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FREQUENCY AND VOLUME OF HOSPITAL CARE FOR SPECIFIC DISEASES IN RELATION TO ALL ILLNESSES AMONG 9,000 FAMILIES, BASED ON NATION-WIDE PERIODIC CANVASSES, 1928-31 [1]—Continued

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CONTENTS

III. COMPARISON OF HOSPITALIZED ILLNESS AND GENERAL MORBIDITY

In view of the interest in hospital statistics as an index of sickness in the community, the age incidence of the two kinds of cases may be compared as well as the make-up of the total case load with respect to diagnosis.

Age incidence of hospital and total cases of illness.—It may be seen in figure 12 and table 4 that the age curves for hospitalized illness differ from those for all recorded illness in that (*a*) puerperal and female genital diseases are relatively more important in hospital practice, (*b*) there is less difference between the sexes in the frequency of hospital cases than in all cases for diagnoses common to males and females, and (*c*) the tendency of the rates to increase with age is slightly greater for all cases than for hospital cases.

With respect to surgical cases, the age curves for total and hospital cases appear to be more similar and this is confirmed by the fact that the percentage of cases that were hospitalized does not vary materially in the different ages; however, the percentages are consistently higher for females than males. With respect to nonsurgical cases, the largest difference between the curves for total and hospital cases is (*a*) the relatively larger peak among hospital cases for female genital and puerperal diagnoses, and (*b*) the absence of any consistent sex differ-

[1] The first two sections of this paper, Source and character of data, and Extent of hospital care as measured by various types of rates, were published in the Public Health Reports, 57: 1399-1427 (September 18, 1942).

ences in the incidence of hospital cases for diagnoses common to the two sexes, but a consistently higher incidence of total cases of the same diagnoses among adult females than males.

Since minor respiratory and minor digestive diseases constitute 42 percent of the total recorded illnesses in these families but only

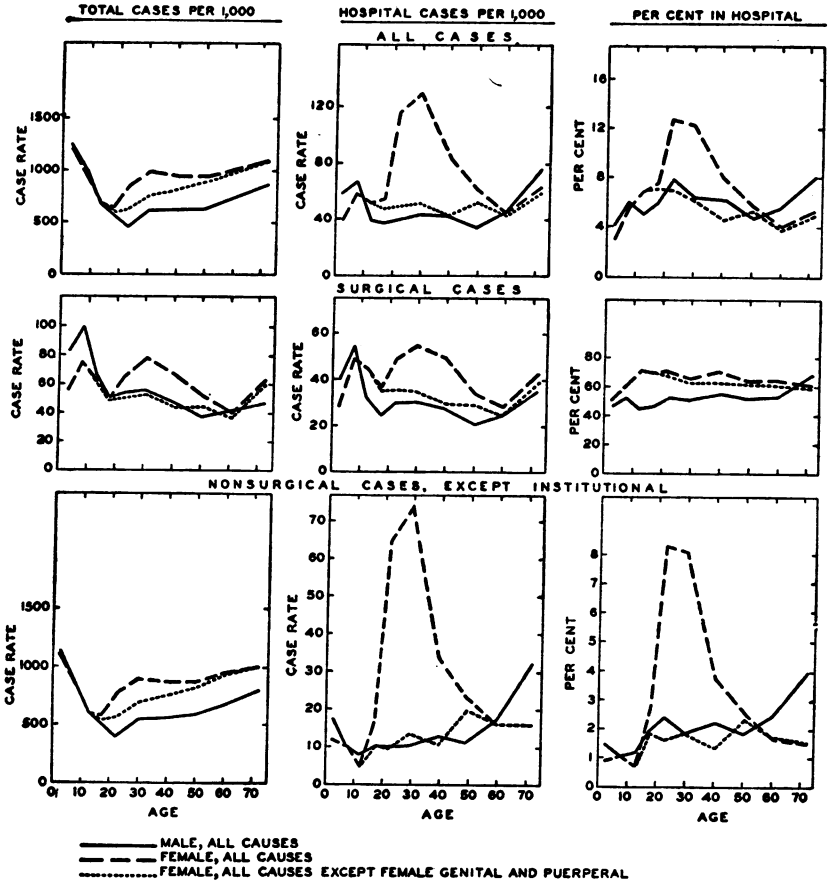

FIGURE 12.—Age incidence among males and females of total and hospital cases from all causes and the percentage of cases hospitalized—8,758 canvassed white families in 18 States during 12 consecutive months, 1928–31. (Total includes all except year-long cases; nonsurgical includes all except those in mental and tuberculosis hospitals and other sanatoriums and year-long cases. Scales are so made that the adjusted rate for all ages of both sexes represents an interval on the vertical rate scale that corresponds to 30 years on the horizontal age scale.)

about 2 percent of the hospital cases, curves have been plotted in figure 13 for total, bed and hospital cases of all diagnoses except minor respiratory and minor digestive diseases (table 5). As might be expected, the correspondence with the age curves of hospital cases is greater, particularly for bed cases; but there is still a relatively greater preponderance of deliveries and female genital diagnoses in the hospital data.

TABLE 4.—*Total and hospital case rates and percentage of cases hospitalized among surgical and nonsurgical cases of all causes at specific ages for each sex—8,758 canvasse white families in 18 States during 12 consecutive months, 1928–31*

Type of case	All ages [1]			Age									
	Number of cases	Adjusted [2]	Crude	Under 5	5–9	10–14	15–19	20–24	25–34	35–44	45–54	55–64	65 and over
	Total cases [3] per 1,000 population during year												
All cases:													
Both sexes	32,736	823	850	1,211	978	679	600	672	820	774	760	845	979
Male	14,589	720	772	1,240	1,000	684	562	454	610	617	625	723	851
Female	18,137	915	925	1,187	957	674	638	832	976	932	925	991	1,078
Female, except genital and puerperal	16,597	833	846	1,185	955	668	589	25	750	806	877	978	1,070
Surgical cases:													
Both sexes	2,439	60.4	63.3	68.2	88.0	62.8	49.5	59.9	68.2	56.8	43.3	41.4	57.1
Male	1,187	58.2	62.8	82.3	99.3	66.1	50.0	53.7	56.2	47.3	36.9	42.3	48.1
Female	1,252	62.0	63.8	54.0	77.0	59.5	49.2	64.5	77.8	66.4	51.1	40.4	64.2
Female, except genital and puerperal	1,068	52.4	54.4	53.3	77.0	59.5	47.9	49.8	52.5	44.4	44.5	37.4	60.6
Nonsurgical [4] except institutional:													
Both sexes	30,224	759	784	1,142	888	614	547	609	749	715	714	800	915
Male	13,370	660	708	1,157	899	617	509	400	552	567	586	677	794
Female	16,844	851	858	1,133	878	610	586	762	895	864	871	949	1,009
Female, except genital and puerperal	15,488	778	789	1,131	877	604	538	570	695	760	830	939	1,004
	Hospital cases [3] per 1,000 population during year												
All cases:													
Both sexes	2,341	61.6	60.7	49.7	62.6	44.7	45.2	83.1	92.6	62.6	45.1	44.8	68.1
Male	890	46.0	47.1	58.0	66.0	38.2	36.7	39.1	42.5	42.0	33.1	44.8	75.5
Female	1,447	74.5	73.7	39.9	59.4	51.2	53.8	115.1	129.7	83.4	59.8	44.8	62.4
Female, except genital and puerperal	956	48.6	48.7	39.9	59.4	51.2	46.6	48.2	50.6	41.3	51.1	41.9	58.8
Surgical cases:													
Both sexes	1,452	36.6	37.7	33.7	50.9	36.8	29.5	39.2	42.9	37.4	26.3	25.1	38.1
Male	618	30.8	32.7	39.5	53.9	30.4	23.6	29.1	29.6	26.9	20.1	23.6	34.3
Female	834	41.7	42.5	27.9	48.0	43.2	35.5	46.5	52.8	48.1	33.9	26.9	41.0
Female, except genital and puerperal	686	33.9	35.0	27.9	48.0	43.2	34.1	34.3	34.0	28.8	28.6	23.9	37.4
Nonsurgical [4] except institutional:													
Both sexes	816	22.8	21.2	15.6	10.3	6.3	13.4	41.5	47.0	23.3	16.7	17.0	23.0
Male	240	13.1	12.7	17.8	10.3	7.8	10.5	10.1	10.8	13.1	11.4	17.4	32.0
Female	572	30.4	29.1	11.9	10.4	4.9	16.4	64.5	73.8	33.5	23.2	16.4	16.0
Female, except genital and puerperal	229	12.3	11.7	11.9	10.4	4.9	10.5	9.8	13.6	10.8	19.9	16.4	16.0
	Percent of cases hospitalized												
All cases:													
Both sexes	------	7.5	7.2	4.1	6.4	6.6	7.6	12.4	11.3	8.1	5.9	5.3	7.0
Male	------	6.4	6.1	4.7	6.6	5.6	6.5	8.6	7.0	6.8	5.3	6.2	8.9
Female	------	8.1	8.0	3.4	6.2	7.6	8.5	13.9	13.3	8.9	6.5	4.5	5.8
Female, except genital and puerperal	------	5.8	5.8	3.4	6.2	7.7	7.9	7.7	6.7	5.1	5.8	4.3	5.5
Surgical cases:													
Both sexes	------	60.6	59.5	49.5	57.9	58.5	59.6	65.4	62.5	65.9	60.7	60.7	66.7
Male	------	53.0	52.1	48.1	54.3	46.1	47.4	54.2	52.6	56.7	54.4	55.9	71.4
Female	------	67.3	66.6	51.7	62.3	72.6	72.0	72.2	67.9	72.4	66.2	66.7	63.9
Female, except genital and puerperal	------	64.7	64.2	52.4	62.3	72.6	71.2	68.9	64.7	64.9	64.2	64.0	61.8
Nonsurgical [4] except institutional:													
Both sexes	------	3.0	2.7	1.4	1.2	1.0	2.5	6.8	6.3	3.3	2.3	2.1	2.5
Male	------	2.0	1.8	1.5	1.1	1.3	2.1	2.5	2.0	2.3	1.9	2.6	4.0
Female	------	3.6	3.4	1.1	1.2	.8	2.8	8.5	8.3	3.9	2.7	1.7	1.6
Female, except genital and puerperal	------	1.6	1.5	1.1	1.2	.8	1.9	1.7	2.0	1.4	2.4	1.7	1.6

[1] All ages includes a few of unknown age; both sexes includes a few of unknown sex.

[2] Rates per 1,000 population are adjusted by the direct method to the age distribution of the white population of the death registration States in 1930 as a standard population; this population is given for specific ages in table 1 of a preceding paper (4). Figures in the "adjusted" column for percentage of cases represent the percentage that the adjusted rate per 1,000 for hospital cases is of the adjusted rate for total cases.

