

PUBLIC HEALTH

6,000,000 Persons in U. S. Are Sick Every Day in Winter

Colds, Influenza, Pneumonia, and Related Diseases Responsible for 25 Per Cent of Total Disabilities

EVERY day throughout the winter 6,000,000 persons in the United States are too sick to work, attend school or pursue their other usual activities. This estimate of the amount of illness in the country is based on results of the National Health Survey which the U. S. Public Health Service has been making.

About 2,500,000 of the 6,000,000 on the nation's daily sick list are suffering from chronic disease such as rheumatism, diseases of the heart and blood vessels, hardening of the arteries, nephritis, cancer and non-malignant tumors, diabetes, asthma, tuberculosis, ulcer of the stomach, gall bladder diseases, nervous diseases and permanent impairments resulting from previous illness or accident.

Colds, influenza, pneumonia and like diseases were the cause of illness in 1,500,000 of the 6,000,000. This is because the survey was made in winter when these diseases are most prevalent.

About half a million were on the sick list because of accidents and another half million suffered from acute infectious illnesses or other acute illnesses such as appendicitis.

The Healthiest Age

From 15 to 24 years is the healthiest age, according to this survey, the proportion of the sick in this age group being only 1 in 40. The highest proportion of sick was in the oldest age group, from 65 years and up. In this group 1 in every 8 were disabled on the day of the survey. Children and adults between 25 and 65 years had about the same proportion of illness.

Illness occurs most often in the lowest income groups, the National Health Survey also shows. During the year of the survey, chronic illness of a week's duration or longer disabled two persons on relief for every one person in the middle and highest income brackets. Families just above the relief level but with incomes less than \$1,000 had less sickness than the relief population but illness rate in this group was 17 per

cent. higher than for the highest income group. Most of this excess was due to the greater frequency of chronic illness.

Illness plays a big part in causing dependency, it appears from that part of the survey which showed how disabling illness incapacitates the wage-earner. In relief families 1 in every 20 family heads was unable to seek work because of disability. In non-relief families with incomes under \$1,000 the number of family heads unable to seek work because of illness was 1 in 33. This figure was 1 in 250 for families in the comfortable income group.

The relief and low-income families not only have more illness but have longer-lasting illnesses. They also get less medical and nursing care than high or comfortable income families.

Science News Letter, January 29, 1938

PUBLIC HEALTH

Health Fight in Future Must Be Against Adult Ills

THE FIGHT to protect and improve the nation's health must be extended to include attacks on the chronic diseases of adults, such as cancer and heart disease, on poor housing, inadequate nutrition and stream pollution, Surgeon General Thomas Parran, U. S. Public Health Service, indicated in his annual report to Congress.

These four lines of attack plus extension of the health provisions of the Social Security Act, enlargement of the Public Health Service staff and extension of its physical facilities are the recommendations made by Surgeon General Parran to Congress.

The Social Security Act should be extended, he believes, to provide further "cooperation with the states in dealing more effectively with such important problems as syphilis, tuberculosis, cancer, pneumonia and mental disease."

The problem of nutrition involves not only the size of the family income and the amount of food that can be purchased but also the education of the public to select the essentials in food. While

these aspects of the problem may appear largely economic and educational, there is still need for scientific studies to establish better standards for judging how well or ill nourished a person is. At present it is only possible to detect gross deviations from the normal.

Accomplishments of the Public Health Service during the past year were many and varied. The attack on syphilis and gonorrhea continued with increasing momentum. There was no let-up in the fight on other infectious diseases, and new quarantine regulations were put into effect to guard against imported diseases. Distribution of nearly \$8,000,000 to the states under the Social Security Act resulted not only in a vast expansion of local and state health services but in stimulation of states and communities to appropriate almost equal sums of their own for health work.

Science News Letter, January 29, 1938

ARCHAEOLOGY

12-Foot Wall Surrounded First City of Troy

A 12-FOOT wall, that surrounded the very first city of Troy, has been discovered by a University of Cincinnati expedition, proving that Trojans—even 2,000 years before the Helen episode—never did trust the neighbors.

The high stone wall, with towers at



AN EARLIER HELEN?

Conventionalized outline of a woman's face, found in the ruins of the oldest city of Troy.

the gate, was built by first settlers at Troy, Dr. Carl W. Blegen, field director, announced.

