes institutions for the long-term treatment of mental disorders, special hospitals for tuberculosis and other chronic diseases, hospices that care for terminally ill patients, and the network of hospitals run by the Veterans Administration.

In 1900, most Americans were born at home and died in their own beds. By 1930, nearly all births and a large proportion of deaths took place in hospitals, as was the case at the end of the century. During the fifty years that followed, the capacity of hospitals, measured by the number of beds, continued to grow a little faster than the population, while average occupancy rose from 63 percent of capacity in 1930 to 78 percent in 1980. Thereafter, the number of hospital patients began to decline, while community hospitals, stimulated by federal construction subsidies, continued to add new capacity. In the mid-1980s, declining occupancy forced many hospitals to close or consolidate, but not fast enough to match decreasing demand. By 1997, the occupancy rate had returned to the 1930 level and was still falling.

Several interlocking factors account for the ongoing decline in general hospital usage. The ever-rising cost of hospital care encouraged health care managers to shorten hospital stays whenever possible and to rely increasingly on outpatient visits for various types of treatment, including surgery. From 1980 to 1995, the ratio of hospital admissions to population declined by a fourth, the average hospital stay shortened from 7.6 days to 6.5 days, the proportion of hospital surgical procedures performed on outpatients increased from 16 percent to 58 percent, and the ratio of outpatient visits to hospital admissions more than doubled.
Average Daily Census of Hospital Patients
Number of patients per million population

1930 = 1,948
1997 = 1,971
Health care expenditures increased sharply toward the end of the century.

When national health care expenditures were first calculated in 1929, they amounted to 3.5 percent of the Gross Domestic Product. Nearly all health care costs were borne by patients or private institutions.

By 1960, health care expenditures had risen moderately to 5.1 percent of GDP or $20 billion. A third of this total—$6.6 billion—was borne by the federal government, primarily for medical and hospital treatment of World War II veterans.

The introduction of Medicare and Medicaid in 1966 began a period of sharper growth. Per capita health care costs nearly tripled between 1970 and 1997. The cost of Medicare benefits for the elderly was borne by the federal government. The cost of Medicaid benefits for the poor and disabled was divided between the federal government and the states.

This substantial infusion of public money was one factor that stimulated price increases throughout the health care sector. During the subsequent thirty years, the annual inflation of medical, hospital, and pharmaceutical prices significantly exceeded the general rate of inflation. Total health expenditures as a percentage of GDP rose to 13.5 percent in 1997, up from 7.9 percent in 1980. Meanwhile, the share borne by the federal and state governments rose to nearly half of the total.

At the end of the century, hospital charges were the largest single component in the trillion-dollar price of health care in the United States, accounting for about half of all third-party health care payments by government agencies and private insurers. Less than 5 percent of hospital patients paid all or most of their own charges, although copayments were often substantial. Between 1950 and 1995, the average cost per patient-day in general hospitals, excluding the effect of inflation, increased by more than 1,000 percent.

Before World War II, hospital charges were billed directly to patients. As late as 1939, only 6 percent of Americans were covered by any form of hospital or surgical insurance. That percentage increased to 51 percent in 1950 and 86 percent by 1970, approximately the same level it was at the end of the century.

Among the major causes of the increase in hospital costs were improvements in medical technology, advanced diagnostic equipment, and expensive procedures such as burn victim recovery, coronary bypass surgery, organ transplants, and the care of premature infants.
Health Care Expenditures
1999 dollars per capita per year

1929 = $290
1997 = $4,243
The population institutionalized for mental disorders increased from early in the century to the 1950s and then declined sharply. The number of people institutionalized for mental retardation, however, continued to grow throughout the century.

During the first half of the century, an increasing number of people with severe mental disorders were confined involuntarily for long or permanent stays in certain state and county hospitals, popularly known as insane asylums. Lacking effective methods of treatment, the behavior of inmates was controlled by strait-jackets, ice baths, beatings, and isolation.

The advent of phenothiazine tranquilizers in the late 1950s, followed by other reliable chemical therapies, coincided with a shift in attitudes toward mental illness and revulsion against the inhumane conditions of the typical asylum. A new psychiatric consensus held that most mental patients could be safely accommodated in community facilities with follow-up care. As the upper chart indicates, the asylums began to empty out, but community facilities were often inadequate or absent, and many de-institutionalized mental patients were soon homeless or in prison.

In the early years of the century, most people with mental retardation lived at home in the care of their families. Only a handful of residential facilities provided care for the “feeble-minded.” In 1931, the earliest year in which people with mental retardation were counted, they constituted only a small fraction of the institutionalized population. Their numbers grew steadily in the decades thereafter.

As the availability of health insurance and third-party payments for care increased, so too did the number of patients in private facilities. As shown in the lower chart, many patients with mental illness and mental retardation moved from decaying public institutions into private institutions of generally higher quality.
Patients in Mental Institutions
Thousands of patients by diagnosis

Thousands of patients by type of institution
The upper chart indicates that the incidence of blindness in the American population declined during the second half of the century. There were 64 blind people receiving public assistance per 100,000 population in 1950 and only 30 per 100,000 population in 1997. These public assistance recipients, moreover, constituted a large share of all blind people.

This striking improvement was largely attributable to a decrease in industrial accidents, enormous progress in cataract surgery and the repair of detached retinas, and advances in controlling glaucoma and other diseases of the eye.

But the lower chart seems to indicate that the incidence of total disability from other causes increased substantially during the same period. The number of people with disabilities that received public assistance rose from 46 per 100,000 population in 1950 to 1,886 per 100,000 population in 1997. This increase is puzzling because it occurred at a time of declining industrial (and household) accident rates and impressive progress in the medical treatment of genetic anomalies, traumas, and mental disorders.

The most likely explanation appears to be that the criteria for classifying public assistance applicants as disabled were progressively liberalized, while the criteria for classifying applicants as blind remained essentially unchanged. (See page 196 for a discussion of government payments to individuals.)