PUBLIC HEALTH

Good Health for 1941

Barring Increase in Accidents, or Spread of Epidemics Excellent Records of Recent Years Should Continue

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LAST December in my review of the mortality for 1939 I indicated that I anticipated no retrogression in the health of the public during 1940. Now, at the end of the year, it is gratifying to find that my statement has been essentially confirmed. While official statistics are not available for the total population, the experience of the Metropolitan Life Insurance Company with its millions of industrial policyholders can be used as a safe index of the general situation. For experience has shown that these insured men, women and children, living in all parts of the United States and Canada, form a very fair cross-section of the general public.

The record for the first eleven and a half months of 1940 shows that their mortality rate for the year will be slightly lower than for last year. Under such conditions the health of the general population of the United States cannot be very different.

The year 1940 got off to a very good start. In the first six months the figures were, month for month, either the lowest or next to the lowest on record. Beginning with the summer, however, when the excessive heat wave contributed to higher-than-average mortality, the death rates for several months ran somewhat above the figures for the past two years. But the month of November again showed the lowest mortality on record. Present indications are that December will also make an excellent showing, in spite of an extensive outbreak of influenza on the Pacific Coast and sporadic instances elsewhere. Fortunately, the type of influenza does not seem particularly virulent and, so far, has not resulted in any appreciable rise in deaths from pneumonia.

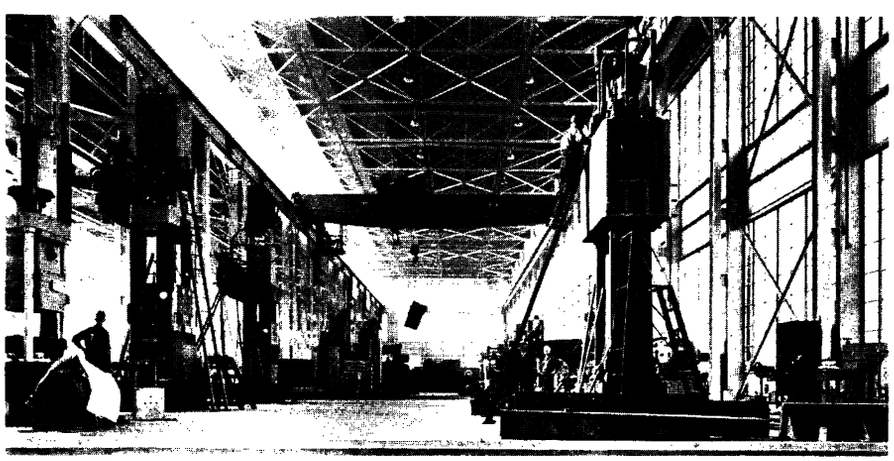
One of the most noteworthy features of the year's record is the marked decline in deaths from pneumonia. Each year since the extensive use of type-specific antiserums and the introduction of sulfanilamide and allied improved derivatives in the treatment of pneumonia, there has been a sharp drop in its mortality. Since these declines have occurred even in the periods when influenza was prevalent, we may expect that at last a method of control has been found for pneumonia, and look forward with confidence to the time when this disease will record only the negligible rates now in evidence for many of the other acute diseases.

The communicable diseases of childhood will register new low rates again this year, with three of them, namely measles, scarlet fever, and diphtheria, causing a death rate of less than one per 100,000. Even whooping cough will show a rate but little above this figure. Another children's disease even more important numerically is diarrhea and enteritis, which will also register a new low for 1940. When we realize that according to the mortality prevailing at the beginning of this century, one-third of all persons born would eventually die from some acute condition, and that under present circumstances this ratio has been reduced to one-sixth, we can appreciate the beneficial effects resulting from the progress in the control of diphtheria, pneumonia, diarrhea and enteritis, and similar diseases.

It also appears that 1940 may be added to the long series of years which have witnessed continuous declines in the mortality from tuberculosis. There has been a considerable slackening in the rate of the fall, however. For many years past, the annual decreases have been sizable, but so far in 1940, the drop has been negligible, namely from 44.8 per 100,000 for the January-November period of 1939, to 44.3 for the like part of 1940.

A very favorable feature of this year's report is the further decline in the mortality of mothers during pregnancy and childbirth. The puerperal death rate for insured women is down 11.1 percent for the first eleven months of the year. The 1940 rate will be the lowest ever recorded.

Now, having considered the favorable side of this year's mortality situation, to make the picture complete we must also note that there are certain diseases and conditions which we have so far failed to bring under control. These are mainly the chronic conditions characteristic of middle and later life, including diseases of the heart, kidneys, and arteries, and cancer, and diabetes. To a large degree, upward trends in mortality from these diseases are inevitable, simply because of the steadily increasing proportion of older persons in our population. Our resources in preventing or postponing the onset of these diseases and in curing them are quite limited. Despite this, it would be wrong to say that little is being accomplished.



ON PRODUCTION LINE

Seventy-foot sub-chasers and motor torpedo boats are among the craft going through a production line designed and built by the Austin Co. in 75 days to speed defense. The photograph was made at the Elco Naval Works in Bayonne, N. J.

