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## PLANS FOR HANDLING SPECIAL HEALTH AND OTHER PROBLEMS INCIDENT TO THE ARMY MANEUVERS IN TENNESSEE

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During the month of June 1941, the Second Army held field maneuvers in south central Tennessee, with headquarters in Manchester, Coffee County, approximately midway between Nashville and Chattanooga. The headquarters company and the quartermaster, ordnance, engineers, and other supply and maintenance troops came into the area first, arriving on May 10, 11, and 12, and remained until July 10. The combat troops followed, arriving on May 28, 29, and 30, and left between June 30 and July 3. During the month of June approximately 77,000 officers and men were stationed in the area.

In preparation for the Army maneuvers in Tennessee a conference was held in Atlanta, Ga., on April 14, 1941. Those present at this conference were Dr. L. L. Williams, Jr., of the United States Public Health Service, liaison officer for the Fourth Corps Area; Dr. W. K. Sharp, Jr., Regional Director of District No. 2, United States Public Health Service; Col. P. W. Gibson, Surgeon of the Second Army; Dr. W. C. Williams, Commissioner of Public Health of Tennessee; and Assistant Surgeon General J. W. Mountin of the United States Public Health Service. After Colonel Gibson had outlined plans for the maneuvers, there was a general discussion of the method of handling the special health and other problems involved. It was decided that the Commissioner of Public Health should request the Governor of Tennessee to call a meeting of representatives of the Second Army and the State Commissioners of Health, Safety, Highway, Conservation, and Agriculture for the purpose of discussing a coordinated
program. Under the laws of Tennessee each of the State officials mentioned has some responsibility in administering public health work or related activities.

This meeting, called by Governor Prentice Cooper on April 23, 1941, resulted in the creation of a Coordinating Unit. Dr. G. Foard McGinnes was appointed Coordinator to handle the problems of vice control (including prostitution and venereal disease control), sanitation of food and food-handling establishments, milk sanitation, and general communicable disease control. All personnel assigned to this unit, regardless of the agency by which they were employed, were directly responsible to the Coordinator. Through this unit liaison was established with the highway patrol and with military and civilian authorities.

Headquarters for the Coordinating Unit were established in the office of the Coffee County Health Department at Manchester, Tenn., on May 12, 1941. The office was kept open 24 hours a day with the personnel working in three shifts. In addition to regular telephone service this office had direct connections with the Army headquarters.

The personnel of the unit consisted of the Coordinator, 3 physicians, 3 field nurses, 1 headquarters nurse, 3 clerks, 1 sanitary engineer, 2 sanitation officers, 10 deputy sheriffs, and 2 special State officers. The Department of Conservation detailed to the unit 1 chief hotel and restaurant inspector and 5 field inspectors, and the Department of Agriculture detailed 1 chief milk inspector and 6 milk sanitarians. The State Department of Safety detailed 1 division chief, 5 sergeants, and 30 patrolmen to the area. The United States Public Health Service furnished a trailer laboratory with a technician and assistant, which arrived on May 26, 1941.

The Coordinator met with the local authorities in each of the 10 counties in and surrounding the maneuver area to explain the control program and request their cooperation and support. A meeting was also held with the mayors, health officers, and chiefs of police of the cities of Nashville, Chattanooga, and Knoxville, for the purpose of requesting their cooperation in vice control in the respective cities for the protection of soldiers on week-end leave. The programs for the handling of special problems are given in the following sections.

## FOOD AND EATING ESTABLISHMENTS

Personnel of the Department of Conservation, in cooperation with local health authorities, inspected all food and eating establishments in the area prior to the beginning of maneuvers. Those establishments which were allowed to remain open were required to comply
with State and local laws. During the month preceding the maneuvers inspections were made and action taken as follows:
Places inspected and graded. ..... 199
Places reinspected and regraded. ..... 4
Places reinspected and progress made ..... 94
Places reinspected, all orders complied with ..... 101
Permits revoked or surrendered ..... 11
Court action (warrants) ..... 19

The inspectors also clpsed or prevented the opening of 23 eating establishments of a temporary type and checked on 184 places (groceries) which did not come directly under their supervision in connection with the serving of food and general sanitation.
During the month when the maneuvers were in progress the following inspections were made and results obtained:
Total calls ..... 3,263
Places regraded and grade raised ..... 14
Places regraded and grade not raised ..... 10
Permits revoked or surrendered (5 of these met requirements and reopened) ..... 13
Court action (warrants) ..... 17
Convicted and fined (balance pending) ..... 12
Temporary operations stopped ..... 49

## MILK AND OTHER DAIRY PRODUCTS

The personnel of the Department of Conservation, in cooperation with the local authorities, inspected all milk plants, ice cream plants, and establishments of raw milk distributors and producer-distributors supplying milk to pasteurization plants and ice cream plants. A list of all such plants with their grades was furnished to the Chief Surgeon of the Second Army.

All grocery stores, meat markets, soda fountains, and stores dispensing ice cream were also inspected. Only those complying with State and local sanitary laws were allowed to remain open. These establishments were frequently reinspected during the period of the maneuvers.

## UNITED STATES PUBLIC HEALTH SERVICE TRAILER LABORATORY

On May 24, 1941, one of the trailer laboratories of the United States Public Health Service was sent to Tennessee from Cincinnati, Ohio, to assist in sanitation activities in the Second Army maneuver area. Manchester was selected as the site of the trailer laboratory because of its central location. The work of the laboratory was confined to bacteriological examinations of milk, ice cream, streams, wet ice boxes, ice cream scoop dishes, and public, semipublic, and private water supplies.


In order to study actual conditions and to effect improvements before troops move into an area, a laboratory unit should be on the ground at least a month prior to the maneuvers.

## GENERAL SANITATION

The sanitation problems were handled by a sanitary engineer and two sanitation officers of the Coffee County Health Department. The sanitary engineer had general charge of all sanitation, including food and eating establishments, milk, and dairy products. The sanitation officers devoted their full time to emergency sanitation problems, mosquito control, and other reported nuisances.

## SAFETY

Just before the field maneuvers began the Director of the Department of Safety, Maj. T. E. Morris, and the Coordinator met with the Adjutant General and the Provost Marshal of the Second Army to work out plans for handling military and civilian traffic. A speed limit of 35 miles per hour was put into effect in the entire maneuver area. When there were movements of large numbers of troops on certain highways, the speed limit was reduced to 15 miles per hour by placing a patrolman at both ends of the highway. At no time, however, were any of the highways closed to the public. The public cooperated very well with the State patrol in carrying out safety measures, as indicated by the fact that only about 30 arrests were made during the entire month and no serious or fatal accident occurred on the highways during the maneuver period.

Since the movements of the various combat divisions were more or less secret, it was found advisable to detail a sergeant and several patrolmen to the Provost Marshal of the Second Army and to each combat division. In this way the sergeant and patrolmen detailed to
each unit carried out safety measures required for the protection of the public on highways during certain secret movements of the troops. They also kept the division chief notified of the highways over which most military traffic would pass, in order that civilian traffic entering these areas could be cautioned to proceed slowly.

In addition to the handling of civilian and military traffic on the highways, the State patrolmen aided in picking up female vagrants on the highways as well as preventing trailers from remaining in the maneuver area. They also reported to the Coordinator any itinerant roadside eating establishments which came to their attention.

## THE CONTROL OF PROSTITUTION AND VENEREAL DISEASES

Clinics for the diagnosis and treatment of venereal diseases were operated in the offices of the health departments at Manchester, Tullahoma, Murfreesboro, Winchester, Pelham, and Fayetteville. Special clinics were established in Shelbyville, McMinnville, Woodbury, Lynchburg, and Jasper where there were no full-time health departments. Physicians and nurses especially employed for this program operated these special clinics and aided the local health officers in operating the clinics of the full-time health departments. Laboratory specimens were sent to the central laboratory each evening by messenger and the reports for the previous day were returned by the same messenger.

The control of vice and prostitution.-From May 12 to June 30, 1941, a deputy sheriff was employed on a full-time basis in each of the 10 counties in and surrounding the maneuver area for the purpose of apprehending prostitutes and arresting female vagrants. Two special officers with State and local police authority were employed full-time to supervise and direct the activities of the deputy sheriffs. The deputy sheriffs were required to report daily to the special officers, who in turn reported daily to the Coordinator.

All persons suspected of immoral acts and all female vagrants were arrested and confined in the local jails until examined by a physician from the health department. Those found infected with venereal disease were quarantined and treated for the duration of the maneuvers. Those suspected of being prostitutes and who were found negative on the first examination were held in most instances for a second examination a week later. If found negative on the second examination they were released and sent out of the maneuver area. Those arrested on vagrancy charges who were found negative were fined and if able to pay the fine were escorted out of the area; otherwise they were retained in the workhouse until they had worked out their fines. All known houses of prostitution were closed and the inmates arrested. Tourist camps and "juke joints" (or honky-tonks) were under constant surveillance.

The Second Army and the State highway patrol cooperated in keeping trailers from stopping overnight in the maneuver area. Each officer in the area was on the alert for trailers, and a prize was offered to anyone finding a trailer at night. It is believed that no trailer actually stopped in the area.

During May, 125 prostitutes and vagrants were examined and 93 , or 74.4 percent, were found to have either syphilis or gonorrhea or both. Only 63 were examined during June. This drop in the number of prostitutes and vagrants picked up was due to the work done in May and to the publicity given the methods of prostitution control which discouraged such persons from coming to the area during the maneuver period. The results of the examinations are given in table 1.

Table 1.-Results of examination of prostitutes and vagrants arrested in May and June in maneuver area

|  | Total |  | May |  | June |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Percent | Number | Percent | Number | Percent |
| Total examined. | 188 | 100 | 125 | 100 | 63 | 100 |
| Syphilis- | 58 | 30.9 | 45 | 36.0 | 13 | 20.6 |
| Gonorrhea | 86 | 45.7 | ${ }^{63}$ | 50.4 | 23 | 36.5 |
| Syphilis and gonorrhea | $\stackrel{22}{122}$ | 11.7 64 | ${ }_{93}^{15}$ | 12.0 | 7 | 11.1 |
| rotal infete. |  |  |  |  |  | 46.0 |

During the 2 months 188 prostitutes and vagrants were examined. Of these, 58 ( 30.9 percent) were found to have syphilis and 86 ( 45.7 percent) gonorrhea. In all, 122 ( 64.9 percent) were found infected with at least one of the venereal diseases.

Cases of venereal disease among troops.-During the maneuver period 10 cases of syphilis and 82 cases of gonorrhea were found among troops of the Second Army. Contact histories were obtained and only 2 of the cases of syphilis and 12 of the cases of gonorrhea were traced to sources in the maneuver area. Three cases of syphilis and 32 cases of gonorrhea were believed to have been contracted in Tennessee outside of the maneuver area, while the sources of infection of nearly half the cases ( 5 of syphilis and 38 of gonorrhea) were thought to have been in areas outside the State. The areas of contact of the reported cases of syphilis and gonorrhea are given in table 2.

