Premature Deaths — Continued

certificates received in state vital statistics offices during a 1-month period using the underlying cause of death recorded on the certificate. Because complete information concerning the underlying cause of death is not available when the sample is taken, estimates for certain causes are biased in the monthly sample but then are corrected when annual estimates are made. The estimated number of deaths each month is obtained by multiplying the corresponding estimated mortality rate, which is computed on an annual basis, by the provisional population estimate for the United States and then dividing by the number of days for that month as a proportion of the total days in the year.

The measure for morbidity is obtained from the National Disease and Therapeutic Index (NDTI), a random sample of data from office-based physicians in 19 major specialties in the continental United States. Each physician in the sample records all his contacts with private patients for 2 consecutive days each quarter. These contacts comprise telephone calls (7% of total in 1981); office visits (68%); and patients visited by the physician in hospitals (22%), nursing homes (1%), and their own homes (1%). As a result, this measure gives greater weight to those diseases that prompt a visit to a private physician or require hospitalization. When the physician cannot make a diagnosis at the time of the visit, the suspected diagnosis or presenting symptom is recorded. Although misclassification might occur, the potential for this bias is reduced by using broad categories in the table.

Publication of Table V is an effort to use measures of morbidity and mortality as reminders of the impact on public health of some of these preventable problems. However, when data are summarized, their complexity and detail are sacrificed; and when information is simplified, although the overall effect may be clarified, subtle issues may be obscured. Therefore, a series of articles exploring different aspects of preventable problems will be published in the MMWR to complement this table . These articles will present more detailed analysis of what is known about health status indicators, risk factors, and other factors affecting public health.

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Current Trends

Antigenic Analysis of Recent Influenza Isolates

Influenza type A(H1N1) and type B viruses received at CDC thus far this winter from outbreaks and sporadic cases in the United States have been closely related to the reference strains A/England/333/80(H1N1) and B Singapore/222/79, respectively. Since about July 1981, influenza type A(H3N2) viruses have been received from Australia, Chile, Guam, Indonesia, Japan, People's Republic of China, Taiwan Province of China, and Trinidad and Tobago. As in the preceding year, the isolates have exhibited heterogeneous reaction patterns in hemagglutination-inhibition tests with ferret serum specimens. Varying proportions of the viruses from different locations are more closely related to A/Texas/1/77 or A/Bangkok/1/79. A minority of recent isolates have been found to exhibit some further antigenic drift from ear-

Influenza Isolates — Continued

lier strains and to resemble the virus A/Shanghai/31/80 isolated in December 1980 from a sporadic case of influenza. As shown in Table 1, A/Shanghai/31/80 exhibits an asymmetric antigenic difference from A/Bangkok/1/79, in that antiserum to A/Bangkok/1/79 usually inhibits the variant to a titer 4-fold lower than homologous, whereas antiserum to A/Shanghai/31/80 reacts almost equivalently with itself and with A/Bangkok/1/79. A further characteristic of A/Shanghai/31/80-like viruses is their low inhibition by A/Texas/1/77 and A/Bangkok/2/79 antisera. The above-described variants have been isolated concurrently, and there is no clear evidence of A/Shanghai/31/80-like viruses, for example, achieving predominance and being responsible for major outbreaks or epidemics in Asia or elsewhere. Prevalence of antibody to A/Bangkok/1/79 and A/Shanghai/31/80 appears similar in the general population in the United States and the United Kingdom, where this has been studied by the WHO Collaborating Centers for Influenza.

TABLE 1. Hemagglutination-inhibition reactions of influenza type A(H3N2) viruses

Antigen	Type of ferret serum			
	A/Texas/1/77	A/Bangkok/1/79	A Bangkok/2/79	A/Shanghai/31/80
A/Texas/1/77	**2,560**	160	160	160
A/Bangkok/1/79	640	**1,280**	160	1,280
A/Bangkok/2/79	320	80	**2,560**	80
A/Shanghai/31/80	160	320	40	**640**

Epidemiologic Notes and Reports

Chromium Sensitization in an Artist's Workshop

The National Institute for Occupational Safety and Health (NIOSH) recently evaluated a case of chromium sensitization involving an artist who had made and dyed quilts in her home studio. The artist had symptoms of mucous-membrane irritation; burning and itching of her arms, face, and hands; and edema of the face and fingers. These symptoms were associated with exposure to the cyanotype image-transfer process.

The cyanotype process, often referred to as the "blueprint" or "ferroprussiate" process, is a technique for transferring images from a photographic negative to cloth or paper. Ferric ammonium citrate and potassium ferricyanide are combined with water to form a photosensitive mixture that is then painted on fabric. A photographic negative is placed over the fabric, and the area is exposed to direct sunlight for 10-30 minutes until the pattern outline turns blue on the fabric as a result of ultraviolet radiation. The color is fixed by dipping the fabric in a potassium dichromate solution, rinsing it in water, and setting it out to dry.