[3] Total cases represent periods of illness of 1 day or longer (disabling or nondisabling) regardless of the number of diagnoses; that is, these totals for all causes are the sums of data for cases with sole or primary diagnoses. Cases with prior onset but causing illness during the study year are included.

Hospital cases include any of these cases that were in the hospital for 1 night or longer during the study year, except as stated in note 4 below.

[4] The few cases in a hospital throughout the study year are excluded from all data in this table (16 cases). All other nonsurgical cases in mental and tuberculosis hospitals and other sanatoriums (73 cases) are excluded from the nonsurgical cases only (total and hospital); 2 short surgical cases of this type were included as negligible. Thus the "all cases" which means surgical plus nonsurgical includes these 73 institutional cases.

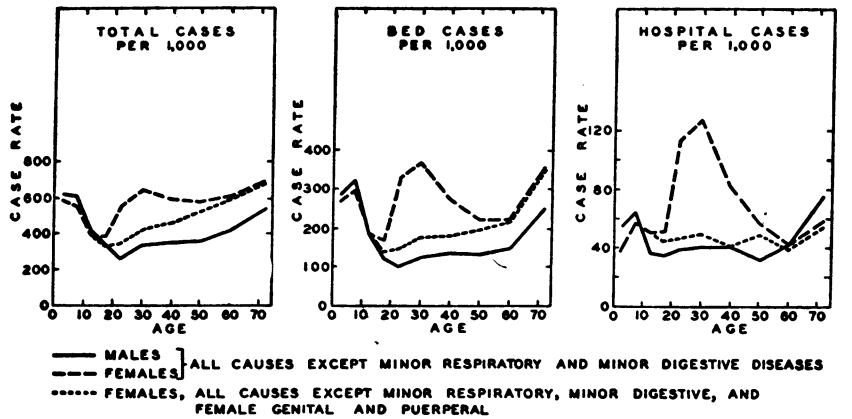

FIGURE 13.—Age incidence among males and females of total, bed, and hospital cases from all causes except minor respiratory and minor digestive diseases—8,758 canvassed white families in 18 States during 12 consecutive months, 1928–31. (Sole or primary diagnoses for all except year-long hospital cases. Scales are so made that the adjusted rate for all ages of both sexes represents an interval on the vertical rate scale that corresponds to 30 years on the horizontal age scale.)

TABLE 5.—*Total, bed and hospital case rates for all causes except minor respiratory and minor digestive diseases among persons of specific ages for each sex—8,758 canvassed white families in 18 States during 12 consecutive months, 1928–31*

[Sole or primary diagnoses]

Sex	All ages [1]			Age									
	Number of cases	Adjusted [2]	Crude	Under 5	5–9	10–14	15–19	20–24	25–34	35–44	45–54	55–64	65 and over
	Total cases [3] per 1,000 population during year												
Both sexes	19,077	488	495	598	582	397	360	427	511	467	457	506	626
Male	8,235	411	436	616	611	408	345	259	331	346	359	421	542
Female	10,835	556	553	582	554	387	376	550	645	588	576	607	691
Female, except genital and puerperal	9,295	474	474	580	552	381	327	343	419	462	528	594	683
	Bed cases [3] per 1,000 population during year												
Both sexes	8,882	225	231	276	307	184	144	229	260	202	172	182	310
Male	3,568	173	189	284	321	184	120	101	122	134	132	149	249
Female	5,308	269	271	267	294	185	167	323	362	271	221	221	357
Female, except genital and puerperal	4,091	205	209	267	294	182	136	145	174	176	193	214	349
	Hospital cases [3] per 1,000 population during year												
Both sexes	2,283	60.1	59.2	47.0	60.9	44.0	43.9	82.6	91.0	62.1	43.3	42.1	66.1
Male	761	44.5	45.6	55.1	64.6	37.3	35.4	39.1	40.4	41.0	32.0	42.3	75.5
Female	1,418	73.0	72.2	37.3	57.3	50.8	52.5	114.3	128.5	83.4	57.1	41.8	58.8
Female, except genital and puerperal	927	47.1	47.2	37.3	57.3	50.8	45.3	47.4	49.4	41.3	48.4	38.9	55.2

[1] All ages includes a few of unknown age; both sexes includes a few of unknown sex.
[2] Adjusted for age differences—see note 2 to table 4 for method.
[3] Total cases refer to disabling and nondisabling cases which lasted for 1 or more days, including cases with prior onset that extended into the study year. Bed cases include any of these cases that were in bed for 1 day or longer and hospital cases include any that were in a hospital for 1 night or longer during the study year. Cases in a hospital throughout the study year are excluded.

Figure 14 shows age curves for the five diagnoses that make up two-thirds of the hospital admissions; the data are shown by sex for the three diagnoses that are common to the two sexes (table 6). With

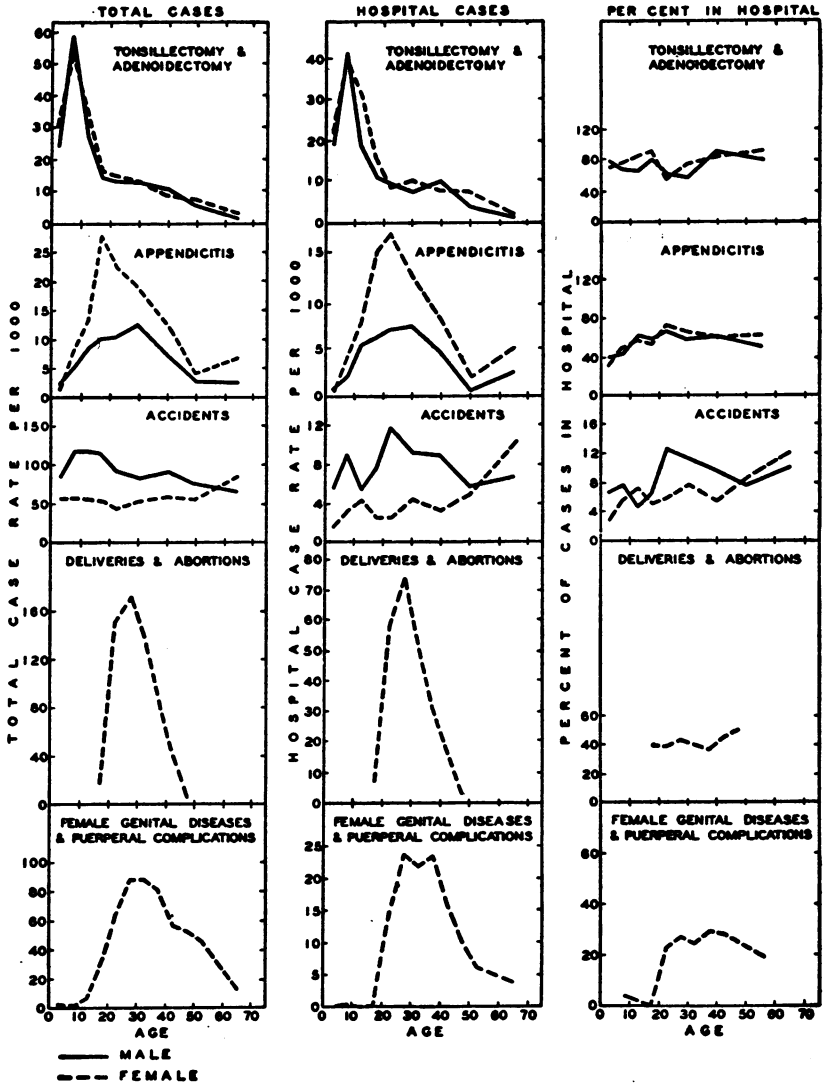

FIGURE 14.—Age incidence among males and females of total and hospital cases of certain diagnoses and the percentage of cases hospitalized—8,758 canvassed white families in 18 States during 12 consecutive months, 1928–31. (Sole, primary, and contributory diagnoses for all cases; scales are so made that the adjusted rate for all ages of both sexes represents an interval on the vertical rate scale that corresponds to 20 years on the horizontal age scale. Deliveries and female genital diseases are here shown in 5-year age groups, but table 6 shows only 10-year groups above 25 years.)

respect to tonsillectomy and appendicitis, the age and sex differences in the incidence of these diseases are similar for hospital cases and for all cases. This is verified by the fact that there are no large age or sex differences in the percentage of cases hospitalized. However,

TABLE 6.—*Total case rates, hospital case rates, and percentage of cases hospitalized for 5 diagnoses among persons of specific age and sex—8,758 canvassed white families in 18 States during 12 consecutive months, 1928–31*

[Sole, primary and contributory diagnoses]