Table 2.-Reported cases of syphilis and gonorrhea among troops of Second Army according to area of contact, by color


In order to obtain attack rates, the numbers of days in the area have been eatimated for the white and colored troops. Annual attack rates per 1,000 have been calculated and are shown in table 3.

Table 3.-Reported cases of syphilis and gonorrhea among troops of Second Army, with attack rates per 1,000, by color


On an annual basis the attack rate for syphilis was found to be 1.4 per 1,000, while the rate for gonorrhea was considerably higher, 11.8 per 1,000 . The attack rate for the colored troops was higher than for the white troops.

In view of the data given in tables 2 and 3, it is believed that the program instituted and carried out in the maneuver area was reasonably effective in the control of venereal diseases.

## HEALTH STATUS OF ADULTS IN THE PRODUCTIVE AGES ${ }^{1}$

By David E. Hailman, Associate Statistician, United States Public Health Service
When a test of strength seems imminent, individuals or nations hasten to appraise their assets and liabilities. The people of the United States are now preparing for such a test and are therefore taking inventories of their military, financial, industrial, and political powers. But most of all, perhaps, they are concerned with their manpower-not only in terms of numbers but also in terms of physical and mental health.

## YOUNG MEN

Of first concern at this time is the health of the young men of this country. The rapid expansion of the armed forces, through voluntary enlistment and compulsory training, will call into service mainly young men between the ages of 20 and 35 . An even more rapid expansion of industry will undoubtedly draw heavily upon the reservoir of unemployed men in these age groups.

[^0]There are two sources, among others, from which valuable data on the health of young men can be obtained: The National Health Survey conducted in 1935-36, and Love and Davenport's study of defects among men drafted during the World War (1917-18).

For adults, health is determined largely by the presence or absence of chronic disease and by the nature and severity of the disease when present; however, acute disabling illness, not associated with chronic disease, is also a factor. The National Health Survey gathered, among other information, data on handicapping chronic diseases and physical impairments whether or not they had caused disability, and on serious disabling illnesses from acute diseases. ${ }^{2}$ In table 1 is given the percentage of adults aged 20 to 65 who fall into 7 groups according to health status, ranging from group a, those who were permanently incapacitated from major chronic disease, to group $g$, those who had no handicapping chronic disease or serious disabling illness.

If these percentages (for the urban population) are applied to the estimated $16,234,230$ young men in 1940 between the ages of 20 and 35 (both urban and rural) ${ }^{3}$ the following numbers would fall into the 7 groups, listed as in table 1.

|  | Number of men, aged 20-s4 |
| :---: | :---: |
| a. Major chronic disease-disability of $\mathbf{1 2}$ months or long | 76, 000 |
| b. Major chronic disease-disability of 3 weeks to 12 months | 260, 000 |
| c. Major chronic disease-dissbility of less than 3 weeks or no disability $\qquad$ | 910, 000 |
| d. Minor chronic disease-with or without disability | 760, 000 |
| e. No chronic disease-acute illness with disability of 3 weeks to 3 months. | 320, 000 |
| f. No chronic disease-acute illness with disability of 1 to 3 weeks | 420, 000 |
| No chronic disease-no acute illness with disability of 1 week or longer $\qquad$ | 13,500, 000 |

It appears from the foregoing estimates that there were in the United States in 1940 about 76,000 men aged $20-34$ who are probably permanently incapacitated (group a); $\mathbf{2 6 0 , 0 0 0}$ have major chronic diseases or impairments such as heart disease, high blood pressure, nephritis, rheumatism, or orthopedic impairments, and also have been disabled for such long periods of time during the past year that they have been prevented from or seriously hindered in working, seeking

[^1]work, or attending school (group b); another 910,000 men, while not disabled for such long periods of time, are more or less seriously handicapped because of these major chronic diseases and impairments (group c); still another 760,000 men have some noticeable degree of handicap caused by lesser chronic diseases such as hay fever, hernia, hemorrhoids, or sinusitis (group d). (See table 5 and its footnotes for explanation and a more complete list of major and minor chronic diseases.)

Table 1.-Percentage distribution according to health status of men and women aged 20-64, classified in two age groups
[National Health Survey 1935-36] ${ }^{1}$

| Health status of men and women who- | Age (years) |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Men |  | Women |  |
|  | 20-34 | 35-64 | 20-34 | 35-64 |
| 2. Have 1 or more major chronic diseases or serious impairments and have been disabled ${ }^{2}$ for the entire past 12 months (living at home, not in institutions) | 0.47 | 1.7 | 0.46 | 1.2 |
| b. Have 1 or more major chronic diseases or serious impairments and have been disabled for 3 weeks (from illnesses lasting 1 week or more) but less than 12 months during the past year ${ }^{3}$ | 1.6 | 2.8 | 3.1 | 4.8 |
| c. Have 1 or 2 major chronic diseases or serious impairments and have been disabled for less than 3 weeks during the past year, or have not been disabled. | 3.6 | 2.8 12.1 | 6.3 | 15.4 |
| d. Have no major chronic disease or serious impairment but have 1 or 2 minor chronic diseases, with or without disability 4 . | 4.7 | 7.0 | 5.4 | 7.2 |
| e. Have no chronic disease or serious impairment but have had one or more acute illnesses (from disease, accident, or confinement) which have disabled for 3 weeks to 3 months ${ }^{2}$ (from illnesses lasting 1 week or more) during the past year. | 2.0 | 2.1 | 6.6 | 3.6 |
| f. Have no chronic disease or serious impairment but have had 1 or more acute illnesses (from disease, accident, or confinement) which have disabled for 1 to 3 weeks (from illnesses lasting 1 week or more) during the past year. | 2.6 | 1.7 | 6.1 | 3.4 |
| g. Have no chronic disease and no acute illness which has disabled for 1 week or more during the past year. | 83.0 | 72.6 | 72.0 | 64.4 |
| Total. | 100.0 | 100.0 | 100.0 | 100.0 |

${ }^{1}$ Data based on a 0.5 percent random sample of $1,530,832$ white and colored persons aged 20-64 years enumerated in the National Health Survey, distributed by age and sex as follows-Male: 20-34 years, 298,096; 35-64 years, 351,449 . Female: $20-34$ years, 430,$344 ; 35-64$ years, 450,943 .
${ }_{2}$ "Chronic" refors to illnesses the disease symptoms of which had been noticed for at least 3 months before the day of the visit. All other illnesses are classified as "acute."
For a list of the most important major chronic diseases and impairments see table 5 . The division into major and minor chronic disease is based largely upon the proportion of disabling cases among all recorded cases of a particular disease or disease group.

Disability is defined as inability to work, attend school, care for home, or carry on other usual pursuits by reason of disease, accident, or physical or mental impairment.
${ }_{3}$ This group, $b$, also includes persons with 3 or more chronic diseases, regardless of disability; and workers disabled less than 12 months, but reported as "unemployable," that is, prevented from working or seeking work by reason of severe chronic disease or incapacitating impairment.
4 For a list of tho most important minor chronic diseases see table 5 .
Thus it seems that there is a minimum ${ }^{4}$ of $2,000,000$ young men (aged 20 to 34) who have a handicapping chronic disease or impairment (groups a, b, c, and d). There are an additional 740,000 young men, as a minimum, who do not, to their knowledge, have any handicapping chronic disease, but each of whom has had during the past

[^2]year one or more illnesses lasting 7 days or longer caused by acute disease.

General physical examinations, not undertaken by the Health Survey, can be expected to reveal many more physical and mental impairments or defects, particularly those of a minor or incipient nature. ${ }^{5}$ Many of these minor defects may be the precursors of actual chronic ailments but they have not as yet become recognized chronic diseases of a handicapping nature, such as reported in the Health Survey.

The results obtained from physical examinations for a special purpose can be expected to differ from those obtained from general examinations and from house-to-house canvasses, such as the National Health Survey. The physical examinations given by the draft boards during the World War had the very special purpose of selecting young men for service in the armed forces. However, a study by Love and Davenport ${ }^{6}$ based upon the results of these special physical examinations gives valuable data, in general, as to the extent, nature, and severity of defects found among men in these ages, 21-30 years-data which are comparable in certain ways to the National Health Survey findings.

Approximately $10,000,000$ men between the ages of 21 and 31 were registered for the draft. Not all of the men were given physical examinations; but of those who were, ${ }^{7}$ the "second million" $(967,486$ men, a sample chosen from those sent to camp after May 1, 1918) represents the best group for the purpose of this study, since the examination procedure had been clarified and improved for these men. (In order to furnish a complete picture of the prevalence of defects among young men, it has been necessary to include with the sample "second million" a proportionate number of the 549,099 men rejected and the 299,456 men placed in a remediable and limited service group by the local boards and never sent to camp; each of these men, of course, had one or more defects.)

Among these drafted men ("second million" plus a proportion of local board rejected and limited service groups), it is estimated that 52.1 percent had one or more defects, distributed as follows: 20.9 percent were accepted for general military duty, 9.9 percent were ac-

[^3]cepted for limited service only, and 21.3 percent were rejected for any duty. ${ }^{8}$

In connection with defects among the rejected men, the authors state, "Many of the defects noted are obviously noteworthy only from a military standpoint * * * . A large proportion of the mechanical defects * * * are no serious handicap in civil life. Also, many of the defects of sense organs found are easily capable of correction so as to fit a man to perform his duties in civil life. Altogether, it is clear that fully half of the defects found are not of such a nature as to interfere seriously with the man performing services of the highest order in civil life." If 21 percent of the men ("second million" plus a proportion of local board rejected and limited service groups) were rejected and if half of those rejected had no defects which were seriously handicapping in civil employment, then another half, or almost 11 percent of the total, did have such handicapping defects. In this connection, data from the National Health Survey show that about 12 percent of men aged $20-34$, living in urban communities, were reported to have chronic diseases or physical impairments of a handicapping nature (groups a, b, c, and d, table 1).

Employment status.-It has been suggested earlier in this paper that, if present trends continue, unemployed young men will rapidly find places in industry or in the armed forces. What is the health of unemployed young men when contrasted with that of the employed? Data from the National Health Survey give some basis of comparison (table 2).

The percentages falling into each health status group (a, b, c, etc.) are not widely different for the employed and for the unemployed. Furthermore, the high percentage (92) of unemployed young men falling into groups $d, e, f$, and $g$ would indicate that the majority of unemployed young men can take their places in industry or in the armed forces alongside the employed, if given the opportunity.