As to cancer, early diagnosis and prompt treatment by surgery and radiation are increasing the number of cured patients. Diabetics, thanks to insulin, are living longer than ever before. Most of them are leading fairly normal lives and are able to work as well as other individuals of the same age.

The record for accidents is somewhat unfavorable this year. The increase in industrial accidents is probably a reflection of the speeding up of industry for national defense. In the last World War such an increase occurred. The entrance of large numbers of inexperienced workers into new occupations inevitably introduces its own particular danger. The urgent need of preparing for the safety of the nation may result in some sacrifice of safety for the individual. It is to be hoped, however, that industry will guard against any such tendency at this time, for it not only results in needless waste of human life, but also impedes the carrying out of the vital program of national defense.

Fatalities from motor vehicle accidents will this year exceed those reported in either 1938 or 1939, and may run as high as 34,500 for the country as a whole. The campaign for prevention of automobile accidents, which seemed to function so efficiently in 1938 and 1939, has not been so successful in the past year.

Considering the trend of mortality in recent years, it seems well assured that the public health will continue to improve along many lines during 1941. Whether the excellent record of the last few years can be repeated or even excelled will depend largely on two or three factors. In the first place, much will depend upon the extent of the spread of influenza now in evidence on the Pacific Coast and other isolated points and upon the continuance of it in a mild form. A widespread epidemic of a more virulent type of influenza would not only increase deaths from that cause, but would also increase mortality of the older people suffering from chronic conditions.

A second factor which must be considered in a forecast of the mortality of 1941 is the effect of the draft on public health. The bringing together of many individuals who have not established immunity against the more common communicable diseases will undoubtedly increase the incidence of such diseases. We must be prepared for a possible recrudescence of epidemic cerebrospinal meningitis such as we had in the draft of 1917 and 1918. Fortunately the introduction of chemotherapy has put us in a better position to handle this disease than formerly. Likewise the recently developed vaccines for influenza and the type-specific antiserums and chemotherapy for pneumonia should result in better control of the respiratory conditions.

A third factor which may affect unfavorably the 1941 mortality is the accident situation. As was noted before, the hazards resulting from the speeding up of industry for national defense must be guarded against to prevent an increase in such deaths.

However, in spite of these difficulties, which are very real, and which will require the best efforts of all those interested in maintaining the public health at a high level, I believe we can look forward to 1941 with confidence. We can continue to make progress in the saving of human life provided we take seriously our personal obligations to keep fit, and our community obligation to support our official and voluntary health agencies with sufficient resources to carry on their work effectively.

Science News Letter, January 4, 1941

SEISMOLOGY

New England Earthquake Centered Near North Conway

Damage Was Slight at Point of Origin, But Waves Traveled Great Distances and Were Detected

NORTH CONWAY, New Hampshire, was close to the center of the earthquake which shook New England early in the morning of Friday, Dec. 20. This location was determined by experts of the U. S. Coast and Geodetic Survey on the basis of reports from seismograph stations gathered by Science Service.

The quake occurred at 2 hours 27 minutes 23 seconds a.m., Eastern Standard time. A preliminary determination of the epicenter placed it at 44.1 degrees north latitude and 71.1 degrees west longitude. This is about 20 miles north of Lake Ossipee, in a region where mild earthquakes have been felt before. On Oct. 9, 1925, a quake felt over a 15,000-square-mile area was centered in the same region.

The first reports of the quake were obtained by long-distance telephone and telegraph from the seismograph stations at Harvard Observatory, Harvard, Mass.; Weston College, Weston, Mass.; Williams College, Williamstown, Mass.; Georgetown University, Washington, D. C.; the Dominion Observatory, Ottawa, Ontario, Pennsylvania State College and St. Louis University.

Though the damage was slight at the point of origin, waves of the tremor traveled great distances, and were detected by other means. M. W. Lewis, of Hyattsville, Md., reported that a dime balanced on edge on his mantelpiece since June 24 fell over. Presumably this was an effect of the earthquake. A galvanometer in the test laboratory of the Coast and Geodetic Survey recorded the vibrations, as did an instrument for measuring the earth's magnetism at their Cheltenham, Md., observatory.

Science News Letter, January 4, 1941

SEISMOLOGY

New England Quakes Forecast New Year Week

A FIVE-TO-TWO chance that earthquake shocks will be felt in New England or the Southern Appalachians, or both, probably between January 3 and 7, is forecast by Dr. Helmut Landsberg, well-known geophysicist at Pennsylvania State College.

Explaining that he bases this probability on study of 50 years of Appalachian earthquake patterns, in which follow-up shocks occur after about 13 days or multiples of 13 days in the majority of quakes in the area, Dr. Landsberg added that such recurring shocks in this case would probably be no more severe than those experienced during December. The recent tremors, he said, have been following the typical Appalachian pattern, in which shocks in one region are followed by reaction shocks in another.

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by E. L. MacHattie, of the University of Virginia.

He told the meeting that by magnetically suspending a steel ball 3/32 inch in diameter in a vacuum, so that friction was nearly eliminated, he was able to spin it 110,000 times per second,