Diagnosis and sex	All ages[1]			Age[4]								
	Number of cases	Adjusted[2]	Crude	Under 5	5–9	10–14	15–19	20–24	25–34	35–44	45–54	55 and over
		Total cases[3] per 1,000 population during year										
Tonsillectomy and adenoidectomy:												
Both sexes	841	18.0	21.9	27.0	55.1	31.1	15.4	14.2	13.1	9.9	6.0	2.4
Male	403	17.5	21.4	23.9	58.2	27.8	14.4	13.4	12.9	11.1	4.9	1.6
Female	438	18.6	22.5	30.6	52.2	34.4	16.4	14.7	13.3	8.8	7.3	3.2
Appendicitis:												
Both sexes	352	9.6	9.1	1.5	6.3	10.5	18.4	17.0	15.6	9.6	3.3	4.5
Male	120	6.6	6.4	1.8	5.0	8.3	9.8	10.1	12.1	7.0	2.7	2.4
Female	232	12.3	11.8	1.1	7.6	12.8	26.9	22.0	18.2	12.2	4.0	6.5
Accidents:												
Both sexes	2,889	74.0	75.0	70.9	85.9	85.8	81.6	64.2	65.6	74.4	66.2	74.5
Male	1,774	90.8	93.9	84.0	115.2	115.6	111.3	91.7	82.0	91.3	74.3	66.1
Female	1,115	58.1	56.8	57.7	57.3	55.6	51.9	44.1	53.4	57.3	56.4	82.9
Deliveries and abortions per 1,000 females: Female	910	48.0	46.4	------	-----	-----	18.4	151.8	153.8	65.1	4.0	-----
Female genital diseases and puerperal complications, per 1,000 females: Female	732	39.5	37.2	2.2	1.7	5.7	30.1	63.6	87.4	69.8	49.1	13.0
All other diagnoses:												
Surgical:												
Both sexes	829	21.6	21.5	33.6	17.1	10.3	14.4	16.5	22.7	22.8	24.8	28.7
Male	449	22.7	23.8	50.2	20.2	13.9	13.8	13.4	20.8	18.1	21.1	33.0
Female	380	20.5	19.4	16.4	14.2	6.6	15.1	18.8	24.1	27.4	29.2	24.4
Nonsurgical:												
Both sexes	27,733	693.1	719.5	1,139.3	850.2	557.6	461.3	462.0	598.4	626.6	673.2	880.6
Male	12,487	616.9	660.8	1,143.9	843.3	538.5	426.3	337.8	501.7	509.6	543.1	754.2
Female	15,234	767.9	776.2	1,139.0	857.0	577.0	496.4	552.7	670.2	744.8	832.7	1,008.1
		Hospital cases[3] per 1,000 population during year										
Tonsillectomy and adenoidectomy:												
Both sexes	636	13.53	16.50	20.32	39.72	24.08	13.11	8.49	9.04	8.77	5.37	2.02
Male	291	12.50	15.40	19.23	40.07	18.25	11.13	8.95	7.49	10.07	3.79	1.61
Female	345	14.64	17.58	21.61	39.38	30.00	15.10	8.16	10.19	7.46	7.30	2.44
Appendicitis:												
Both sexes	211	5.81	5.47	.54	2.97	6.35	10.16	12.27	9.93	5.90	1.19	3.64
Male	69	3.94	3.65	.71	2.13	5.22	5.89	6.71	7.08	4.36	.54	2.42
Female	142	7.64	7.23	.37	3.80	7.50	14.45	16.33	12.04	7.46	1.99	4.88
Accidents:												
Both sexes	209	5.67	5.42	3.45	5.77	4.60	4.92	6.13	6.03	5.73	5.07	8.09
Male	139	7.48	7.36	5.34	8.51	5.22	7.20	11.19	8.74	8.39	5.42	6.45
Female	70	4.08	3.57	1.49	3.11	3.97	2.63	2.45	4.01	3.05	4.65	9.76
Deliveries and abortions per 1,000 females: Female	367	19.34	18.70	------	-----	-----	7.22	59.59	63.62	25.08	1.99	-----
Female genital diseases and puerperal complications per 1,000 females: Female	175	9.23	8.92	------	.35	-----	-----	14.69	23.16	20.67	8.63	4.07
All other diagnoses:												
Surgical:												
Both sexes	421	11.88	10.92	12.33	7.35	3.94	4.92	10.38	12.41	13.32	16.11	21.04
Male	216	12.01	11.43	18.87	9.93	5.65	5.24	7.83	10.41	9.40	13.55	23.37
Female	205	11.79	10.44	5.59	4.84	2.21	4.60	12.24	13.90	17.28	19.26	18.70
Nonsurgical:												
Both sexes	642	17.72	16.66	20.50	13.65	9.85	14.10	13.69	16.13	16.02	18.50	32.38
Male	304	17.07	16.09	23.50	14.89	9.13	11.13	6.71	12.49	14.77	14.63	37.87
Female	333	18.22	16.97	15.65	12.44	10.59	17.07	18.78	18.84	17.28	23.24	26.83

[1] All ages includes a few of unknown age; both sexes includes a few of unknown sex.

[2] Adjusted for age differences—see note 2 to table 4 for method.

[3] Total cases refer to disabling and nondisabling cases which lasted for 1 or more days, including cases with prior onset that extended into the study year. Hospital cases include any of these cases that were in a hospital for 1 night or longer during the study year.

The rates per 1,000 for all ages (adjusted) for hospital cases for sole and primary diagnoses were: Tonsillectomy and adenoidectomy, 13.28; appendicitis, 5.18; accidents, 5.59; deliveries and abortions per 1,000 females, 19.29; female genital and puerperal complications per 1,000 females, 6.59.

[4] Percent in hospital plotted in fig. 14 in broader age groups. Age 45 years and over: Tonsillectomy and adenoidectomy, male 81.8, female 93.4; appendicitis, male 50.0, female 64.3; female genital diseases and puerperal complications, female 20.0. Age 40–49, deliveries and abortions, female 45.3. Age under 15, female genital, female 4.2. Deliveries and female genital diseases are shown here in 10-year groups above 25 years but are plotted in 5-year groups in fig. 14.

TABLE 6.—*Total case rates, hospital case rates, and percentage of cases hospitalized for 5 diagnoses among persons of specific age and sex—8,758 canvassed white families in 18 States during 12 consecutive months, 1928–31*—Continued

Diagnosis and sex	All ages			Age								
	Number of cases	Adjusted	Crude	Under 5	5–9	10–14	15–19	20–24	25–34	35–44	45–54	55 and over
		Percent of cases hospitalized										
Tonsillectomy and adenoidectomy:												
Both sexes		75.3	75.6	75.2	73.0	77.5	87.0	58.1	68.9	88.1	90.0	83.3
Male		71.4	72.2	79.4	69.3	66.7	81.0	61.5	58.1	90.9	77.8	100.0
Female		78.7	78.8	71.6	77.0	86.1	92.0	55.6	76.7	84.6	100.0	75.0
Appendicitis:												
Both sexes		60.4	59.9	37.5	47.2	60.4	55.4	72.2	63.6	61.4	36.4	81.8
Male		59.7	57.5	40.0	42.9	63.2	60.0	66.7	58.6	61.9	20.0	100.0
Female		62.1	61.2	33.3	50.0	58.6	53.7	74.1	66.1	61.1	50.0	75.0
Accidents:												
Both sexes		7.7	7.2	4.9	6.7	5.4	6.0	9.6	9.2	7.7	7.7	10.9
Male		8.2	7.8	6.4	7.4	4.5	6.5	12.2	10.7	9.2	7.3	9.8
Female		7.0	6.3	2.6	5.4	7.1	5.1	5.6	7.5	5.3	8.2	11.8
Deliveries and abortions: Female		40.3	40.3				39.3	39.2	41.4	38.5	50.0	
Female genital diseases and puerperal complications: Female		23.4	23.9		20.0			23.1	26.5	29.6	17.6	31.3
All other diagnoses:												
Surgical:												
Both sexes		54.9	50.8	36.8	42.9	38.3	34.1	62.9	54.7	58.5	65.1	73.2
Male		52.9	48.1	37.6	49.1	40.6	38.1	58.3	50.0	51.9	64.1	70.7
Female		57.6	53.9	34.1	34.1	33.3	30.4	65.2	57.7	63.0	65.9	76.7
Nonsurgical:												
Both sexes		2.6	2.3	1.8	1.6	1.8	3.1	3.0	2.7	2.6	2.7	3.7
Male		2.8	2.4	2.1	1.8	1.7	2.6	2.0	2.5	2.9	2.7	5.0
Female		2.4	2.2	1.4	1.5	1.8	3.4	3.4	2.8	2.3	2.8	2.7

these are diagnoses in which 60 to 75 percent of the cases are hospitalized so that the hospital cases make up a considerable share of the total cases under consideration. The age curves for all accidents and for hospitalized accidents are not so similar. Hospitalized accident cases show relatively higher rates for adult males than is true of total cases; this is confirmed by the curves of the percentage of cases hospitalized which show considerable excesses for males over females in the ages 20 to 45 years. For deliveries and female genital diseases, the curves for hospitalized and total cases are fairly similar except where the numbers of cases are small.

In this small study there are not enough hospital cases of the many other diagnoses to set up age curves that have any degree of reliability. However, table 7 shows in broad age groups total and hospital case rates and the proportions of cases that were hospitalized. The table shows considerable variation in the percentages hospitalized at the different ages, but the variability from one diagnosis to another is much greater than that from age to age for a given diagnosis. Thus, although the age curves of specific diagnoses may be similar for hospital and total cases, the age curves for all diagnoses vary because the make-up of the hospital case load is radically different from that of all cases of illness recorded in this family study.

Diagnosis distribution of hospital and total cases and days of illness.—The distribution of the hospital case load according to diagnosis is

TABLE 7.—*Total case rates, hospital case rates, and percentage of cases hospitalized for 14 diagnoses among persons in broad age groups—8,758 canvassed white families in 18 States during 12 consecutive months, 1928–31*

[Sole, primary and contributory diagnoses]

Diagnosis	All ages [1]	Age—			
		Under 5	5–14	15–44	45 and over
	Number of cases	Total cases [2] per 1,000 population during year			
Tonsillectomy and adenoidectomy	841	21.9	27.0	44.1	12.5	4.5
Pneumonia, all forms	316	8.2	23.6	8.2	3.5	7.2
Other respiratory diseases	12,399	321.7	496.5	320.0	278.2	286.0
Appendicitis	352	9.1	1.5	8.2	14.2	3.8
Other digestive diseases	3,189	82.7	163.3	55.9	64.5	105.8
Accidents	2,889	75.0	70.9	85.9	71.4	69.7
Deliveries and abortions per 1,000 females	910	46.4	-------	-------	101.2	2.2
Female genital diseases and puerperal complications per 1,000 females	732	37.2	2.2	3.5	68.6	32.9
Degenerative diseases	1,430	37.1	9.4	11.6	31.2	125.6
Diseases of bones and joints, malformations and early infancy	349	9.1	17.4	7.5	6.7	10.6
Communicable diseases	3,697	95.9	237.3	179.1	26.7	16.0
Tuberculosis, all forms	182	4.7	2.2	5.8	5.5	3.1
Nervous and mental diseases	556	14.4	10.5	7.2	17.0	23.0
All other diseases	6,444	167.2	212.8	139.0	153.2	210.4
		Hospital cases [2] per 1,000 population during year				
Tonsillectomy and adenoidectomy	636	16.50	20.32	32.77	9.62	3.95
Pneumonia, all forms	50	1.30	3.81	1.17	.72	.86
Other respiratory diseases	113	2.93	2.72	2.04	3.23	3.95
Appendicitis	211	5.47	.54	4.47	8.84	2.23
Other digestive diseases	154	4.00	2.72	1.07	4.30	9.10
Accidents	209	5.42	3.45	5.25	5.74	6.36
Deliveries and abortions per 1,000 females	367	18.70	-------	-------	40.73	1.10
Female genital diseases and puerperal complications per 1,000 females	175	8.92	-------	.19	17.23	6.58
Degenerative diseases	160	4.15	.36	.78	4.18	13.74
Diseases of bones and joints, malformations and early infancy	65	1.69	6.17	1.36	.84	.52
Communicable diseases	81	2.10	2.36	3.31	1.67	1.03
Tuberculosis, all forms	62	1.61	1.27	1.56	2.03	.86
Nervous and mental diseases	62	1.61	.91	.97	1.79	2.75
All other diseases	316	8.20	12.52	5.54	7.77	9.79
		Percent of cases hospitalized				
Tonsillectomy and adenoidectomy	-------	75.6	75.2	74.4	76.7	88.5
Pneumonia, all forms	-------	15.8	16.2	14.3	20.7	11.9
Other respiratory diseases	-------	.9	.5	.6	1.2	1.4
Appendicitis	-------	59.9	[3]	54.8	62.4	59.1
Other digestive diseases	-------	4.8	1.7	1.9	6.7	8.6
Accidents	-------	7.2	4.9	6.1	8.0	9.1
Deliveries and abortions	-------	40.3	-------	-------	40.3	[3]
Female genital diseases and puerperal complications	-------	23.9	-------	5.6	25.1	20.0
Degenerative diseases	-------	11.2	3.8	6.7	13.4	10.9
Diseases of bones and joints, malformations and early infancy	-------	18.6	35.4	18.2	12.5	4.8
Communicable diseases	-------	2.2	1.0	1.8	6.3	6.5
Tuberculosis, all forms	-------	34.1	[3]	26.7	37.0	27.8
Nervous and mental diseases	-------	11.2	8.6	13.5	10.5	11.9
All other diseases	-------	4.9	5.9	4.0	5.1	4.7
		Population (years of life)				
Both sexes	-------	38,544	5,513	10,283	16,779	5,822
Females	-------	19,627	2,684	5,162	8,937	2,736

[1] All ages includes a few of unknown age.