One fact worth noting, however, is the higher proportion of unemployed than of employed men with disabling chronic diseases, especially those with the longer periods of disability (group b). This relatively high rate of disabling illness from chronic diseases among unemployed young men is borne out by other data from the National Health Survey. ${ }^{9}$

[^4]Figures in table 2 also indicate that young men in school (including those 15-19 years of age) have only a slightly better health status than workers, either employed or unemployed.
Tabiv 2.-Percentage distribution according to health status of men aged 20-54,
classifod by employment status
[National Health Survey 1938-38] 1

| Health status of men who- | $\underset{\substack{\text { Em- } \\ \text { ployed }}}{ }$ | Unem- ployed | In school ${ }^{1}$ |
| :---: | :---: | :---: | :---: |
| a. Have 1 or more major chronic diseases or sarious impairments and have been disabled for the entire past 12 months ${ }^{2}$ |  |  |  |
| b. Have 1 or more major chronic discases or sarious impairments and have been disabled for 3 weeks (from illnesses lasting i week or more) but less than 12 months during the past year 4 . | 1.1 | 26 | 1.0 |
| c. Have 1 or 2 major chronic diseases or serions impairments and have been disabled for less than 3 weeks during the peist year, or havenot been |  |  |  |
| disabled - |  | 5.4 | 3.5 |
| d. minor chronic diseases, with or without dsabniity 1 | 6.0 | 3.5 | 4.0 |
| e. Have no chronic discease or serious impairment but have had 1 or more acute illoesses (from disease or accident) Which have disabled for 3 weeks to 8 months 4 (from illnesses lasting 1 week or more) during |  |  |  |
| tave no chronic disease or serious impairment but have had |  | 2 | 2.0 |
| acute illnesses (from disease or accident) which have dissbled for 1 to 3 weeks (from illnesses lasting 1 week or more) during the past |  |  |  |
| g. Have no chronic disease and no acute illiness which has disabled for 1 week or more during the past year. | 83.8 | 26 83.7 | 4.3 85.3 |
| Total | 100.0 | 100.0 | 100.0 |

${ }^{1}$ Data based on a 0.5 percent random sample of 208,006 white and colored males aged $20-34$ years enumerated in the National Health Survey.
${ }^{2}$ Inciudes boys $15-19$ years of age in order to get a sufficient sample.
${ }^{8}$ This group is not considered to be in the labor market and is therefore not included in this table.
" "Chronic" refers to llinesses the disease symptoms of which had been noticed for at least 3 months before the day of the visit. All other illnesses are classified as "acute."
For a list of the most important major chronic diseases and impairments see table 5 . The division into major and minor chronic disease is based largely upon the proportion of disabling cases among all recorded cases of a particular disease or disease group.

Disability is defined as inability to work, attend school, care for home, or carry on other usual pursuits by reason of disease, accident, or physical or mental impairment.

- For a list of the most important minor chronic diseases see table 5.


## MEN AGED 35-64

So far as the immediate future can be foreseen, it is improbable that men between 35 and 65 years of age will be called upon to serve in the armed forces of the United States, but the situation with regard to industrial employment is different, since the speeding-up of the industrial program may in the future mean that all able-bodied men up to 65 years of age will be needed. The health of these men is therefore of great importance to the national security.

If the percentages given in table 1 are applied to the estimated $22,581,585$ men between the ages of 35 and 65 in 1940 (see footnote 3), the following numbers would be found in the 7 groups:

## Number of men, coed Sb-64

a. Major chronic disease-disability of 12 months or longer

380, 000
b. Major chronic disease-disability of 8 weeks to 12 months_.....- 630,000

d. Minor chronic disease-with or without disability ................... 1, 580, 000
e. No chronic disease-acute illness with disability of 3 weeks to 3 months.

470, 000
f. No chronic disease-acute illness with disability of 1 to 3 weeks_ 380,000
g. No chronic disease-no acute illness with disability of 1 week or longer

16, 400, 000
Thus, it is estimated that in the United States in 1940 there were about 380,000 men aged $35-64$ who are probably permanently incapacitated (group a); 630,000 who have major chronic diseases and have been disabled for such long periods of time during the past year that they have been prevented from or seriously hindered in working, seeking work, or pursuing other usual activities (group b); another $\mathbf{2 , 7 3 0 , 0 0 0}$ who, while not disabled for such long periods, are more or less seriously handicapped in pursuing their usual activities because of these major chronic diseases (group c); still another $1,580,000$ who have some noticeable degree of impairment from less serious chronic diseases (group d); and an additional $850,000 \mathrm{men}$ in these ages who do not, to their knowledge, have any chronic diseases, but each of whom had in the past year one or more illnesses of 7 days or longer duration caused by an acute disease or accident (groups e and f). Many more men with incipient or borderline chronic disease would be found in this age group if general physical examinations were to be given.

Employment status.-For young men it was found that health status, according to the measures used, is not widely different among the employed and the unemployed, except that a small proportion of the unemployed have a relatively high rate of disabling illness of long duration from major chronic diseases and impairments. Among men 35-64, however, there are greater differences between the employed and the unemployed with respect to health.

There is among the unemployed men in these ages a relatively high concentration of men with chronic diseases and impairments, both major and minor, with varying degrees of disability (groups b, c, and d). Indeed 30 percent of these unemployed men are handicapped by chronic disease or impairments of varying severity (table 3).

## Table 3.-Percentage distribution according to haalth status of men aged 35-64, classifed by employment atatus

[National Health Survoy 10e5-30] 1

| Health status of men who- | $\underset{\text { ployed }}{\text { Rmb }}$ | Unemployed |
| :---: | :---: | :---: |
| a. Have 1 or more mafor chronic disenses or serious impairments and have been disabled for the entire past 12 months 2 |  |  |
| b. Have 1 or more major chronic diseases or serious impairments and have been dibabled for 3 weeks (from illnesses lasting 1 week or more) but less than 12 months during the peist year ${ }^{2}$ - | 1.7 | 4.9 |
| C. Have 1 or 2 mafor chronic diseases or serious impairments and have been disabled |  |  |
| d. Have no major chronie disenee or serious impairment but have 1 or 2 minor chronic | 10.8 | 17.8 |
|  | 7.1 | 7.6 |
| a. Have no chronic disease or serious impairmont but have had 1 or more sente illnesses (from disease or accident) which have disabled for 8 weeks to 8 months ${ }^{\text {a }}$ (from ullnesses lasting 1 week or more) during the past year........................ | 2.1 | 2.2 |
| f. Have no chronic disease or serious impairment but have had 1 or more acute ilinesses (from disease or sccident) which have disabled for 1 to 8 weeks (from illnesses lasting 1 weak or more) during the past year | 1.8 | 1.5 |
| s. Have no chronic discase and no acute Inness which has disabled for 1 week or more during the past year. | 76.5 | 66.6 |
| Total | 100.0 | 100.0 |

[^5]
## WOMEN

During the World War, when man power was at a premium, there was a large movement of women from the home to the factory and office. In the present emergency it is probable that as industry expands many more women will seek jobs and will be needed for them. These will be mainly young women, butsomeolder women undoubtedly will enter industry, especially in jobs for which they have already been trained. This speeding-up of military and industrial preparedness certainly will place added responsibilities and work upon the women who remain at home. It is important then to know the health of all women in the productive ages, whether they be workers, potential workers, or housewives.

If the proper percentages given in table 1 (for the urban population) are applied to the estimated (see footnote 3) $\mathbf{1 6 , 6 9 2 , 9 3 7}$ women between the ages of 20 and 35 and the $21,743,138$ between the ages of 35 and 65 in 1940 (urban and rural), the following numbers would be found in the 7 groups:

## Group

a. Major chronic disease-disability of 12 months or longer
Number a,
women,
aged $20-54$
77,000
Number of agoed $5 s-8$,
260, 000
b. Major chronic disease-disability of 3 weeks to 12 months
520, 000 1, 040, 000
c. Major chronic disease-disability of less than 3 weeks or no disability
1, 050,000
3, 350, 000
d. Minor chronic disease-with or without disability 900, 000 1, 570, 000
e. No chronic disease-acute illness with disability of 3 weeks to 3 months
$1,100,000$
780, 000
f. No chronic disease-acute illness with disability of 1 to 3 weeks
$1,020,000$
740, 000
g. No chronic disease-no acute illness with disability of 1 week or longer.
12, 000, 000
14, 000, 000

It appears from the foregoing estimates that there were in the United States in 1940 about 77,000 women in the younger ages and 260,000 women in the older 'ages who are permanently incapacitated (group a); 520,000 young women and 1,040,000 older women who have major chronic diseases (such as cardiovascular-renal diseases, rheumatism, nervous and mental diseases, or cancer and tumors) or impairments and have been disabled for such long periods of time during the past year that they have been prevented from or seriously hindered in working, seeking work, caring for the home, or pursuing other usual activities (group b); another $1,050,000$ younger women and $3,350,000$ older women who, while not disabled for such long periods of time during the past year, are more or less seriously handicapped because of these major chronic diseases and impairments (group c); and still another 900,000 younger women and 1,570,000 older women who have some noticeable degree of handicap from less serious chronic diseases such as hay fever, hemorrhoids, varicose veins, or diseases of the female genital organs (excluding cancer and tumors) (group d).

Thus, it is estimated that there were in the United States in 1940, as a minimum, $2,500,000$ women between the ages of 20 and 35 and $6,200,000$ between the ages of 35 and 65 who have one or more handicapping chronic diseases or impairments (groups a, b, c, and d). An additional $2,000,000$ women in the younger age group and $1,500,000$ in the older age group do not, to their knowledge, have any chronic disease, but each had in the past year one or more illnesses lasting 7 days or longer, caused by acute disease or accident (groups e and f).

Employment status.-As mentioned previously, it is probably true that during the next few months or years women who are now housewives or not gainfully employed will be called upon for new jobs in defense industries and to fill certain of the vacancies left by men called to military service. What is the health of housewives and unemployed women as compared with those who are now employed?

Table 4 shows that unemployed women and housewives in both age groups ( $20-34$ and 35-64) have a less favorable status with regard to health than do employed women, chiefly because of higher rates of chronic disease (groups b, c, and d), but in some part caused by illness from acute disease (groups e and f). These high rates of acute disease among housewives and unemployed women as compared with the employed would be reduced considerably if confinements were excluded, but differences would remain. ${ }^{10}$

Table 4.-Percentage distribution according to health status of women aged 20-64, classified in 2 age groups, by employment status
[National Health Survey 1935-36]!