"This first Troy, which began before 3000 B. C. and continued at least no later than 2500 B.C., probably was ruled even then by a king," Dr. Blegen explained.

Troy was rebuilt no less than nine times, as one Troy after another met with some disaster. The seventh city is now believed the one conquered by the ruse of the Trojan Horse, after Greeks vainly besieged its walls for 20 years in order to reclaim stolen Queen Helen, in the twelfth century B.C.

Discovery that Trojans of 3000 to 2500 B.C. had their own distinctive art is also revealed. Dr. Blegen reported finding a heart-shaped human face carved on a slab in a parapet. Pronouncing this sculpture older than any ever found in Greece or Crete, both centers of extensive archaeological investigations, Dr. Blegen said this Trojan art is far from crude. It is as old as Egypt's famous Old Kingdom sculptures, or the great carvings found in Mesopotamian cities.

"It is to be inferred," said Dr. Blegen, "that this earliest Troy not only had a king but a royal court, as well, which fostered progress in art."

Science News Letter, January 29, 1938



A TOWER OF ILIUM

Not "topless" were these first towers of Troy, nor able to boast of highly finished construction; yet for their time they were doubtless formidable. This one guarded a city gate.

its destination, and landing, the whole being accomplished completely automatically, thereby relieving the flight crew of all duties other than observing the instruments to see that the equipment is functioning properly."

Science News Letter, January 29, 1938

AVIATION

Robot Lands Airplanes Without Aid From Pilots

A FORECAST of the future of aviation, when planes will take off and land automatically without human effort, was made at the meetings of the Society of Automotive Engineers by Capt. G. V. Holloman of the U. S. Army Air Corps of Wright Field, Dayton, Ohio.

Under the new system, which the Army has already used on great cross-country flights from the Midwest to New York, to Virginia and then back to Wright Field, the landings of the planes have been entirely without action by the pilot, whose only job is to see that robot mechanisms are operating.

Under the automatic blind landing system a plane has only to get within 20 miles of even a fog-bound airport and it arrives safely at its destination. Four shortwave radio stations, plus the automatic controls in the plane, accomplish the actual landing.

When within 20 miles of the first radio station the pilot levels off the airplane, lowers the landing wheels, adjusts the landing flaps and sets the propellers for their minimum pitch. Then he closes a master switch and can sit back.

The robot controls turn the plane toward the first station of the landing system and adjust the gasoline throttle until the plane is in a glide that will take it down to 1,000 feet above the elevation of the runway of the airport. If this altitude is reached before the plane flies over station No. 1, automatic adjustment levels the plane off into constant altitude flight at 1,000 feet.

When the plane comes over station No. 1 (five miles from the airport) the radio homing device automatically tunes on station No. 2, having a slightly different radio frequency. At the same time the plane is held in level flight at the altitude of 1,000 feet. When the plane passes over station No. 2 (two miles from the airport) the robot controls tune the landing device on station No. 3, which is directly in front of the landing runway at the airport.

At the same time the controls put the plane in a long glide at the rate of 400 feet drop per minute. It holds this glide until an altitude of 200 feet above the elevation of the runway is obtained and then the plane is automatically leveled off at 200 feet altitude.

At station No. 3 the robot tunes the controls on station No. 4, which is at the opposite end of the airport's runway and thus fixes the line on which the plane will land. At the same time the plane is put into its "let down" glide—as pilots call it—and again drops down at a rate of 400 feet per minute until it touches the ground.

At the instant of contact with the ground the robot controls push in the throttle and cut off the gasoline supply and, at the same time, operate gently the brakes on the wheels to bring the plane to a stop.

Capt. Holloman adds:

"Now that automatic landing is an accomplished fact, it is well within the realm of reason to visualize an airplane taking off from an airdrome, flying to

AVIATION

"Flight Strips" Proposed To Aid Distressed Planes

DESPERATE hunts for landing fields, with the gas getting low and the fog closing in, may be a thing of the past for airline pilots, if the scheme proposed to the 35th annual convention of the American Road Builders Association by Lt.-Col. Stedman S. Hanks is adopted. Instead of cruising around hunting for a place to land, pilots of the future will find a highway and set their planes down on "flight strips" built beside the main roads by the highway departments.

Proposed not only as emergency landing fields, but for the use of private pilots, these paved strips beside main highways, at least 200 feet wide and 1800 feet long, built and maintained by highway engineers, on state-owned land, may also be used as way-stations, from