[2] Total cases refer to disabling and nondisabling cases which lasted for 1 or more days, including cases with prior onset that extended into the study year. Hospital cases include any of these cases that were in a hospital for 1 night or longer during the study year.

[3] Less than 15 total cases and no percentage computed.

TABLE 8.—*Distribution according to diagnosis of hospital, bed, disabling, and sick cases and days—8,758 canvassed white families in 18 States during 12 consecutive months, 1928–31*

[Sole or primary diagnoses, except institutional cases and days [1]]

Diagnosis	Percentage due to each diagnosis							
	Hospital	Bed	Disabling	Sick [2]	Hospital	Bed	Disabling	Sick [2]
	All cases				All cases except minor respiratory and minor digestive diseases [3]			
All causes	100	100	100	100	100	100	100	100
Tonsillectomy and adenoidectomy	27.5	4.8	4.1	2.5	28.2	9.1	7.4	4.3
Pneumonia	1.5	1.6	1.4	.8	1.6	3.0	2.5	1.4
Minor respiratory diseases	1.5	40.2	38.3	34.7				
Other respiratory diseases	1.9	2.1	2.2	2.6	1.9	4.0	4.0	4.5
Appendicitis	8.3	1.7	1.4	1.0	8.5	3.2	2.6	1.7
Minor digestive diseases	.8	6.8	6.6	7.1				
Other digestive diseases	5.1	2.0	2.0	2.2	5.2	3.9	3.6	3.7
Accidents	9.0	5.2	7.0	8.8	9.3	9.8	12.7	15.1
Deliveries and abortions	16.1	5.4	4.6	2.8	16.5	10.2	8.3	4.8
Female genital diseases and pregnancy complications	5.5	1.9	1.7	1.9	5.6	3.6	3.1	3.3
Degenerative diseases	5.4	3.2	3.2	3.7	5.5	6.1	5.8	6.4
Diseases of bones and joints, malformations and early infancy	2.5	.6	.7	1.0	2.5	1.1	1.2	1.7
Communicable diseases	3.1	13.4	14.2	11.2	3.2	25.2	25.7	19.2
Tuberculosis, all forms	.8	.4	.4	.4	.9	.7	.7	.7
Nervous and mental diseases	.9	1.1	1.1	1.4	.9	2.0	2.0	2.5
All other diseases	9.9	9.6	11.3	17.8	10.2	18.1	20.6	30.6
Number of cases, all causes	2,268	16,639	19,798	32,663	2,215	8,814	10,913	19,009
	All days				All days except for minor respiratory and minor digestive diseases			
All causes	100	100	100	100	100	100	100	100
Tonsillectomy and adenoidectomy	4.5	2.1	2.6	.7	4.6	2.8	3.4	.9
Pneumonia	2.2	3.4	2.5	.7	2.2	4.5	3.2	.8
Minor respiratory diseases	1.2	22.5	19.2	11.5				
Other respiratory diseases	1.1	1.9	2.2	4.8	1.1	2.5	2.8	5.7
Appendicitis	10.2	3.4	2.8	1.1	10.4	4.6	3.6	1.3
Minor digestive diseases	.6	3.0	2.9	4.0				
Other digestive diseases	7.1	3.2	3.1	5.4	7.3	4.4	3.9	6.4
Accidents	11.4	6.5	8.3	5.4	11.6	8.7	10.6	6.4
Deliveries and abortions	16.9	8.0	5.4	1.6	17.2	10.7	6.9	1.9
Female genital diseases and pregnancy complications	6.6	3.0	2.5	4.9	6.8	4.0	3.2	5.8
Degenerative diseases	9.3	11.2	10.2	14.5	9.5	15.0	13.1	17.1
Diseases of bones and joints, malformations and early infancy	8.1	3.4	2.3	4.0	8.2	4.5	3.0	4.7
Communicable diseases	5.2	12.3	17.5	8.0	5.3	16.5	22.5	9.4
Tuberculosis, all forms	2.0	3.6	4.7	3.2	2.1	4.8	6.1	3.7
Nervous and mental diseases	1.7	2.4	2.9	4.4	1.7	3.2	3.8	5.2
All other diseases	11.8	10.2	10.9	25.8	12.0	13.7	14.0	30.6
Number of days, all causes	25,339	130,703	272,265	1,002,001	24,879	97,300	212,013	847,148

[1] Sixteen cases in hospitals throughout the study year and 73 other cases in mental and tuberculosis hospitals and other sanatoriums are excluded from all categories of cases and days.

[2] Sick cases and days refer to the total of disabling and nondisabling cases and days.

[3] Minor respiratory diseases include coryza and other colds, bronchitis, cough, influenza, grippe, tonsillitis, quinsy, diseases of the pharynx and larynx, croup, and other sore throat. Minor digestive diseases include indigestion, gastritis and the like, other minor stomach diseases, biliousness and diarrhea and enteritis.

quite different from that of total cases and also from the distributions of disabling and bed cases reported in the survey (table 8). As noted above, one of the major differences is the large proportion of minor respiratory and minor digestive diseases in the nonhospital case load which is almost absent from the hospital case load; these two diagnosis

groups make up 47 percent of the bed cases but only 2 percent of the hospital cases recorded in this study. Therefore, the diagnosis distribution of hospital cases was compared with total disabling and bed cases exclusive of minor respiratory and minor digestive diseases. But there are still large differences in the hospital and other data. Of the hospital cases, exclusive of minor respiratory and minor digestive diseases, tonsillectomy constitutes 28 percent, as against 9 percent of the bed cases, 7 percent of the disabling cases and 4 percent of the total cases recorded in the survey. Similarly, deliveries and abortions constitute 16 percent of the hospital cases, 10 percent of the bed cases, 8 percent of the disabling cases, but only 5 percent of the total cases. Accidents, however, constitute a larger percentage of total cases (15 percent) than of hospital cases (9 percent), but about the same percentage of bed (10 percent) as of hospital cases. Communicable diseases are a much larger proportion of nonhospital than of hospital cases, constituting 3 percent of the hospital cases, 25 percent of bed cases, and 19 percent of total cases, exclusive of minor respiratory and minor digestive diseases. Appendicitis is also more important in hospital practice, constituting 8 percent of hospital cases, 3 percent of bed cases, and 2 percent of total cases. To summarize, the diagnoses that loom larger in hospital practice than in the general sickness picture are tonsillectomy, deliveries, appendicitis, other major digestive diseases, female genital diseases, and malformations and diseases of early infancy; while the percentages are different for days of hospital, bed, and disabling illness for the various diagnoses, the data indicate that these same diagnoses are relatively more important with respect to days of sickness spent in the hospital than in the total illness picture.

IV. COMPARISON OF HOSPITALIZED ILLNESS AND GENERAL MORTALITY

It is hardly necessary to compare graphically the age curve of hospital cases with that of mortality from all cases: (*a*) death rates vary greatly with age, but hospital admission rates vary relatively little except for the large peak of deliveries among females of the childbearing ages, (*b*) death rates increase in old age much more rapidly than hospital admission rates, (*c*) death rates are higher in the youngest ages than among older children, but hospital admission rates in this study are higher at 5–9 years than among children under 5 years, (*d*) death rates for males are higher than those for females at every age group, but hospital admission rates for males are slightly lower than those for females when deliveries and female genital diseases are excluded.

Proportions of cases and deaths that are hospitalized.—When deaths for the surveyed population are considered, it is necessary to bring in data for families that were observed for only part of the study year. A death was frequently the reason that the family had to

be dropped from the study in that it often led to the break-up of the family or its removal to another locality. Even when the households observed for only part of the year are combined with the full-time group, there were only 295 deaths in the whole surveyed population. Of these deaths, 37.6 percent were hospital cases, as compared with 32.7 percent for all deaths in the United States in 1936 (*32*), the earliest available year.[27] In view of this moderate agreement it seems feasible to compare for specific diagnoses the percentages of cases that were hospitalized in the surveyed population with the percentages of deaths that occurred in hospitals in the total United States. Al-

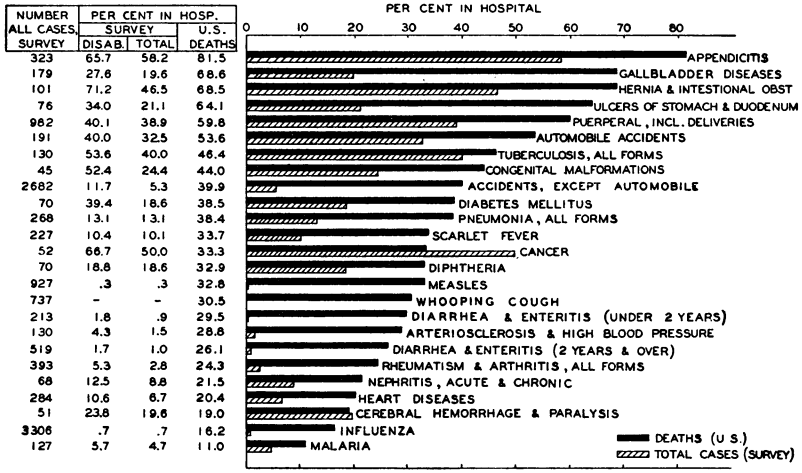

FIGURE 15.—Percentage of cases and of deaths that were hospital cases. (Sole or primary diagnoses with 45 or more total cases and 20 or more disabling cases in the family survey, 1928–31; deaths in the total United States, 1936; deaths in penal institutions are not counted as deaths in hospitals.)

though the comparison is a rough one, the data will help to indicate the kinds of cases that get into hospitals.