\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline \multirow{3}{*}{Health status of women who-} \& \multicolumn{7}{|c|}{Age (years)} <br>
\hline \& \multicolumn{4}{|c|}{20-34} \& \multicolumn{3}{|c|}{35-64} <br>
\hline \& $$
\underset{\text { ployed }}{\text { Em- }}
$$ \& Unemployed \& Housowives \& $$
\underset{\text { school } 2}{\text { In }}
$$ \& $$
\begin{gathered}
\text { Em- } \\
\text { ployed }
\end{gathered}
$$ \& Unemployed \& Hoasewives <br>
\hline \multicolumn{8}{|l|}{a. Have 1 or more major chronic diseases or serious impairments and have been disabled for entire past 12 months ${ }^{2}$} <br>
\hline b. Have 1 or more major chronic diseases or serious impairments and have been disabled for 3 weeks (from illnesses lasting 1 week or more) but less than 12 months during the past year 4 \& 1.1 \& 3.7 \& 4.5 \& 0.9 \& 1.9 \& 6.0 \& 5.0 <br>
\hline a. Have 1 or 2 major chronic diseases or serious impairments and have been disabled for less than 3 weeks during the past year, or have not been disabled. \& 3.1 \& 6.6 \& 9.1 \& 2.1 \& 10.8 \& 16.3 \& 16.9 <br>
\hline d. Have no major chronic disease or serious impairment but have 1 or 2 minor chronic diseases, with or without disability ${ }^{5}$ \& 3.1
3.5 \& 6.6
3.7 \& 9.1
7.1 \& 2.1
4.5 \& 10.8
7.0 \& 16.3
7.4 \& 16.9
7.6 <br>
\hline e. Have no chronic disease or serious impairment but have had 1 or more acute illnesses (from disease, accident, or confinement) which have disabled for 3 weeks to 3 months 4 (from illnesses lasting 1 week or more) during the past year- \& 2.4 \& 3.7

2.2 \& 6.1
610.5 \& 4.5
3.0 \& 2.0 \& 7.4
2.5 \& 7.6
3.9 <br>
\hline f. Have no chronic disease or serious impairment but have had 1 or more acute illnesses (from disease, accident, or confinement) which have disabled for 1 to 3 weeks (from illnesses lasting 1 week or more) during the past year. \& 2.4
2.9 \& 18812 \& 10.6
18.3 \& 3.0
3.0 \& 2.2
2.2 \& 2.5 \& 3.9
3.2 <br>
\hline 5. Have no chronic disease and no acute illness which has disabled for 1 week or more during the past year. $\qquad$ \& 2.9
87.0 \& 8.1
75.7 \& 8.3
60.5 \& 3.0
86.6 \& 2.2
76.9 \& 1.9
65.9 \& 3.2
63.4 <br>
\hline Total \& 100.0 \& 100.0 \& 100.0 \& 100.0 \& 100.0 \& 100.0 \& 100.0 <br>
\hline
\end{tabular}

[^6]If women who are not gainfully employed now are to be considered for employment, it is important to know that, of the unemployed women $20-34$ years of age, 14 percent had a handicapping chronic disease or impairment, and of the unemployed women aged 35-64, 30 percent were so handicapped (groups b, c, and d); of young housewives, 21 percent, and of housewives aged 35-64, 29 percent were so handicapped.

## NATURE OF CHRONIC DISEASE

The previous sections have been concerned, in large part, with the presence or absence of chronic disease or impairment and with the nature and severity of the disease when present. This section will present further data on the nature of the diseases found or the diagnoses.

Table 5 shows the prevalence of specified chronic diseases and impairments among men and women in two age groups, 20-34 and 35-64 years. ${ }^{11}$ (See also footnote 4.) Among young men, orthopedic impairments predominate, followed by rheumatism and allied diseases, hay fever, hernia, cardiovascular-renal diseases, and sinusitis; among older men rheumatism, orthopedic impairments, cardiovascular-renal diseases, and hernia show relatively high rates, followed by hemorrhoids, deafness, hay fever, and asthma.

Among young women there are relatively high rates of rheumatism and cardiovascular-renal diseases, followed by hay fever, goiter, diseases of the female genital organs, sinusitis, hemorrhoids, nervous and mental diseases, and varicose veins. Among older women are found relatively high rates of rheumatism and cardiovascular-renal diseases, followed by varicose veins, hemorrboids, deafness, hay fever, nervous and mental diseases, goiter, and orthopedic impairments.

[^7]Percentage distribution of deaths among persons 20-64 years of age, according to cause, classified in 8 age groups
[United States Census, 1938]

| Cause of death | $\underset{20-64}{\substack{\text { All ages, } \\ 2}}$ | 20-34 | 35-64 |
| :---: | :---: | :---: | :---: |
| All causes. | 100.0 | 100.0 | 100.0 |
| Cardiovascular-renal diseases | 35.9 | 13.2 | 40.6 |
| Cancer and other tumors-- | 13.9 | 5.1 | 15.8 |
| Accidents and violent deaths | 12.4 | 25.0 | 9.8 |
| Tuberculosis (all forms) | 8.4 | 19.5 | 6.2 |
| Pneumonia (all forms).- | 5.5 | 6. 5 | 5.8 |
| Other infectious diseases. | 3.8 | 5.7 | 3.4 |
| Nervous and mental diseases. | 2.5 | 2.8 | 2.4 |
| Diabetes mellitus .-.-.-......- | 2.3 | . 7 | 2.6 |
| Rheumatism and allied diseases | 15.0 | 21.1 | 13.8 |

Table 5.-Preaalence (per 1,000 persons) of specified chronic diseases or impairments, disabling and nondisabling, among adults 80-64 years of age, classified by sex in 2 age groups
[National Health Survey 1935-36] ${ }^{1}$

| Disasse or disease groap ${ }^{2}$ | Total | Malo |  | Female |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 20-34 | $\begin{aligned} & 35-64 \\ & \text { years } \end{aligned}$ | $\begin{aligned} & 20-34 \\ & \text { years } \end{aligned}$ | $\begin{aligned} & 35-64 \\ & \text { years } \end{aligned}$ |
| Major ohronic diseases and impairments: |  |  |  |  |  |
| Rheumatism and allied diseores..... | 49.5 | 12.4 | 62.2 | 21.4 | 84.2 |
| Cardiovascular-renal diseases. | 39.3 | 8.7 | 49.6 | 17.0 | 72.7 |
| Orthopedic impairments..- | 21.7 | 20.0 | 52.4 | 5.8 | 14.0 |
| Deafness......... | 10.6 | 4.0 | 18.7 | 3.6 | 15.2 |
| Asthma. | 9.0 | 4.6 | 15.8 | 4.6 | 11.0 |
| Nervous and mental dispases. | 9.0 | 3.7 | 9.1 | 7.1 | 11.3 |
| Goiter and other thyroid diseases | 8.1 | 1.3 | 2.6 | 10.9 | 14.2 |
| Blindness, 1 or both eyes. | 5.1 | 3.0 | 11.3 | 1.1 | 5.5 |
| Cancer and other tumors | 4.7 | . 8 | 2.4 | 8.9 | 9.9 |
| Gall bladder and liver diseases | 4.4 | . 3 | 3.5 | 1.9 | 10.3 |
| Diabetes mellitus....- | 4.1 | 1.0 | 5. 1 | . 8 | 8.6 |
| Ulcer of stomach --..-- | 2.8 | 2.2 | 6. 5 | . 9 | 23 |
| Tuberculosis (all forms) | 1.9 | 1.5 | 3.1 | 2.0 | 1.2 |
| Minor chronic diseases: 14.3 11.6 16.4 13.8 |  |  |  |  |  |
| Hay fever-- | 14.3 | 11.6 | 16.4 | 13.8 | 15.0 |
| Hernia-... | 13.7 | 10.6 | 40.7 | 1.4 | 6.3 |
| Varicose veins | 13.2 | 2.0 | 9.8 | 6.6 | 29.6 |
| Hemorrhoids. | 12.4 | 4.7 | 20.5 | 7.3 | 15.9 |
| Bronchitis. | 8.9 | 3. 4 | 13.1 | 5.5 | 12.3 |
| Sinusitis.- | 8.3 | 6.2 | 9.5 | 7.3 | 9.6 |
| Diseases of female genital organs. | 4.9 |  |  | 9.7 | 7.5 |

${ }^{1}$ Data based on a 0.5 percant random sample of cases among $1,530,832$ white and colored persons aged 20-64 years enumerated in the National Health Survey, distributed by age and sex as follows-Male: 20-34 years, 298,096; 35-64 years, 351,449. Female: 20-34 years, 430,344; 35-64 years, 450,943.
${ }^{2}$ The division into major and minor is based largely upon the proportion of disabling cases among an cases of a speciffed disease or disease group recorded in the National Health Survey. A particular case of a major chronicdisease may be relatively mild and a particular case of a minor chronic disease may be relatively severe.

Rheumatism and allied diseases.-Rheumatism, arthritis, gout, neuralgis, neuritis, lumbago, acute rheumatic fever, stiff neck, and other muscular pains.
Cardiovascular-renal diseases.-Heart diseases (including diseases of coronary arteries), arteriosclerosis, hypertension, cerebral hemorrhage, nephritis and other kidney diseases, and current paralysis except paresis. paralyzing of any member or part of the body.
Nervous and mental diseases.-Neurasthenia, nervous breakdown, epilepsy, chorea, locomotor ataxia, paresis, insanity, and other diseases of the nervous systam.
Cancer and other tumors.- All cancers and other malignant and nonmalignant tumors, regardless of site.
Gall bladder and liver diseases.-Diseases of the gall bladder, biliary passages; and liver.
Ulcer of the stomach and duodenum.
Tuberculosis.-All forms of tuberculosis-respiratory, nonrespiratory, disseminated, and suspected.
Varicose veins.-Varicose veins or ulcers, varicocele.
It must be recalled again that these are diseases reported as handicapping by the patient or by the informant for the family and are therefore, in general, of a rather serious nature.
For certain chronic diseases and defects there are unusual difficulties in obtaining complete and accurate information in a house-to-house canvass; among these are tuberculosis, nervous and mental diseases, the venereal diseases, dental defects, malnutrition, pellagra, malaria, and hookworm disease. All of these chronic diseases or defects are widely prevalent among young persons as well as among older persons.

About 75,000 persons die yearly of tuberculosis, of whom 50,000 are in the productive ages, 20-64. Among young persons 20-34, it is the leading disease cause of death (àcidents ranking first of all causes). It is estimated that 500,000 persons of all ages are ill from
tuberculosis, ${ }^{12}$ a prevalence rate of about 4 per 1,000 persons. The great majority of these persons are in the productive ages.

Undoubtedly the prevalence of nervous and mental diseases as reported in the Health Survey (table 5), while great, underestimates the true situation. Because of the difficulties encountered in enumerating such diseases in a house-to-house canvass and because information from other sources is scanty, estimates from any source must be tentative. If Health Survey data, however, are adjusted for underenumeration (and if persons confined to institutions for mental disease are included), a rough figure of $2,000,000$ persons with serious nervous and mental diseases is reached-a rate of about 15 per 1,000 persons. The great majority of these are $20-64$ years of age and a considerable proportion in the younger ages, 20-34.