The artist reported that she had first used the cyanotype process in June 1978. Shortly thereafter, she noticed a tingling sensation of her hands and skin when she handled the chemicals; these symptoms became more marked each time she dyed fabric. She discontinued use of the process in the summer of 1979. The symptoms, however, recurred each time she had contact with fabrics that had been dyed using the cyanotype process or when she had other direct or indirect contact with materials used in the process. Her symptoms abated when she was away from home, provided she did not take any of the treated cloth with her. Symptoms

Chromium Sensitization – Continued

must be handled with care and kept out of the reach of children. The instructions also suggested that rubber gloves be worn. However, neither the instructions nor the container of potassium dichromate provided any information regarding the strong hypersensitivity reactions that might be induced by potassium dichromate. Proper labeling might have led to earlier intervention and a solution to the problem.

Finally, it is important to note that potassium ferricyanide may form cyanide gas when exposed to heat, acid, or ultraviolet light. Since some artists use carbon arcs when doing the cyanotype process indoors, care must be taken to ensure that confined work areas are properly ventilated so that any lethal hydrogen cyanide gas produced will be completely removed.

References

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Current Trends

Surveillance of Childhood Lead Poisoning — United States

In the fourth quarter of fiscal year 1981, 59 childhood lead-poisoning prevention programs reported that 143,000 children were screened, and 6,500 were identified with lead toxicity. For the fiscal year, programs screened 535,000 children (the largest number ever tested in a single year), found almost 22,000 with the disease, and referred 23,000 for treatment for iron deficiency.

Childhood lead toxicity is found throughout the United States in both large and small communities. The Second National Health and Nutrition Examination Survey, 1976-1980 (NHANES II)—conducted by the National Center for Health Statistics to measure blood-lead levels in the general U.S. population—showed that 4% of all children, ages 6 months-5 years, had elevated blood-lead levels. Positivity rates ranged from 2.1% in rural areas to 11.6% in inner cities.

Since 1973, childhood lead-poisoning prevention programs have reported screening almost 3,900,000 children and adults, 243,000 (6.2%) with lead toxicity. Because of the pervasiveness of childhood lead toxicity, many state and local child health programs have included lead screening as a routine service for all patients, ages 1-5 years. In fiscal year 1981, 70% of the children reported as being screened were initially tested in these other child health programs.

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MORBIDITY AND MORTALITY WEEKLY REPORT

Notice to Readers

Introduction to Table V Premature Deaths, Monthly Mortality, and Monthly Physician Contacts — United States

Beginning with this issue, a new table will appear monthly in the MMWR: "Table V. Potential Years of Life Lost, Deaths, and Death Rates, by Cause of Death, and Estimated Number of Physician Contacts, by Principal Diagnosis" (see page 117). By displaying a variety of measures that gauge the importance and relative magnitude of certain public health issues, this table will call attention to those issues where strategies for prevention are needed. Publication of this table reflects CDC's increased responsibility for promoting action to reduce unnecessary morbidity and premature mortality and continues the MMWR's tradition of disseminating public health information to its readership.

Further improvements in health can be achieved through actions taken by individuals as well as by administrators in the public and private sectors to promote a safer and healthier environment (*1*). To this end, the new table provides information regarding areas that provide the greatest potential for health improvement.

Causes of death are listed in Table V in descending order of the potential years of lost life that are attributed to each cause. In 1980, heart disease, cancer, and cerebrovascular disease accounted for 67.9% of all deaths in the United States; motor-vehicle and other accidents, suicide, and homicide accounted for 8.1% (*2*). In terms of age at the time of death, the relative importance of causes of death changes remarkably; motor-vehicle and other accidents, suicide, and homicide accounted for 40.8% of the total years of life lost prematurely (before age 65 years); and heart disease, cancer, and cerebrovascular disease accounted for 37.2%.

"Potential years of life lost before age 65" in the table is estimated for persons between 1 year and 65 years old at the time of death and is derived by multiplying the annual number of deaths in each age category by the difference between 65 years and the age at the mid-point of each category. If deaths of persons older than 65 years were included, greater weight would be given to natural causes of death, and premature and preventable causes of death would no longer be distinguishable. If deaths of persons younger than 1 year were included, causes of death affecting this age group would be weighted heavily and would therefore contribute a disproportionately large share of potential years of life lost. However, "Infant mortality" in the table is a measure of deaths occurring in this age group and "Prenatal care" reflects efforts to prevent death in this group.

Cause-specific mortality rates, published in the *Monthly Vital Statistics Report* by the National Center for Health Statistics, are estimated from a systematic sample of 10% of death