Of the total survey cases, 7.5 percent were hospitalized; of disabling cases 12.5 percent, and of the bed cases 14.9 percent were hospitalized, as compared with 37.6 percent of deaths for the survey and 32.7 for the total United States. Considering the specific causes shown in figure 15, it is seen that for every diagnosis except cancer and cerebral hemorrhage the percentage of deaths in hospitals was materially

[27] Of the 88 deaths in the surveyed group from cardiovascular renal diseases, 20 percent were hospital cases, as compared with 21 percent for the United States; for all other causes the figures were 45 percent for the survey and 41 percent for the United States. Of the other specific causes of death, none had as many as 30 deaths in the surveyed group and the percentages would be unreliable.

The figures for the United States and the family survey both exclude deaths in institutions other than hospitals, such as jails, penitentiaries, and homes for the blind, deaf, and aged. A fatal hospital case in the survey means one that was in a hospital within the survey year but may have died after discharge from the hospital; the actual place of death was not available but it may be assumed that most of such cases died in hospitals.

The percentage of deaths that occurred in hospitals (public general) of Ontario, Canada (*31*), is available back to 1900. In that year 5.0 percent of all deaths occurred in these hospitals; in 1910, 10.0 percent; in 1920, 16.5 percent; in 1930, 29.5 percent; in 1936, 29.7 percent; and in 1938, 31.5 percent.

larger than the percentage of the total cases. Although the excess in the percentage for deaths over that for cases is large for most of the diagnoses, it is less for appendicitis, hernia, and tuberculosis than for other causes. Measles, whooping cough, and diarrhea and enteritis show very small percentages of cases hospitalized, but 26 to 33 percent of the deaths were in hospitals.

Although not shown graphically, there is given at the left of the chart the percentage of disabling cases of each diagnosis that were hospitalized. These percentages more nearly approximate those for deaths, but for most of the diagnoses the proportion of deaths in hospitals is larger than the proportion of disabling cases that were hospitalized. Thus, the data for specific causes indicate that hospital cases include larger proportions of the severe cases that terminate fatally.

Surgical and nonsurgical treatment in relation to hospitalization and case fatality.—No data are available on deaths among surgical and nonsurgical patients in all hospitals in the United States. However, the 295 deaths in the surveyed population can be classified according to the type of treatment received. Table 9 shows by sex and age the proportions of surgical and nonsurgical fatal cases that had been in a hospital. Of the 38 deaths of surgically treated patients 95 percent had been hospitalized, but of the 257 deaths of nonsurgical patients only 29 percent had been hospitalized. The much higher percentages hospitalized among fatal surgical cases is true of both males and females and for the three age groups, although the numbers involved are very small. Of the total surgical cases, 60 percent were hospitalized, but of the fatal surgical cases 95 percent were hospitalized. Thus the factor of severity plus the indication that surgery is required brings practically all such cases to the hospital.

TABLE 9.—*Percentage of all fatal cases (deaths) from all causes that were hospital cases—295 deaths among 42,780 years of life for canvassed white families in 18 States during 3 to 12 consecutive months, 1928–31*

Type of case	Percentage of fatal cases (deaths) that were hospital cases						Total number of all fatal cases (deaths)				
	All ages			Both sexes			All ages [1]		Both sexes		
	Both sexes	Male	Female	Under 20	20–44	45 and over	Male	Female	Under 20	20–44	45 and over
All fatal cases	37.6	43.5	30.6	41.8	58.0	28.5	161	134	98	50	144
Fatal surgical cases	94.7	95.0	94.5	90.0	100.0	94.1	20	18	10	11	17
Fatal nonsurgical cases	29.2	36.2	20.7	36.4	46.2	19.7	141	116	88	39	127

[1] All ages includes 3 deaths of nonsurgical patients of unknown age; 4 deaths of unknown sex (under 1 year) were allocated 2 to male and 2 to female; 1 death of unknown sex and age was allocated to female.

Table 10 shows the percentage of surgical and nonsurgical hospital cases in this study that terminated fatally. Among the 2,623 hos-

TABLE 10.—*Percentage of hospital cases that were fatal—2,623 hospital cases among 42,780 years of life for canvassed white families in 18 States during 8 to 12 consecutive months, 1928–31*

Type of case	All ages [1]				Both sexes, all causes				
	All causes			Female, all except genital and puerperal	Under 5	5–19	20–44	45–64	65 and over
	Both sexes	Male	Female						
	Percentage of hospital cases that were fatal								
Total	4.2	7.0	2.5	3.4	7.7	2.3	2.4	7.3	29.1
Surgical	2.3	2.8	1.8	2.0	2.0	.8	1.8	5.7	20.0
Nonsurgical	7.3	15.9	3.4	6.8	18.6	7.3	3.1	9.4	38.5
	Total number of hospital cases								
Total	2,623	994	1,629	1,099	298	787	1,194	247	79
Surgical	1,599	674	925	767	196	609	605	141	40
Nonsurgical	1,024	320	704	323	102	178	589	106	39

[1] All ages includes a few of unknown age; 4 cases (2 fatal) under 1 year of age and of unknown sex were allocated equally to male and female; 1 nonfatal case 45–64 years of age and of unknown sex was allocated to female.

pitalized cases for the full- and part-time families, 4.2 percent terminated fatally either in the hospital or within the study year after being discharged from the hospital. Among males 7.0 percent terminated fatally as compared with figures for females of 2.5 percent for all causes and 3.4 percent for all except female genital and puerperal diagnoses. Among the 1,599 hospital surgical cases, 2.3 percent terminated fatally, but of the 1,024 nonsurgical cases 7.3 percent terminated fatally. In each of the age and sex groups shown in table 10 a smaller percentage of surgical than of nonsurgical cases terminated fatally. It should be noted that these case fatalities for hospital cases are not comparable with those for all cases because hospital admissions represent a selected group of severe cases with more than the average probability of dying.

V. DISTRIBUTION OF CASES BY DAYS OF HOSPITAL CARE

The distribution of cases according to the days of hospital care is of interest. Although the cases in this study include some carried over from the preceding year, the number may be assumed to be small; in the tables that follow this carry-over is disregarded and the days within the study year are used for all cases, except that year-long cases are excluded from certain tables.

Table 11 shows hospital cases and rates for all causes by single days of duration up to 45 days. Cases in the hospital for only one day amount to 14.2 per 1,000 population or nearly one-fourth of all hospital cases; 2-day cases with 5.4 per 1,000 have the second highest

TABLE 11.—*Hospital admission rates during year [1] for cases classified by days of hospital stay, and the annual days of hospital care resulting from cases contributing a specified number of days [2] t or less—8,758 canvassed white families in 18 States during 12 consecutive months, 1928–31*

[Sole or primary diagnoses; 38,544 years of life]

Hospital days (t)	All causes				Annual number of days of hospital care resulting from cases contributing t days or less, per 1,000 population		
	Admissions with the specified number of hospital days (t)		Admissions with the specified number of hospital days (t) or more		All causes	All causes except mental and nervous diseases and tuberculosis	All causes except mental and nervous diseases, tuberculosis, deliveries, and abortions
	Number	Annual rate per 1,000 population	Number	Annual rate per 1,000 population			
1	548	14.22	2,341	60.74	61	58	49
2	208	5.40	1,793	46.52	107	103	84
3	101	2.62	1,585	41.12	148	141	113
4	96	2.49	1,484	38.50	187	178	140
5	70	1.82	1,388	36.01	223	212	165
6	55	1.43	1,318	34.19	257	244	189
7	89	2.31	1,263	32.77	290	274	211
8	60	1.56	1,174	30.46	320	303	231
9	55	1.43	1,114	28.90	349	330	250
10	192	4.98	1,059	27.48	377	356	269
11	62	1.61	867	22.49	399	376	285
12	106	2.75	805	20.89	420	395	301
13	46	1.19	699	18.14	438	412	314
14	182	4.72	653	16.94	455	427	328
15	35	.91	471	12.22	467	438	338
16	24	.62	436	11.31	479	447	347
17	20	.52	412	10.69	489	457	355
18	21	.54	392	10.17	500	465	363
19	14	.36	371	9.63	509	473	371
20	12	.31	357	9.26	518	481	378
21	64	1.66	345	8.95	527	489	385
22	11	.29	281	7.29	535	494	391
23	6	.16	270	7.00	542	500	396
24	13	.34	264	6.85	549	505	401
25	6	.16	251	6.51	555	511	406
26	6	.16	245	6.36	561	516	411
27	8	.21	239	6.20	568	520	415
28	30	.78	231	5.99	574	525	420
29	7	.18	201	5.21	579	529	424
30	20	.52	194	5.03	584	533	427
31	2	.05	174	4.51	588	536	430
32	6	.16	172	4.46	593	540	433
33	2	.05	166	4.31	597	543	436
34	4	.10	164	4.25	601	546	439
35	15	.39	160	4.15	606	549	442
36	1	.03	145	3.76	609	551	445
37	1	.03	144	3.74	613	554	447
38	2	.05	143	3.71	617	556	449
39	3	.08	141	3.66	620	559	452
40	2	.05	138	3.58	624	561	454
41	1	.03	136	3.53	627	564	456
42	9	.23	135	3.50	631	566	458
43	4	.10	126	3.27	634	568	461
44	2	.05	122	3.17	637	570	462
45	5	.13	120	3.11	641	572	464

[1] Cases with onset of symptoms prior to the study year are included. The date of admission to the hospital was not recorded; although 10 percent of the 2,341 hospital cases had a prior onset of symptoms, the number with prior hospitalization would be much less. Also some cases with onset within were still sick at the end of the year, but they were not necessarily still in the hospital. Sixty-three cases in the hospital an unknown number of days were put in at the average for known cases of the same diagnosis; inasmuch as the unknowns were scattered among 22 separate diagnoses they fell into the distribution in various places and would not affect the result in any material way. The only cases omitted are the 16 recorded as in the hospital throughout the study year.