The Health Survey did not attempt to enumerate the venereal diseases. The prevalence of gonorrhea in the United States, never known with any certainty, is even more an unknown quantity since the introduction of relatively fast and efficacious chemotherapy. While the outlook for the eventual control of gonorrhea is bright, the prevalence of the disease is still exceedingly high, especially among young men.

There have been various estimates of the prevalence of syphilis in the United States, the most authoritative made in 1938 by the Venereal Disease Division of the United States Public Health Service. ${ }^{13}$ Among persons $20-64$ years of age, 10.8 per 1,000 have syphilis, that is, in the language of the authors cited, remain a "potential treatment problem." Among young persons 20-34, the prevalence rate is 8 per 1,000 , and among older persons $35-64$ it is 12.9 per 1,000 .

Observations on the dental needs of adults in these ages are relatively few in number. Studies made by Henry Klein, dental officer in the United States Public Health Service, make available the following findings:

1. A group of youths aged 16-24 years working for the National Youth Administration or the Works Progress Administration shows a current need for fillings of about 9 permanent tooth surfaces per youth; a group of youths aged $20-24$ years in the Navy shows 3 surfaces needing filling.
2. The yearly increment of carious permanent tooth surfaces was found to be 1.3 surfaces decayed per year per NYA-WPA boy, aged 16-24 years, and 1.2 surfaces per Navy youth, aged 20-24 years.
3. From these findings it is clear that the current accumulated need for fillings is perhaps almost as closely controlled by the amount,

[^8]kind, and rate of supply of dental care (fillings) as by the tendency to experience caries.

Hookworm is a disease indigenous primarily to rural coastal plain areas of the Southern States. Recent surveys (1930-38) "show that a substantial reduction has occurred in the incidence of hookworm in each of the (eight) Southern States in the counties studied" since previous surveys (1910-14). ${ }^{14}$ However, these States still show high average percentages of persons with hookworm infestation ( 7.9 to 15.9 percent); one-fourth of these persons had infestations sufficiently severe to produce clinical symptoms. The age group $20-24$ years showed higher than average (all ages) infestation, and above 25 years, decreasingly lower average infestation.

The prevalence of pellagra and malaria among adults is not known with any exactitude. That they are still widely prevalent, especially in rural districts in the South, is certain; on the other hand, public health, sanitary, and educational measures, along with a rising cultural level, are reducing their incidence.

## SUMMARY

The health of men and women in the productive ages, 20-64, may be measured with data based on the National Health Survey (1935-36) and for men aged 20-34, upon Love and Davenport's study of defects among men drafted for the World War (1917-18).
(1) Health Survey data indicate that there were in the United States in 1940, as a minimum, $16,200,000$ men and women in the productive ages, 20-64 (living at home, not in institutions) who have one or more handicapping chronic diseases or serious physical or mental impairments, the symptoms of which have been noticed for 3 months or more. To be added to this figure are an estimated 500,000 persons in these ages in institutions for the care of mental diseases and tuberculosis. ${ }^{15}$ Moreover, for certain of these handicapping chronic diseases, there are obvious difficulties in obtaining complete information in a house-to-house canvass such as the Health Survey; notable among these are tuberculosis, nervous and mental diseases, the venereal diseases, pellagra, malaria, and hookworm disease. If all persons 20-64 years with these diseases could be included in the number with handicapping chronic diseases, the total would no doubt be considerably increased.

There are, as a minimum, an additional $5,200,000$ adults in these ages who do not, to their knowledge, have any chronic disease but who had one or more acute illnesses disabling from 1 week to 3 months

[^9]during the past year. Thus, upwards of $22,000,000$ persons in the United States between the ages of $\mathbf{2 0}$ and $\mathbf{6 5}$ have one or more handicapping chronic diseases or physical impairments, or have had during the past year one or more serious acute illnesses. The remainder of persons in these ages, estimated to be from $50,000,000$ to $55,000,000$ persons, presumably have better health. They may, however, have lesser impairments not included above, such as defects of vision, enlarged tonsils, or defective or deficient teeth. They may also have incipient chronic diseases which can be revealed only by general physical examinations, or they may have had, during the past year, acute illnesses lasting less than 7 days.
(2) From Health Survey data it is estimated that there were in the United States in 1940, as a minimum, about 800,000 men and women between the ages of 20 and 65 who are more or less permanently incapacitated (excluding those persons living in institutions). They are distributed by age and sex as follows:

|  | Age (years) | Men | Women |
| :---: | :---: | :---: | :---: |
| 20-34. |  | 76, 000 | 77, 000 |
| 35-64. |  | 380, 000 | 260, 000 |

Almost as incapacitated a group of persons are those who have major chronic diseases and have been disabled for such long periods (3 weeks to 1 year) during the past year that they have been prevented from or seriously hindered in working, seeking work, attending school, caring for the home, or pursuing other usual activities. Included among the major chronic diseases and impairments are cardiovascularrenal diseases, nervous and mental diseases, rheumatism and allied diseases, tuberculosis, orthopedic impairments, blindness, deafness, diabetes, cancer and other tumors, asthma, gall bladder and liver diseases, goiter and other thyroid diseases, and ulcer of the stomach. There are in the United States a minimum of about $2,500,000$ of these handicapped persons, distributed by age and sex as follows:

|  | Age (years) | Men | Women |
| :---: | :---: | :---: | :---: |
| 20-34 |  | 260, 000 | 520, 000 |
| 35-64 |  | 630, 000 | 1,040, 000 |

Another 8,000,000 adults, while not disabled for such long periods of time, are more or less seriously handicapped owing to the presence of these major chronic diseases and impairments. They are distributed by age and sex as follows:


Almost 5,000,000 adults $20-64$ years of age have some noticeable degree of handicap from hay fever, sinusitis, varicose veins, hernia, hemorrhoids, diseases of the female genital organs, and other less
disabling, but nonetheless handicapping, chronic diseases. They are distributed by age and sex as follows:

|  | Age (years) | Men | Women |
| :---: | :---: | :---: | :---: |
| 20-34 |  | 760, 000 | 900, 000 |
| 35-64 |  | 1, 580, 000 | 1,570, 000 |

Among adults who have no recognized handicapping chronic diseases or impairments, a minimum of $2,700,000$ have had during the past year one or more acute illnesses (from disease or accident) which disabled for a period of from 3 weeks to 3 months. They are distributed by age and sex as follows:

|  | Age (years) | Men | Women |
| :---: | :---: | :---: | :---: |
| 20-34 |  | 320, 000 | 1, 100, 000 |
| 35-64. |  | 470, 000 | 780, 000 |

Still another $2,600,000$ persons who have no recognized handicapping chronic diseases or impairments have had during the previous year one or more acute illnesses (from disease or accident) which disabled them for 1 to 3 weeks at a time. They are distributed by age and sex as follows:

|  | Age (years) | Men | Women |
| :---: | :---: | :---: | :---: |
| 20 |  | 420, 000 | 1, 020, 000 |
| 35-64 |  | 380, 000 | 740, 000 |

(3) Health Survey data lead to the conclusion that the health of the great majority of unemployed young men (aged 20-34) is not far different from that of the employed or that of young men in school. However, a higher proportion of unemployed than employed young men have major chronic diseases and impairments associated with long periods of disability.

For men 35-64 years of age there is a much greater concentration of all chronic diseases and impairments (major and minor, all periods of disability) among the unemployed than among the employed. Thirty percent of men in these ages have a chronic disease.

Unemployed women and housewives in either age group have a less favorable health status than do employed women, chiefly because of higher rates of chronic disease, but in some part caused by illness from acute disease.
(4) The chronic diseases and impairments most prevalent among adults 20-64 years, in descending order of frequency, are:

Men $20-34$
Orthopedic impairments
Rheumatism and allied diseases
Hay fever
Hernia
Cardiovascular-renal diseases
Sinusitis
Hemorrhoids
Asthma
Deafness

## Women 20-s4

Rheumatism and allied diseases
Cardiovascular-renal diseases
Hay fever
Goiter and other thyroid diseases
Diseases of the female genital organs
Sinusitis
Hemorrhoids
Nervous and mental diseases
Varicose veins

Mew s5-64
Rheumatism and allied diseases
Orthopedic impairments
Cardiovascular-renal diseases
Hernia
Hemorrhoids
Deafness
Hay fever
Asthma
Bronchitis

Women 3s-64
Rheumatism and allied diseases
Cardiovascular-renal diseases
Varicose veins
Hemorrhoids
Deafness
Hay fever
Nervous and mental diseases
Goiter and other thyroid diseases
Orthopedic impairments

# A NEW METHOD FOR VIEWING SHEET KODACHROME ${ }^{1}$ 

By Albert A. Stone, R. Donald Reed, and Louis Schwartz, Medical Director, United States Public Health Service

In the photographic unit of the National Institute of Health, hundreds of transparencies of Kodachrome professional film have been produced during the past two years. Many of these were connected with stud es on dermatoses, and therefore were required to show very fine detail. These films have been mounted for lantern slide projection and light box viewing. From selected ones, wash-off relief color prints were made for permanent exhibits. Often the fine detail on the film was lost in the wash-off prints.
Since printing of Kodachrome in color is expensive and time-consuming, often entailing inexactness in color and loss of detail, it was believed that if a technique could be developed for directly mounting Kodachrome film for exhibit purposes, a worth-while economy of time and money could be efferted.

Some time ago a series of Kodachrome films was exposed under varying lighting conditions, and in the study of these test films it was observed that one of the transparencies, when placed on a white sheet, made a viewable picture. While this picture was sufficiently clear to show the pathological detail, it was believed that improvement in color values could be achieved with further experiments in exposure, chemical manipulation, and modifications in the material forming the reflective background.

We have now devised a method by which Kodachrome film can be mounted into a viewable picture. This is accomplished by means of accurately controlled lighting and exposure conditions, and backing material of high light-reflective properties. A technique has been developed whereby the density of the Kodachrome film can be reduced to the density necessary for our method of viewing.

[^10]
## DESCRIPTION OF METHOD

A fixed focus range finder is used as a means of maintaining a constant subject-camera distance.
Illumination is obtained by a total of 4,000 watts of incandescent light so placed that the subject is evenly illuminated. From data previously obtained with the lens to be used, the optimum exposure for a "thin" transparency is made. In case of doubt, slight underexposure for a "thin" transparency is preferred. When the transparency is received from the developing laboratory, it is placed, emulsion down, against the glossy side of fixed-out Eastman white topographic film and observed for general effect.
If the immediate result is slightly dark, the following chemical treatment is given to the transparency: It is soaked in distilled water at $76^{\circ} \mathrm{F}$. for 5 minutes. Then it is placed in a solution, 1 percent by weight, of sodium hydrosulfite. This gradually reduces the density of the dye deposit. At periodic intervals the transparency is removed, rinsed in distilled water, placed against a white background, and checked for effect.
When the desired density is reached, the transparency is thoroughly washed in water and hung to dry. After it is dry, it is ready for mounting, as follows:
The transparency is pressed, emulsion side, to Eastman white topographic fixed-out film. This is placed between a piece of clean glass for the front and another piece of glass or flat material for the back, and bound with cellophane tape. The resultant picture gives satisfactory rendition of skin tones and detail.