[2] Includes days of care from the 1st to the t^{th} day in the hospital, or to the day of discharge if earlier, regardless of the total hospital duration of the case.

rate. There are large peaks in the cases at 10, 12, 14, 21, and 28 days which should be heavily discounted because of the tendency of the housewife to report durations in round numbers or in weeks. However, a tabulation of data from the records of nine Baltimore hospitals (*22*) indicates that there are considerably more hospital cases with durations for each of 9, 10, and 11 days than for any other single day of duration above 3 days. Deliveries account for this peak and when they are excluded, there is a fairly gradual decline in the

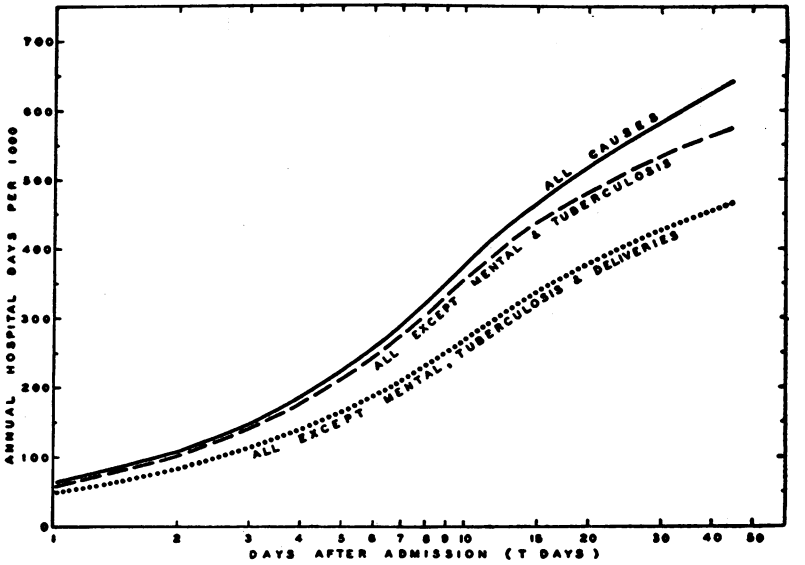

FIGURE 16.—Annual days of hospital care from day of admission through the indicated day after admission per 1,000 population—8,758 canvassed white families in 18 States during 12 consecutive months, 1928–31. (Includes days of care from the 1st to the t^{th} day in the hospital, or to the day of discharge if earlier, regardless of the total hospital duration of the case. See table 11 for further details. Horizontal scale is logarithmic.)

number of cases as duration increases, with only small peaks at 19 to 21 and 28 days.

Table 11 also shows days of hospital care per 1,000 persons which pertain to cases of certain durations. In figure 16 the data are plotted in a way to show the days of hospital care pertaining to cases contributing a given number of days or less. For example, the figure plotted for 21 days refers to the days of hospital care accruing from the first to the twenty-first day of hospitalization for each case (or from the first day until discharge if that occurred earlier). Thus, if the figure plotted for 2 days be subtracted from that for 21 days, the result is the days of hospital care accruing from the third to the twenty-first day of hospitalization for each case.[28]

[28] This type of chart with a logarithmic horizontal scale was used by Perrott (*19*) and Gafafer (*25, 26*) in showing similar data for days of disability.

TABLE 12.—*Mean days per hospital case and the distribution of cases according to days in the hospital—8,758 canvassed white families in 18 States during 12 consecutive months, 1928–31*

Diagnosis	Cases with only 1 diagnosis (uncomplicated)															Cases with 2 or more diagnoses (complicated) [1]			
	Total number of cases	Percent in hospital	Mean hospital days per hospital case	Number of hospital cases with known hospital days	Percent of hospital cases that were in the hospital the specified number of days within the study year											Total number of cases	Percent in hospital	Mean hospital days per hospital case	Number of hospital cases with known hospital days
					All hospital cases	1	2	3	4–5	6–8	9–11	12–17	18–24	25–45	46–365				
All causes	31,344	6.7	15.0	2,033	100	25.8	9.2	4.3	6.4	8.5	13.7	16.9	5.8	4.6	4.9	[1] 1,406	18.7	20.5	[1] 261
Tonsillectomy and adenoidectomy	791	75.6	1.7	590	100	68.0	21.4	4.4	3.4	1.2	.5	.8	.2	.2	------	50	76.0	6.0	37
Other respiratory diseases	11,894	.7	10.8	80	100	10.0	6.3	13.7	16.3	12.5	11.3	15.0	8.7	3.7	2.5	821	9.7	21.6	79
Appendicitis	291	55.3	13.0	161	100	1.9	1.2	------	1.9	13.7	25.5	41.0	8.7	6.2	------	61	82.0	17.5	50
Other digestive diseases	2,906	3.7	14.2	108	100	5.6	3.7	2.8	6.5	9.3	13.0	28.7	20.4	9.3	.9	283	16.8	17.3	46
Accidents	2,837	6.7	13.0	183	100	26.8	7.7	8.2	8.7	12.0	7.7	13.1	4.4	5.5	6.0	52	36.5	29.0	19
Deliveries and abortions	871	39.5	11.0	339	100	.6	2.4	.9	5.0	9.1	45.1	32.4	2.9	.9	.6	39	59.0	22.7	23
Female genital and puerperal complications	574	16.9	12.3	97	100	6.2	2.1	4.1	13.4	14.4	10.3	25.8	16.5	6.2	1.0	158	49.4	18.5	78
Degenerative diseases	1,020	9.4	21.6	94	100	13.8	5.3	6.4	4.3	13.8	6.4	14.9	9.6	12.8	12.8	410	15.9	21.6	63
Diseases of bones and joints, malformations and early infancy	317	16.1	46.2	48	100	4.2	6.3	2.1	2.1	6.3	8.3	20.8	6.3	12.5	31.3	32	43.7	40.3	14
Communicable diseases	3,514	1.7	19.7	60	100	8.3	6.7	8.3	5.0	5.0	8.3	16.7	8.3	26.7	6.7	183	12.0	25.4	21
Tuberculosis, all forms	154	31.2	115.5	42	100	4.8	------	2.4	2.4	9.5	------	2.4	4.8	11.9	61.9	28	50.9	45.6	13
Nervous and mental diseases	478	8.4	98.6	33	100	------	3.0	6.1	6.1	3.0	6.1	21.2	3.0	12.1	39.4	78	28.2	40.9	21
Ear and mastoid diseases	695	5.9	8.3	41	100	7.3	9.8	7.3	22.0	14.6	17.1	7.3	14.6	------	------	212	10.4	14.0	22
All other diseases	5,002	3.5	17.1	157	100	15.9	5.7	5.1	13.4	17.2	6.4	15.9	8.3	4.5	7.6	535	14.0	12.9	76

[1] Complicated cases of a given diagnosis include both primary and contributory causes; however, the figure for all causes is a total of primary causes only, since that counts each case once and only once.

Days of hospital care for all cases contributing 21 days or less (first to twenty-first day or to discharge if earlier) amounted in this study to 527 days per 1,000 population for all cases except those hospitalized throughout the study year, 489 for all except mental and nervous diseases and tuberculosis, and 385 for all except mental and nervous diseases, tuberculosis, deliveries, and abortions. However, hospital admission rates in this study are considerably less than in hospital insurance plans.

Table 12 shows for each of 14 diagnoses the average hospital days per hospital case for uncomplicated and complicated cases (two or more diagnoses). For 9 of the 14 diagnoses the average days in the hospital are materially greater for cases complicated by another disease than for those with only a single diagnosis. For the diseases of greater severity (tuberculosis, mental and nervous diseases, bone and joint diseases, malformations and diseases of early infancy, degenerative diseases) the average durations for cases with two or more diagnoses were no greater than for cases with only a single diagnosis.

For all causes of illness, 7 percent of the cases with only one diagnosis were hospitalized with an average stay of 15 days per hospital case, as compared with 19 percent of the complicated cases with 20 days per hospital case. More careful and complete diagnosis of hospital than of nonhospital cases would make for more hospital cases with two or more diagnoses and thus increase the percentages of complicated cases recorded as hospitalized; however, the average duration per hospital case seems free from this bias. Thus, the presence of a second diagnosis usually means a longer average stay in the hospital.

Table 12 also shows the distribution of uncomplicated cases according to the number of days in the hospital. Because the durations were those reported by the household informant, they tend to be remembered in weeks and round numbers, such as 5, 7, 10, 14, 21, etc.; the rather peculiar class intervals in the table are arranged to put these values near the centers of the classes. Considering all causes of illness, 26 percent of the uncomplicated hospital cases were in the hospital for only 1 day and another 20 percent for 1 to 5 days, with only 5 percent staying as long as 46 days during the study year. Of the cases of tonsillectomy, 68 percent were in the hospital for only 1 day and another 21 percent for 2 days, with only 11 percent staying as long as 3 days. Twenty-seven percent of the accident cases were in the hospital for only a single day but about half the cases were in the hospital for 6 days or longer. Of the uncomplicated deliveries 45 percent were in the hospital from 9 to 11 days and another 32 percent from 12 to 17 days. Thus, these cases show less than the average variability in the length of hospital stay.

VI. TYPE OF HOSPITAL, ACCOMMODATIONS, AND PUBLIC CLINIC SERVICE

Of the 2,285 cases among the 8,758 families observed for a full year which were admitted to hospitals other than those for tuberculosis and mental diseases, 88 percent were in general hospitals, as compared with 90 percent in the report of the American Medical Association (table 13); admissions to eye-ear-nose-throat, women's, children's, and communicable disease hospitals make up another 7 percent in the survey data, as compared with 5 percent in the American Medical Association data; other hospitals, except tuberculosis and mental, account for 5 percent of the admissions in both the survey and the American Medical Association data.

TABLE 13.—*Percentage of hospital cases that were admitted to each type of hospital—2,357 hospital cases among 8,758 canvassed white families in 18 States during 12 consecutive months, 1928–31*

Kind of hospital	Percentage of admissions to each type of hospital, including mental and tuberculosis hospitals				Percentage of admissions to each type of hospital, excluding mental and tuberculosis hospitals			
	Total U.S., 1932[1]	Surveyed families, 1928–31			Total U.S., 1932[1]	Surveyed families, 1928–31		
	All cases	All cases	Surgical	Nonsurgical	All cases	All cases	Surgical	Nonsurgical
All hospitals, number of cases	7,228,151	2,357	1,452	905	6,965,188	2,285	1,452	833
All hospitals, percent	100	100	100	100	100	100	100	100
General	87.2	85.2	92.0	74.1	90.5	87.9	92.0	80.6
Eye, ear, nose, and throat	1.6	.7	1.2	-------	1.7	.7	1.2	-------
Women's	1.3	2.7	.6	6.1	1.3	2.8	.6	6.6
Children's	1.2	2.1	1.8	2.7	1.2	2.1	1.8	2.9
Tuberculosis	1.3	1.8	-------	4.8	-------	-------	-------	-------
Mental and nervous	2.3	1.2	-------	3.2	-------	-------	-------	-------
Communicable disease	.6	1.1	.1	2.9	.6	1.2	.1	3.1
All other	4.5	5.1	4.4	6.3	4.7	5.3	4.4	6.8

[1] Registered hospitals in the United States as reported in the Hospital number of the Journal of the American Medical Association (27).

Of the hospital surgical cases in the survey, 92 percent were in general hospitals as compared with 81 percent of the nonsurgical cases, exclusive of those in tuberculosis and mental hospitals; larger percentages of nonsurgical than of surgical cases were in each of the special types of hospitals except those for eye, ear, nose and throat cases.

Of the total hospital cases, 36 percent were in wards, 22 percent in semiprivate rooms, and 42 percent in private rooms. Forty percent of the 905 nonsurgical cases were in wards as compared with 34 percent of the 1,452 surgical cases.

Of the total hospital cases, 10.4 percent had some public clinic or out-patient service also, including that rendered by the same hospital and by other public and hospital clinics; this figure may be compared with 4.8 percent for all attended cases (hospital and nonhospital). Of the hospital surgical cases 8.1 percent had some public clinic service as compared with 14.0 percent for all hospital nonsurgical

cases and 13.0 percent for all except those in tuberculosis and mental hospitals. Of the cases in general hospitals, 9.3 percent had public clinic service—7.9 percent for surgical cases and 11.9 percent for nonsurgical cases. In women's hospitals, 22 percent of the 63 cases had public clinic service, in children's hospitals 14 percent of the 49 cases, and in tuberculosis hospitals 44 percent of the 43 cases had public clinic service.

Among ward patients, 22.1 percent had some public clinic service, as compared with 7.9 percent of those in semiprivate rooms and 0.8 percent of those in private rooms.

VII. SUMMARY

Data on the frequency of illness and hospital care were recorded for a 12-month period between 1928 and 1931 by periodic canvasses of 8,758 white families in 130 localities in 18 States. The surveyed families include representation from nearly all geographic sections, from rural, urban, and metropolitan areas, from all income classes and of both native- and foreign-born persons. Visits were made at intervals of 2 to 4 months. Illnesses causing symptoms for one day or longer were recorded, together with the number of cases that were hospitalized and the days of hospital care within the study year.

There were during the year 61.6 hospital cases and 886 hospital days per 1,000 persons under observation, exclusive of cases in institutions throughout the study year. The average stay in the hospital was 14.4 days per case. Of the total illnesses, 7.5 percent were hospitalized. Of the illnesses causing inability to work or pursue other usual activities, 12.5 percent were hospitalized, and of the total disabled days 11.8 percent were spent in a hospital. Of the cases that confined the patient to bed for one or more days 14.9 percent were hospitalized, and 23.4 percent of the days in bed were hospital days.

Hospital admission rates varied relatively little with age except for a large peak for females of the childbearing ages when deliveries are an important cause of hospitalization. There is not much difference between hospital rates for males and females when the comparison is limited to diagnoses common to both sexes (fig. 1).

Of all hospital cases 22 percent had the exclusive services of a special private duty nurse for one or more of the days or nights in the hospital. Of the cases with such a nurse, 35 percent had two or more nurses during at least one 24-hour day. Fourteen percent of the hospital days were days with a special nurse for the day or night or both.

Five specific diagnoses stand out as extremely important in hospital practice, namely, tonsillectomy, deliveries, accidental injuries, appendicitis, and female genital diseases. Tonsillectomy is less important in days of hospital care but the other diagnoses are important both in admissions and days. The five specific diagnoses with the highest

percentages of cases hospitalized were tonsillectomy 76 percent, mastoid diseases 73 percent, tumors of the female genital organs 67 percent, appendicitis 60 percent, and salpingitis and pelvic abscess 59 percent. In general a higher percentage of cases of corresponding diagnoses were hospitalized among males than females.

Of the total hospital cases 62 percent were surgical and the other 38 percent nonsurgical. Among hospital cases exclusive of those in mental and tuberculosis hospitals and other sanatoriums, surgical cases were more frequent than nonsurgical in every age group except 20 to 34 years for women when deliveries are an important cause of hospital care. The largest excess for surgical cases is at 5–9 years when tonsillectomy is frequent (fig. 8). Sixty percent of all surgical cases reported in the study were hospitalized, but only 3 percent of the nonsurgical cases. Ninety percent or more of the surgical cases of hernia, gall bladder diseases, thyroid diseases, appendicitis, mastoid diseases, and salpingitis and female genital tumors were hospitalized, but none of these diagnoses had more than 15 percent of the nonsurgical cases hospitalized and only one had more than 8 percent (fig. 11). Thus hospitals get disproportionately large numbers of surgical cases.

The relative age curves for males and females for all illnesses recorded in the survey are quite different from the corresponding curves of hospital cases. The curves for all surgical cases are fairly similar to corresponding curves for hospital surgical cases, but those for nonsurgical cases are radically different. The relative age curves for all bed cases except minor respiratory and minor digestive diseases are more similar to those for hospital cases, the chief difference being that bed cases among females show an excess over males for diagnoses common to the two sexes but hospital cases show little excess of this kind (figs. 12 and 13).

The relative age curves of specific diseases that are important in hospital practice are generally similar for total and hospital cases (fig. 14). But the distribution according to diagnosis of the hospital case load is radically different from similar distributions of total disabling and bed cases recorded in the survey, even when minor respiratory and minor digestive cases are eliminated.

Roughly one-third of the fatal cases (deaths) are hospitalized but only one-tenth to one-fifteenth of all cases. This difference shows up for nearly every diagnosis but is most marked for the communicable diseases of childhood and for diarrhea and enteritis. Thus hospitals get disproportionately large numbers of the severest types of cases.

Hospital case fatality (deaths per 100 hospital cases) was consistently less in the different age groups for surgical than for nonsurgical cases.

Days of hospital care for all cases contributing 21 days or less (first to twenty-first day or to discharge if earlier) amounted to 527

days per 1,000 population for all cases except those hospitalized throughout the study year, 489 for all except mental and nervous diseases and tuberculosis, and 385 for all except mental and nervous diseases, tuberculosis, and deliveries and abortions. However, hospital admission rates in this study were considerably less than in hospital insurance plans.

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PUBLIC HEALTH SERVICE PUBLICATIONS

A List of Publications Issued During the Period January–June 1942

The following is a list of publications of the United States Public Health Service issued during the period January–June 1942.

The purpose of the publication of this list is to provide a complete and continuing record of Public Health Service publications, for reference use by librarians, scientific workers, and others interested in particular fields of public health work, and not to offer the publications for indiscriminate free public distribution.

Those publications marked with an asterisk (*) may be obtained only by purchase from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the prices noted.

Periodicals

*Public Health Reports (weekly), January–June, vol. 57, Nos. 1 to 26, pages 1 to 986. 5 cents a number.

*Venereal Disease Information (monthly), January–June, vol. 23, Nos. 1 to 6, pages 1 to 248. 5 cents a number.

*Journal of the National Cancer Institute (bimonthly), February–April, vol. 2, Nos. 4 and 5, pages 309 to 530. 40 cents a number.

Reprints From the Public Health Reports

2345. Disease outbreaks from water, milk, and other foods in 1939. By A. W. Fuchs. November 28, 1941. 8 pages.

2346. The coding and tabulation of medical and research data for statistical analysis. By Thomas I. Edwards. January 2, 1942. 14 pages.
2347. Antitularemic serum. By Edward Francis and Lloyd D. Felton. January 9, 1942. 12 pages.
2348. Distribution of health services in the structure of State government. Chapter III. Tuberculosis control by State agencies. By Joseph W. Mountin and Evelyn Flook. January 16, 1942. 26 pages.
2349. Isolation of coccidioides from soil and rodents. By C. W. Emmons. January 23, 1942. 3 pages.
2350. Studies on the duration of disabling sickness. III. Duration of disability from sickness and nonindustrial injuries among the male employees of an oil refining company with particular reference to the older worker, 1933–39, inclusive. By William M. Gafafer, Rosedith Sitgreaves, and Elizabeth S. Frasier. January 23, 1942. 14 pages.
2351. The incidence of cancer in Dallas and Fort Worth, Texas, and surrounding counties, 1938. By Arthur J. McDowell. January 23, 1942. 15 pages.
2352. Nutritional deficiency and infection. I. Influence of riboflavin or thiamin deficiency on fatal experimental pneumococcal infection in white mice. By Jerald G. Wooley and W. H. Sebrell. January 30, 1942. 13 pages.
2353. The present status of full-time local health organization. By F. W. Kratz. February 6, 1942. 2 pages.
2354. The occurrence of hyaline sclerosis and calcification of blood vessels in rats on sulfaguanidine. By Floyd S. Daft, L. L. Ashburn, Samuel S. Spicer, and W. H. Sebrell. February 13, 1942. 2 pages.
2355. Dental status of adult male mine and smelter workers. By H. P. Brinton, D. C. Johnston, and E. O. Thompson. February 13, 1942. 11 pages.
2356. Report on market-milk supplies of Standard Milk Ordinance communities. January 1, 1940–December 31, 1941. February 13, 1942. 6 pages.
2357. Diphtheria toxoid treatment of leprosy. A preliminary report. By G. H. Faget and F. A. Johansen. February 20, 1942. 5 pages.
2358. The effects of distillery wastes and waters on the microscopic flora and fauna of a small creek. By James B. Lackey. February 20, 1942. 8 pages.
2359. An appraisal technique for urban problem areas as a basis for housing policy of local governments. Illustrative results from three test surveys. A report of the Subcommittee on Appraisal of Residential Areas, Committee on the Hygiene of Housing, American Public Health Association. February 27 and April 3, 1942. 28 pages.
2360. Pathologic histology in guinea pigs following intraperitoneal inoculation with the virus of "Q" fever. By R. D. Lillie. February 27, 1942. 11 pages; 1 plate.
2361. Directory of full-time local health officers, 1942. March 6, 1942. 33 pages.
2362. The incidence of cancer in Birmingham and Jefferson County, Alabama, 1938. By Herbert J. Sommers. March 13, 1942. 21 pages.
2363. A summary of census data on sewerage systems in the United States. March 20, 1942. 13 pages.
2364. Milk control in the defense program. By A. W. Fuchs. March 20, 1942. 10 pages.
2365. Observations on experimental malaria control drainage ditch linings. By J. L. Robertson, Jr., J. A. LePrince, H. A. Johnson, and W. V. Parker. March 27, 1942. 13 pages; 8 plates.
2366. Histogenesis and repair of the hepatic cirrhosis in rats produced on low protein diets and preventable with choline. By R. D. Lillie, L. L. Ashburn, W. H. Sebrell, F. S. Daft, and J. V. Lowry. April 3, 1942. 7 pages.

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2367. Studies of the acute diarrheal diseases. VI. New procedures in bacteriological diagnosis. By Albert V. Hardy and Thelma DeCapito. VII. Carriers of *Shigella dysenteriae*. By James Watt, Albert V. Hardy, and Thelma DeCapito. VIII. Sulfaguanidine in the control of *Shigella dysenteriae* infections. By Albert V. Hardy, James Watt, Jerome Peterson, and Elise Schlosser. April 10, 1942. 15 pages.