Copies and enlargements can be made from this mounting with a process camera, using the factors of exposure described above for taking the original. Enlargements from small transparencies may be made onto sheet Kodachrome with proper filters and resultant transparency processed as described above.
The resulting picture shows no screen or grain, and detail can be studied with a hand magnifying lens.

## PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES

## September 7-October 4, 1941

The accompanying tables summarize the prevalence of nine important communicable diseases, based on weekly telegraphic reports from State health departments. The reports from each State are published in the Public Health Reports under the section "Prevalence of disease." Table 1 gives the number of cases of poliomyelitis reported by each State in recent weeks of 1941, and table 2 gives the number of cases of nine important communicable diseases,
including poliomyelitis, for the 4-week period ended October 4, 1941, the number reported for the corresponding period in 1940, and the median number for the years 1936-40.

## DISEASES ABOVE MEDIAN PREVALENCE

Influenza.-An increase over the preceding 4 -week period of approximately 1,000 cases of influenza was reported during the 4 weeks ended October 4. The increases appeared to be largely due to an excess of cases in a few widely scattered States, viz, Texas, South Carolina, Virginia, Wisconsin, Colorado, Arizona, and California. An increase in influenza cases is normally expected at this season of the year, but the current increase for the country as a whole is slightly above that during preceding years. No unusual prevalence was reported from any State in the North Atlantic, West North Central, or East South Central regions and the incidence in those areas was below the seasonal expectancy.

Poliomyelitis.-The number of reported cases of poliomyelitis dropped from 2,370 for the preceding 4 -week period to 2,239 for the current 4 -week period. The incidence was approximately 80 percent of that recorded during the corresponding period in 1940, but it was more than one and one-fifth times the 1936-40 median incidence for this period. In States in the South Atlantic and East South Central regions, where the current rise of this disease started, the number of cases declined considerably during the current period, but in the North Atlantic regions the highest incidence of the season was reported during the first weeks of the period. In Georgia the number of cases dropped from a peak of 242 for the preceding 4 weeks to 76 for the current period; in Florida, from 44 to 26; in Tennessee from 143 to 119; in Alabama from 291 to 152; and in Kentucky from 73 to 33 cases. New York reported an increase from 255 cases for the preceding 4 weeks to 424 cases for the 4 weeks ended October 4; New Jersey an increase from 103 to 119; and Connecticut from 25 to 53. Pennsylvania reported 250 cases as compared with 258 for the preceding 4 weeks.

The 1940 epidemic of poliomyelitis was confined largely to the North Central and South Atlantic regions. The North Central regions, especially the West North Central States, have been little affected by the current outbreak. The first increase of cases during the present year was reported from States in the South Atlantic region. In the West South Central, Mountain, and Pacific regions the incidence was considerably below the normal seasonal expectancy; there has been no serious outbreak of this disease in the West South Central region since 1937 and none in the Mountain and Pacific regions since 1934.

The accompanying table gives the number of cases of poliomyelitis reported by weeks in each State since the beginning of the current outbreak. Starting in Florida the disease spread into Georgia and
then into the East South Central States but did not reach other States in the South Atlantic and the North Atlantic regions until about the middle of August. In preceding years a sharp decline in the incidence of this disease has usually occurred during the period following the one now under consideration. For the weeks ended October 11 and October 18 (the latest reports available) there were 429 and 312 cases reported.

Table 1.-Poliomyelitis cases reported in each State during recent weeks of 1941


Whooping cough.-For the current 4-week period there were 13,015 cases of whooping cough reported, as compared with 10,726 for the corresponding period in 1940, which figure also represents the 1938-40 average incidence for this period. Each section of the country except the Middle Atlantic reported a relatively large number of cases, the increases over the normal seasonal incidence ranging from about 10 percent in the South Atlantic region to approximately 60 percent in the Mountain and Pacific regions.

Measles.-The number of cases $(3,200)$ of measles reported for the current period was almost 20 percent in excess of the 1936-40 average incidence for this period. Each section of the country except the West North Central contributed to the excess. The disease still remained unusually prevalent in the South Atlantic region, the number of cases there being more than three and one-half times the normal seasonal incidence.

## DISEASES BELOW MEDIAN PREVALENCE

Diphtheria.-For the 4 weeks ended October 4, there were 1,759 cases of diphtheria reported, an increase of approximately 30 percent over the number reported during the corresponding period in 1940. However, the number was considerably below the 1936-40 average incidence ( 2,296 cases) for this period. In the New England, West North Central, West South Central, and Mountain regions the incidence stood at about the normal seasonal level, but in all other regions the incidence was comparatively low.

Meningococcus meningitis.-The number of cases of meningococcus meningitis was also relatively low, 103 cases as compared with 107 in 1940 and an average of 113 cases for the corresponding period in the years 1936-40. In the New England region, although the number of cases (14) was not large, it was twice the average seasonal expectancy; in the Middle Atlantic, South Atlantic, West South Central, and Pacific regions the incidence was about normal, and in the North Central, South Central, and Mountain regions the incidence was relatively low.

Scarlet fever.-The number of cases $(4,281)$ of scarlet fever reported for the current period was the lowest recorded for this period in the 13 years for which these data are available. Each section of the country shared in this favorable situation except the New England section; there an increase over the normal seasonal expectancy of about 25 percent was reported.

Smallpox.-The incidence of smallpox remained at a comparatively low level. For the current period 21 cases were reported as compared with the record low level of 48 cases reported for the corresponding period in 1940, and an average of 125 cases in the years 1936-40. In
the North Central, Mountain, and Pacicfi regions the current incidence was the lowest on record for this period.

Table 2.-Number of reported cases of 9 communicable diseases in the United States during the 4-week period September 7-October 4, 1941, the number for the corresponding period in 1940, and the median number of cases reported for the corresponding period, 19s6-40


[^11]Typhoid fever.-The number of cases $(1,216)$ of typhoid fever was only about 85 percent of last year's figure for the corresponding period and approximately 70 percent of the 1936-40 median incidence. The incidence for the country as a whole was the lowest in recent years and each section of the country shared in this favorable situation.

## MORTALITY, ALL CAUSES

The average mortality rate from all causes in large cities for the 4 weeks ended October 4, based on data received from the Bureau of the Census, was 10.2 per 1,000 inhabitants (annual basis). The rate for the corresponding period last year was 10.6 and the average rate in the years 1938-40 was 10.7.

## DEATHS DURING WEEK ENDED OCTOBER 11, 1941

[From the Weekly Mortality Index, issued by the Bureau of the Census, Department of Commerce]

|  | Week ended Oct. 11, 1941 | Correspond- <br> ing week, 1940 |
| :---: | :---: | :---: |
| Data from 88 large cities of the United States: |  |  |
| Total deaths....-.-...- | 7,783 | 7, 764 |
| Average for 3 prior years. | 7,776 |  |
| Total deaths, first 41 weeks of year | 344, 153 | 345, 231 |
| Deaths per 1,000 population, first 41 weeks of year, annual rate | 11.7 | 11.8 |
| Average for 3 prior years. | 504 |  |
| Deaths under 1 year of age, first 41 weeks of year | 21, 548 | 20,566 |
| Data from industrial insurance companies: |  |  |
| Poiries in force-........ | 64, 520, 3204 | , 10,763 |
| Death claims per 1,000 policies in force, annual rate | 8.0 | 8.7 |
| Death claims per 1,000 policies, first 41 weeks of year, annual rate........- | 9.5 | 9.7 |

## PREVALENCE OF DISEASE

## No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

## UNITED STATES

## REPORTS FROM STATES FOR WEEK ENDED OCTOBER 18, 1941

## Summary

The number of reported cases of poliomyelitis dropped to 312 for the current week as compared with 429 for the preceding week. The largest numerical decrease occurred in the Middle Atlantic States, where the number of cases dropped from 146 to 97 cases, all three States in the area (New York, New Jerscy, and Pennsylvania) reporting decreased incidence. The largest increases were in Georgia ( 6 to 18 ) and Alabama ( 17 to 22). Only six States reported 15 or more cases, as follows (last week's figures in parentheses): New York 55 (79), Pennsylvania 30 (42), Alabama 22 (17), Georgia 18 (6), Tennessee 17 (16), Illinois 16 (25). The largest weekly number of cases (624) was reported for the week ended August 30.

A total of 1,131 cases of influenza was reported for the week as compared with 995 for the preceding week and with a 5 -year (1936-40) median of 717 for the corresponding week. Texas reported 529 cases, or about half of the total for the current week, while South Carolina reported 151 cases and Virginia 104. The disease has been slightly above the median expectancy continuously during the past summer, due to the unusually large number of cases reported in Texas.

While for the country as a whole diphtheria is below the median expectancy, considerably larger numbers of cases as compared with last year are being reported from the South Atlantic and South Central areas, where the incidence has notably increased during recent weeks. Of 662 cases reported currently, 490 , or 74 percent, occurred in these areas, of which 101 cases were in North Carolina.

Of 110 cases of endemic typhus fever, 46 were reported in Georgia and 29 in Texas.

The crude death rate for the current week for 88 large cities in the United States is 10.6 per 1,000 population as compared with 10.9 for both the preceding week and the 3 -year average for the corresponding week. The cumulative rate to date, first 42 weeks, is 11.7 , the same as for the corresponding period last year.

Telographic morbidity reports from State health officers for the week onded October 18, 1941, and comparison with corresponding week of 1940 and 5 -year modian
In these tables a zero indicates a definite report, while leaders imply that, although none were reported, cases may have cocurred.


See footnotes at end of table.

Telagraphic morbidity reports from State health officers for the week ended October 18, 1941, and comparison with corresponding week of 1940 and 5 -year medianContinued


See footnotes at end of table.

Telegraphic morbidity reporits from State health officers for the week ended October 18, 1941, and comparison with corresponding roeek of 1940-Continued

| Division and State | Whoopingcongh |  | Division and State | Whoopingcongh |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Week ended- |  |  | Week ended- |  |
|  | Oct. | $\begin{aligned} & \text { Oct. } \\ & \text { 19, } 1940 \end{aligned}$ |  | Oct. | Oct. <br> 19, 1940 |
| NEW ENG. | 97394033 | 811175688 | so. ATL.-continued | 621925 | ${ }_{9}^{22}$ |
| New Hempshire. |  |  | South Carolina ${ }^{\text {2 }}$ |  |  |
| Vermont.- |  |  | Georgia ${ }^{\text {2 }}$ |  |  |
| Massachusetts |  |  | Florida ${ }^{\text {a }}$ |  |  |
| Connecticut....- |  |  | E. SO. CEN. |  |  |
| MID. ATL. |  |  | Kentucky --. | 40 | 5031 |
| New York ${ }^{2}$. | $\begin{aligned} & 287 \\ & 143 \\ & 233 \end{aligned}$ | $\begin{aligned} & 329 \\ & 123 \\ & 558 \end{aligned}$ | Alabama ${ }^{2}$ <br> Mississippi $\qquad$ | 33 16 |  |
| Now Jersey -- |  |  |  |  |  |
| Pennsylvania.--.----- |  |  |  |  |  |
| E. NO. CEN. | 22614190233231 |  |  | 153 | 12 |
|  |  | 201 |  |  |  |
| Ilinois ${ }^{3}$ |  | 149 | Oklahoma. | 11 | 12 |
| Michigan ${ }^{\text {a }}$ |  | 371 | Texas ${ }^{2}$... | 9314 | 119 |
| Wisconsin.- |  | 113 |  |  |  |
| W. NO. CEN. |  |  | Montana..... |  | 3 |
| Minnesota |  |  | Idaho-...- | 5 | 4 |
| lowa | 15 | 16 | Colorado. | 69 | 13 |
| Missouri. | $3{ }^{3}$ | 7 | New Mexico. | 21 | 17 |
| North Dakota | 12 | 34 | Arizona. | 5 | 12 |
| South Dakota | 10 | 0 | Utah ${ }^{\text {4 }}$ | 18 | 7 |
| Nebraska- | 6 | 2 | Nevada. | 5 | 0 |
| So. ATL. | 032 |  | Pacticic |  |  |
|  |  |  | Washington. | 4334181 | 8013 |
| Delaware -- |  | 3 | Oregon.-. |  |  |
| Maryland 4 - |  | 93 | California ${ }^{2}$ |  | 249 |
| Dist. of Col | 251716112 | 2313599 | Total | 2,807 | 3,329 |
| West Virginia |  |  |  |  |  |
| North Carolina ${ }^{2}$ |  |  | 42 weeks. | 174, 520 | 131, 501 |

[^12]
## WEEELI REPORTS FROM CITIES

City reports for week ended October 4, 1941
This table lists the reports from 128 cities of moxe than 10,000 popalation distriberted throughont the United States, and ropresents a cross section of the current urban incidance of the diseases inciuded in the table.


City reports for sbeek ended October 4, 1941-Continued

| :State and city | $\begin{aligned} & \text { Diph } \\ & \text { theria } \\ & \text { cases } \end{aligned}$ | Influensa |  | Mensles cases | Pnoumonia deaths | $\begin{aligned} & \text { Sear- } \\ & \text { lot } \\ & \text { fover } \end{aligned}$ | $\left\lvert\, \begin{gathered} \text { Smanall } \\ \text { poxi } \\ \text { ceses } \end{gathered}\right.$ | Tubercalosis deaths | Tyfever cases | Whoopcough cases | $\begin{aligned} & \text { Deaths, } \\ & \text { call } \\ & \text { causes } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Cases | Deaths |  |  |  |  |  |  |  |  |
| Missouri: |  |  |  |  |  |  |  |  |  |  |  |
| Kanses City ...- | 0 | --...- | 0 |  |  | 4 | 0 |  | 0 | 1 | 104 |
| St. Jooeph...... | 0 |  | 0 | 1 | . 2 | 7 | 0 | 0 | 0 | 0 | 28 339 |
| North Dekota: |  |  |  |  |  |  |  |  |  |  |  |
| Fargo...... | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| Grand Forls.-- | 0 |  |  | 0 |  | 0 | 0 |  | 0 | 0 |  |
| Minot..........- | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 |
| South Dakota: |  |  |  |  |  |  | 0 |  | 0 | 1 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Lincoln......... | 0 |  |  | 0 |  | 0 | 0 |  | 0 | 1 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Kansas: |  |  |  |  |  |  |  |  | 0 |  |  |
| Lawrence | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 2 | 0 | 0 3 | $3{ }^{3}$ |
| Wichita-...------ | 0 |  | 0 | 0 | 2 | 8 | 0 | 1 | 0 | 1 | 30 |
| Delaware: |  |  |  |  |  |  |  |  |  |  |  |
| Wilmington...- 0 $-\ldots-$. 0 0 2 2 0 0 0 1 24 |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Baltimore | 1 |  | 0 | 13 | 5 | 8 | 0 | 8 | 0 | 45 | 192 |
| Cumberland...- | 0 |  | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 12 |
| Dist. of Columbia - | 7 |  | 0 | 0 3 | 6 | 17 | 0 | 2 | 2 | 15 | 144 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Lynchburg....- | 2 |  | 0 | 0 | 1 | 0 | 0 |  |  |  | 16 |
| Norfolk.......-- | 1 |  | 0 | 1 | 2 2 | 3 1 | 0 | 0 3 | 0 | 2 0 | 24 49 |
| Richmond... | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Charleston.- | 0 |  | 0 | 1 | 2 | 1 | 0 | 0 | 1 | 1 | 12 |
| Wuntington...-- | 0 |  | 0 | 0 1 | 0 | 0 | 0 | 0 | 1 0 | 0 | 26 |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| South Carolina: |  |  |  |  |  |  |  |  |  |  |  |
| Charleston. | 0 | 6 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 1 | 10 |
| Florence | 0 |  | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | $\stackrel{5}{21}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Brunswick. | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 3 |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Miami | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 19 |
| St. Petersburg. <br> Tampa | 0 |  | 0 | 0 | 0 |  | 0 | 0 | 0 | 4 | 23 |
| Kentucky: 0 e 0 en 0 |  |  |  |  |  |  |  |  |  |  |  |
| Ashland.......- | 0 |  | 0 | 0 | 0 | 2 | 0 | 1 | 0 |  | 12 |
| Covington....-- | 0 |  | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 8 13 |
| Lexington.....- | 0 |  | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 13 |
|  |  |  |  |  |  |  |  | 2 |  |  | 25 |
| Memphis-.-...-- | 0 |  | 0 | 0 | 2 | 1 | 0 | 3 | 1 | $\frac{1}{3}$ | 76 |
|  |  |  |  |  |  |  |  |  |  |  | 45 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Mobile......-.- | 1 |  | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 23 |
| Montgomery --- | 2 |  |  | 0 |  | 5 |  |  | 0 | 1 |  |
| Arkansas: ' |  |  |  |  |  |  |  |  |  |  |  |
| Fort Smith. | 0 |  |  | 0 |  | 0 | 0 |  | 0 | 1 |  |
| Little Rock-...- | 0 | 8 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 30 |
| Louisiana: | 1 | 1 | 0 | 0 | 13 | 0 | 0 | 8 | 1 | 1 |  |
| Shreveport...-- | 1 |  | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 | 34 |
| Oklahoma: |  |  |  |  |  |  |  |  |  |  |  |
| Oklahoma City | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 29 |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Dallas. | 9 |  |  | 2 | 1 | 5 | 0 | 1 | 0 | 0 | 44 |
| Gort Galveston.-...- | 0 |  | 0 | 0 | 3 | 0 | 0 | 2 | 0 | 0 | 16 |
| Houston.. | 0 |  | 0 | 0 | 3 | 0 | 0 | 5 | 0 | 8 | 73 55 |
| San Antonio.-. | 0 | 2 | 0 | 0 | 6 | 0 | 0 |  |  |  | 55 |

City reports for week ended October 4, 1941-Continued


Dengue.-Cases: Charleston, S. C., 1.
Encephalitis, epidemic or lethargic.-Cases: Minneapolis, 1; St. Paul, 1; Wichita, 1; Norfolk, 1. Deaths: New York, 1; Minneapolis, 3; Topeka, 1; Wichita, 1.
Pellagra.-Cases: Charleston, S. C., 1; Savannah, 2; San Antonio, 1.
Typhus feper.-Cases: New York, 2; Savannah, 2; Nashville, 1; Birmingham, 2; New Orleans, 2; Dallas, 2; San Antonio, 1.

Rates (annual basis) per 100,000 population for a group of 89 selected cities (population, 1940, 33,902,982)

| Period | Diphtheria cases | Infumesa |  | Measles cases | Pnenmonia deaths | $\begin{aligned} & \text { Scar- } \\ & \text { fever } \\ & \text { ceases } \end{aligned}$ | $\begin{aligned} & \text { Small- } \\ & \text { pox } \\ & \text { cases } \end{aligned}$ | Tuber culosis deaths | Typhoid fever cases |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Cases | Deeths |  |  |  |  |  |  |  |
| Week ended Oct. 4, 1941. | 12.00 | 8. 46 | 0.62 | 21.07 | 35. 53 | 60.14 | 0.00 | 45.83 | 4.77 | 166. 72 |
| Average for week, 1936-40... | 17.57 | 8.71 | 2.80 | 34.51 | 52.23 | 71.66 | . 47 | 49.12 | 8.24 | 151.10 |

## TERRITORIES AND POSSESSIONS

## HAWAII TERRITORY

Plague (rodent).-A rat found on September 12, 1941, and another found on September 18, both in the Paauhau area of Hamakua District, Island of Hawaii, T. H., have been proved positive for plague.

## FOREIGN REPORTS

## CANADA

Provinces-Communicable diseases-Week ended September 18, 1941.-During the week ended September 13, 1941, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada as follows:

| Disease | Prince <br> Edward <br> Island | Nova Scotia | New Brunswick | $\begin{aligned} & \text { Que- } \\ & \text { bec } \end{aligned}$ | Ontario | Mani- tobs | $\begin{gathered} \text { Sas- } \\ \text { catch- } \\ \text { ewan } \end{gathered}$ | $\underset{\text { berta }}{\text { Al- }}$ | $\left\lvert\, \begin{gathered} \text { British } \\ \text { Colum- } \\ \text { Bia } \end{gathered}\right.$ | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cerebrospinal meningitis. |  | 4 |  |  | 4 | 1 |  |  | 2 | 11 |
| Chickenpox |  | 5 |  | 11 | 37 | 4 | 3 |  | 15 | 75 |
| Diphtheria | 1 | 11 | 1 | 35 | 7 | 2 | 2 |  |  | 59 |
| Dysentery. |  |  |  | 16 |  |  |  |  | 7 | 23 |
| Influenza- |  | 3 |  |  |  |  |  |  |  | 3 |
| Lethargic encephalitis. |  |  |  |  |  | 10 | 161 | 5 |  | 76 |
| Measles................. |  |  |  | 47 | 12 | 2 | 16 | 8 | 17 | 97 |
| Mumps.. |  |  |  | 55 | 28 | 14 | 21 | 4 | 12 | 134 |
| Pneumonis, |  | 2 |  |  | 3 | 1 |  |  | 3 | 9 |
| Poliomyelitis |  | 3 | 24 | 4 | 4 | 31 | 3 | 17 | 5 | 91 |
| Scarlet fever |  | 3 | 2 | 65 | 92 | 8 | 6 | 13 | 3 | 192 |
| Trachoma |  |  |  |  |  |  |  |  | 1 | 14 |
| Tuberculosis. | 2. | 8 | 12 | 61 | 44 | 8 | 7 |  |  | 142 |
| Typhoid and paratyphoid fever. |  |  |  | 51 | 6 | 1 | 74 | 4 | 3 | 138 |
| Whooping cough... | 6 | 16 | 5 | 89 | 105 |  | 7 | 3 | 22 | 253 |

${ }^{1}$ Encephalomyelitis.

## JAMAICA

Communicable diseases-4 weèks ended September 27, 1941.—During the 4 weeks ended September 27, 1941, cases of certain communicable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

| Disease | Kingston | Other localities | Disease | Kingston | Other localities |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Chickenpox | 3 | 7 | Erysipelas.. | 1 |  |
| Diphtheria. | 1 |  | Tuberculosis. | 26 | 79 |
| Dysentery-....... | 2 | 1 | Typhoid fever.-. | 16 | 16 |

# repports of cholera, plague, smallpox, typhus fever, and YELLOW FEVER RECEIVED DURING THE CURRENT WEEK 

Nore.-Only those places are included which had not previously reported any of the above-named discases, except yellow fever, during the current year. All reports of yellow fever are published currently. A cumulative table showing the reported prevalence of theee discases for the year to date is published in the Public Hizalfi Reports for the last Friday of each month.

## Plague

Chile-Valparaiso.-According to a cablegram dated October 11, 1941, received from the Director of Health of Chile, 1 case of plague was reported in Valparaiso.

Peru-Lima Department.-During the month of August 1941, plague was reported in Lima Department, Peru, as follows: Huaura, 1 case, 1 death; Sayan, 1 case, 1 death.

## Typhus Fever

Puerto Rico-San Juan.-During the week ended September 13, 1941, 1 case of typhus fever was reported in San Juan, Puerto Rico.

## Yellow Fever

Colombia.-Yellow fever has been reported. in Colombia as follows: Santander Department-Bolivar, August 26, 1 death, August 30, 1 death; Intendencia of Meta-Villavicencio, August 31, 1 death.

## COURT DECISION ON PUBLIC HEALTH

Restoration to employment under local board of health.-(Ohio Supreme Court; State ex rel. West v. Feyler et al., Board of Health, 34 N.E.2d 441; decided May 14, 1941.) In a mandamus action against the board of health of a city health district in Ohio, the relator sought to be restored to his employment as plumbing inspector and to his position as registrar of vital statistics. There was no statutory office or position under a local board of health known as "plumbing inspector" or "inspector of plumbing." Regarding the office of local registrar of vital statistics, section 201 of the General Code provided in part: "*** and in cities the city board of health shall appoint a local registrar of vital statistics, and each shall be subject to the rules and regulations of the state registrar, the provisions of this chapter and to the penalties provided by law." Other General Code sections which were relevant to the matter were sections 4408 and 4411-1 which provided, respectively, as follows: "Sec. 4408. In any city health district, the board of health or person or persons performing the duties of a board of health shall appoint for whole or part time service a health commissioner and may appoint such public
health nurses, clerks, physicians, and other persons as they deem necessary." "Sec. 4411-1. The board shall determine the duties and fix the salaries of its employees * * *."

The Supreme Court of Ohio said that it would be apparent from reading the two latter sections that the respondent board (a) was authorized, but not required, to make appointments in addition to a whole or part time health commissioner and (b) had the power to determine the duties of all employees. In deciding in favor of the board of health the court stated that, as the appointment of relator, the fixing of his duties, and his term of office were matters of discretion resting with the board, there was no clear legal duty on the part of the board to make such appointment or to continue relator's employment. Under the above-mentioned section 201 there was a duty to appoint a local registrar of vital statistics but it was pointed out that no term of office was provided and, as there was no claim of a civil service status, the court said that there was no clear legal duty resting upon the respondents to retain relator in or reappoint him to such office. Furthermore, whether the duties of plumbing inspector and those of local registrar should be combined and discharged by one person was said to be a matter discretionary with the appointing power.


[^0]:    ${ }^{1}$ From the Environmental Sanitation Section of the Division of Public Health Methods, National Institute of Health. Acknowledgment is made to Rollo H. Britten, senior statistician, and James S. Fitzgerald for assistance in the preparation of this report, and to Margaret T. Comstock for much of the statistical tabulation. Assistance in the preparation of the National Health Survey data was furnished by the personnel of Work Projects Administration Official Projects Nos. 712159-658/9999 and 765-23-3-10.

[^1]:    ${ }^{2}$ The National Health Survey was a house-to-house canvass of about 700,000 families in 83 cities in 18 States, representative generally of the urban population as a whole. About $\mathbf{3 7 , 0 0 0}$ families in rural areas were also canvassed, but these were not considered to be sufficiently representative of the rural population of the United States to be included in this article. The survey followed established techniques, information being obtained by trained enumerators from the housewife or other responsible member of the household.

    For a more detailed discussion of the scope, method, and general definitions, see Perrott, George St. J., Tibbitts, Clark, and Britten, Rollo H.: The National Health Stirvey: Scope and method of a Nation-wide canvass of sickness in relation to its social and economic setting. Pub. Health Rep., 54: 1663 (1939). Reprint 2008.

    For general rates of illness aceording to several different measures see Britten, Rollo H., Collins, Selwyn D., and Fitzgerald, James 8.: The National Health Survey: Some general findings as to disease, accidents, and impairments in urban areas. Pub. Health Rep., 55: 444 (1940.) Reprint 2143.
    ${ }^{2}$ Based on release of U. S. Census Bureau, July 23, 1941 (Series P-3, No. 15).

[^2]:    4 Because of the known impossibility of complete enumeration of illness and chronic disease, this estimate and those to follow are to be considered as minimum. However, it is probable that there was more complete enumeration of illness and disease among women, since the housewife, who was usually the family informant, tended to report more fully for herself than for other members of the family.

[^3]:    ${ }^{5}$ See Sydenstricker, Edgar, and Britten, Rollo H.: The physical impairments of adult life. Am. J. Hyg., 11:73-135 (January 1930).
    6 Love, Albert B., and Davenport, Charles B.: Defects found in drafted men. War Department, U. S. Government Printing Office, 1920.
    ${ }^{7}$ The physical examinations were made by about 4,648 local boards with more than that number of examining physicians. Many of the men were also examined by medical advisory boards, with a total number of 9,577 examining physicians. In addition, they were examined by thousands of medical officers at the various Army cantonments, camps, and posts.

[^4]:    ${ }^{8}$ For a more complete description of the statistical methods used in making the estimates, see Britten, Rollo H., and Perrott, George St. J.: Summary of physical findings on men drafted in the World War. Pub. Health Rep., 56: 41 (Jan. 10, 1941).

    - Illness among employed and unemployed workers. Preliminary Reports, The National Health Survey. Sickness and Medical Care Series. Bull. No. 7 (1938).
    Hailman, David E.: The prevalence of disabling illness among male and female workers and housewives. Pub. Health Bull. No. 260, U. S. Government Printing Office, 1941.

[^5]:    ${ }^{1}$ Data based on a 0.5 percent random sample of 351,440 white and colored males aged 35-64 years enumerated in the National Health Survey.
    ${ }^{2}$ This group is not considered to be in the labor market and is therefore not included in this table.
    ${ }^{3}$ "Chronic" refers to illnesses the disease symptoms of which had been noticed for at least 3 months be fore the day of the visit. All other illnesses are classified as "acute."
    For a list of the most important major chronic diseases and impairments see table 5. The division into major and minor chronic disease is based largely upon the proportion of disabling cases among all recorded cases of a particular disease or disease group.
    Disability is defined as inability to work, attend school, care for home, or carry on other usual pursuits by reason of disease, accident, or physical or mental impairment.

    - For a list of the most important minor chronic disesses see table 5.

[^6]:    ${ }^{1}$ Data based on a 0.5 percent random sample of 430,344 white and colored females between the ages of 20-34 years and 450,943 between the ages of 35-64 years enumerated in the National Health Survey.
    ${ }^{2}$ Includes girls $15-19$ years of age in order to get a sufficient sample.
    3 This group is not considered to be in the labor market or able to carry on usual housewife duties and is therefore not included in this table.
    " "Chronic" refers to illnesses the disease symptoms of which had been noticed for at least 3 months before the day of the visit. All other illnesses are classified as "acute."
    For a list of the most important major chronic diseases and impairments see table 5. The division into major and minor chronic disease is based largely upon the proportion of disabling cases among all recorded cases of a particular disease or disease group.
    Disability is defined as ins bility to work, attend school, care for home, or carry on other usual pursuits by reason of disease, accident, or physical or mental impairment.
    ${ }^{6}$ For a list of the most important minor chronic diseases, see table 5.

    - These rates include a large number of confinements.
    ${ }^{10}$ For confirmation of some of these comparisons, see article by David E. Hailman listed in footnote 9.

[^7]:    ${ }^{11}$ The relative importance of certain of these diseases as a cause of death is indicated in the following table:

[^8]:    ${ }^{12}$ Whitney, Jessamine S.: High points of attack on tuberculosis. Trans. of the Thirteenth Annual Meeting of the National Tuberculosis Assoc., 1934, p. 151.
    ${ }^{12}$ Vonderlehr, R. A., and Usilton, Lida J.: The chance of acquiring syphilis and the frequency of its disastrous outcome: Ven. Dis. Inf., 19: 396 (November 1938). Reprint 99.

[^9]:    ${ }^{14}$ Keller, Alvin E., Leathers, U. S., and Densen, Paul M.: The results of recent studies of hookworm in eight Southern States. Am. J. Trop. Med., 20: 493 (July 1940).
    ${ }^{15}$ Based upon data reported in: Tuberculosis facilities in the United States. J. Am. Med. Assoc., 114: 771 and 1162 (1940).

[^10]:    1 From the National Institute of Health.

[^11]:    ${ }^{1}$ Mississippi, New York, and Pennsylvania excluded; New York City included.
    ${ }^{2}$ Mississippl excluded.
    ${ }^{3}$ Three year (1938-40) median.

[^12]:    ${ }^{1}$ New York City only.
    ${ }^{2}$ Typhus fever, week ended Oct. 18, 1941, 110 cases, as follows: New York, 2; North Carolina, 2; South Carolina, 2; Georgia, 46; Florida, 3; Tennessee, 7; Alabama, 9; Mississippi, 3; Louisiana, 6; Texas, 29; California, 1.
    ${ }_{3}$ Rocky Mountain spotted fever, week ended Oct. 18, 1941, 8 cases, as follows: Illinois, 2; Wyoming, 6 (delayed reports).
    4 Period ended earlier than Saturday.