2368. Administrative organization for mental hygiene. By Victor H. Vogel. April 10, 1942. 6 pages.

2369. Distribution of health services in the structure of State government. Chapter IV. Venereal disease control by State agencies. By Joseph W. Mountin and Evelyn Flook. April 17, 1942. 26 pages.

2370. A new base for the protective ointment for the prevention of poison ivy dermatitis. By Louis Schwartz, John E. Dunn, and F. H. Goldman. April 17, 1942. 10 pages.

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2372. An epidemic of boils in a group of tunnel workers. By James Q. Gant, Robert J. Owens, and Louis Schwartz. April 24, 1942. 5 pages.

2373. Frequency and duration of disabilities causing absence from work among the employees of a public utility, 1938–41. By W. M. Gafafer. April 24, 1942. 4 pages.

2374. The story of the National leprosarium (U. S. Marine Hospital), Carville, Louisiana. By G. H. Faget. May 1, 1942. 12 pages; 2 plates.

2375. Anaphylaxis in guinea pigs following sensitization with chick-embryo yellow fever vaccine and normal chick embryos. By T. O. Berge and M. V. Hargett. May 1, 1942. 16 pages.

2376. Health agencies—their responsibilities and their opportunities during the present crisis. By Paul V. McNutt. May 8, 1942. 8 pages.

2377. The use of mucin in experimental infections of mice with *Vibrio cholerae*. By James J. Griffitts. May 8, 1942. 3 pages.

2378. Prevalence of poliomyelitis in the United States in 1941. By C. C. Dauer. May 8, 1942. 8 pages.

2379. An epidemiological study of poliomyelitis in Mississippi in 1941. By L. L. Lumsden. May 15, 1942. 25 pages.

2380. Five fumigants for disinfestation of bedding and clothing: a comparative study of insecticidal properties. By G. C. Sherrard. May 15, 1942. 7 pages.

2381. Domestic water and dental caries. IV. Effect of increasing the fluoride content of a common water supply on the *Lactobacillus acidophilus* counts of the saliva. Preliminary report. By Francis A. Arnold, Jr., H. Trendley Dean, and Elias Elvove. May 22, 1942. 8 pages.

2382. Housing of health departments. By Joseph W. Mountin. May 22, 1942. 9 pages.

2383. Clothing for protection against occupational skin irritants. By Louis Schwartz, Leon H. Warren, and Frederick H. Goldman. June 28, 1940. 6 pages; 2 plates.

2384. National Health Survey. List of publications. May 29, 1942. 8 pages.

2385. An analysis of industrial hygiene activities in State and local health departments, 1940–41. By V. M. Trasko and J. J. Bloomfield. June 5, 1942. 20 pages.

2386. Distribution of health services in the structure of State government. Chapter V. Sanitation by State agencies. By Joseph W. Mountin and Evelyn Flook. June 12 and 19, 1942. 50 pages.

Public Health Bulletins

277. Health and working environment of nonferrous metal mine workers. By Waldemar C. Dreessen, Richard T. Page, J. Walter Hough, Victoria M. Trasko, J. L. Jones, and R. W. Franks. 1942. 110 pages; 4 halftones.

National Institute of Health Bulletin

178. Index to the literature of *Siphonaptera* of North America. By Wm. L. Jellison and Newell E. Good. 1942. 193 pages.

Workers Health Series

6. Bill gets the works. 1942. 12 pages.

Unnumbered Publications

Index to Public Health Reports, volume 56, part 2, July–December 1941. 19 pages.

National Negro Health Week bulletin. This pamphlet is published annually, usually about the middle of March, for community leaders in an effort to suggest ways and means by which interested individuals and organizations may be organized for a concerted and effective attack upon the community's disease problems. Twenty-eighth observance, April, 5–12, 1942. 4 pages.

National Negro Health Week leaflet. Twenty-eighth observance, April 5–12, 1942. 2 pages.

National Negro Health Week poster. Twenty-eighth observance, April 5–12, 1942.

Reprints From Venereal Disease Information

165. The social worker and the nurse in genitoinfectious disease control. By Lena R. Waters. Vol. 22, November 1941. 7 pages.

166. Sulfathiazole treatment of gonococcal infection in 360 patients. By J. F. Mahoney, C. J. Van Slyke, and R. R. Wolcott. Vol. 22, December 1941. 7 pages.

167. Toxic dose of mapharsen given in interrupted doses. By Harold J. Magnuson and B. O. Raulston. Vol. 22, December 1941. 5 pages.

168. Syphilis study project Logan County, West Virginia. By N. B. Hon and William P. Hamilton. Vol. 23, January 1942.

169. Role of open houses of prostitution in spread of venereal diseases in a cantonment area. By Bascom Johnson, Jr. Vol. 23, January 1942. 7 pages.

170. Syphilis in Selective Service registrants determination of prevalence and plan of rehabilitation of proven cases. By Robert Dyar. Vol. 23, February 1942. 8 pages.

171. Sulfonamides and fever therapy in the treatment of gonorrhea in the male. By J. A. Trautman. Vol. 23, February 1942. 6 pages.

172. Storage of syphilitic serums. By Ruth M. Myers and C. A. Perry. Vol. 23, February 1942. 4 pages.

173. The private physician today in the control of the venereal diseases. By Frank H. Lahey. Vol. 23, March 1942. 3 pages.

174. The management of gonorrhea in general practice. The Executive Committee of the American Neisserian Medical Society. Vol. 23, March 1942. 15 pages.

175. The Mazzini microscopic flocculation test for syphilis. By L. Y. Mazzini. Vol. 23, April 1942. 8 pages.

176. Syphilis control in a State prison. I. Plan for treatment. By Bernard I. Kaplan and Charles C. Sweet. II. Role of prison in effecting adequate treatment. By Bernard I. Kaplan and I. Jay Brightman. Vol. 23, April 1942. 7 pages.
177. Studies in the epidemiology of syphilis. V. Methods of contact investigation. By Anne Sweeney. Vol. 23, April 1942. 7 pages.
179. A statement on prostitution in venereal disease control. By John H. Stokes. Vol. 23, May 1942. 4 pages.

Venereal Disease Bulletin

95. It doesn't pay. 1942. 21 pages.

INCIDENCE OF HOSPITALIZATION, AUGUST 1942

Through the cooperation of the Hospital Service Plan Commission of the American Hospital Association, data on hospital admissions among about 8,000,000 members of Blue Cross Hospital Service Plans are presented monthly. These plans provide prepaid hospital service. The data cover about 60 hospital service plans scattered throughout the country, mostly in large cities.

Item	August—	
	1942	1941
1. Number of plans supplying data	63	48
2. Number of persons eligible for hospital care	8,889,867	5,663,760
3. Number of persons admitted for hospital care	91,467	58,033
4. Incidence per 1,000 persons, annual rate, during current month (daily rate x 365)	121.1	120.6
5. Simple average of annual rates for the 12 months ended Aug. 31	107.4	----------

DEATHS DURING WEEK ENDED SEPTEMBER 12, 1942

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

	Week ended Sept. 12, 1942	Corresponding week 1941
Data from 86 large cities of the United States:		
Total deaths	7,222	7,379
Average for 3 prior years	7,309	----------
Total deaths, first 36 weeks of year	299,145	302,822
Deaths per 1,000 population, first 36 weeks of year, annual rate	11.7	11.8
Deaths under 1 year of age	537	529
Average for 3 prior years	488	----------
Deaths under 1 year of age, first 36 weeks of year	20,232	18,723
Data from industrial insurance companies:		
Policies in force	65,013,474	64,458,633
Number of death claims	8,019	10,202
Death claims per 1,000 policies in force, annual rate	6.4	8.3
Death claims per 1,000 policies, first 36 weeks of year, annual rate	9.3	9.6

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 SEPTEMBER 19, 1942

Summary

The incidence of poliomyelitis declined from 267 cases last week to 229 cases for the current week, with more than one-half of the cases occurring in the East North Central States (73 cases) and the Middle Atlantic States (62 cases). The largest numbers of cases were reported in Illinois (52), New York (27), New Jersey (20), Pennsylvania (15), and Nebraska (11). No other State reported more than 10 cases.

Although the incidence of meningococcus meningitis declined from 46 to 43, it remains above the 5-year (1937–41) median (31) and above any other year since 1937. Meningococcus meningitis and measles are the only common communicable diseases, for which comparable figures are available, that are above the 5-year medians to date this year.

Other reports for this week include 2 cases of anthrax (1 each in New York and Pennsylvania), 31 cases of amebic dysentery, 259 cases of bacillary dysentery (112 in Texas), 170 cases of unspecified dysentery (139 in Virginia), 25 cases of infectious encephalitis, 15 cases of Rocky Mountain spotted fever, 9 cases of smallpox, 9 cases of tularemia, 133 cases of endemic typhus fever (51 in Georgia and 33 in Texas), and 7 cases of undulant fever (5 in Pennsylvania and 1 each in Rhode Island and North Carolina).

The death rate for the current week in 88 large cities of the United States is 10.9 per 1,000 population, as compared with 10.1 for the preceding week, and with a 3-year (1939–41) average of 10.5.

Telegraphic morbidity reports from State health officers for the week ended September 19, 1942, and comparison with corresponding week of 1941 and 5-year median

In these tables a zero indicates a definite report, while leaders imply that, although none were reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended		Median 1937–41	Week ended		Median 1937–41	Week ended		Median 1937–41	Week ended		Median 1937–41
	Sept. 19, 1942	Sept. 20, 1941		Sept. 19, 1942	Sept. 20, 1941		Sept. 19, 1942	Sept. 20, 1941		Sept. 19, 1942	Sept. 20, 1941	
NEW ENG.												
Maine	0	0	1	----	----	----	3	13	7	5	0	0
New Hampshire	0	1	0	----	----	----	0	0	0	0	0	0
Vermont	0	0	1	----	----	----	30	2	1	0	0	0
Massachusetts	2	4	2	----	----	----	28	20	21	1	3	2
Rhode Island	1	4	0	----	----	----	3	0	2	0	0	0
Connecticut	0	1	1	----	----	1	5	12	3	0	0	0
MID. ATL.												
New York	3	7	10	[1] 3	[1] 2	[1] 4	32	56	56	8	2	4
New Jersey	5	3	3	5	3	3	21	26	26	2	2	0
Pennsylvania	5	1	17	----	----	----	26	75	75	3	4	3
E. NO. CEN.												
Ohio	3	6	12	18	4	7	12	14	14	3	0	0
Indiana	4	3	13	18	12	12	3	3	3	1	1	1
Illinois	13	16	17	4	2	5	20	21	21	0	1	1
Michigan [2]	3	0	2	15	----	1	11	22	22	1	0	1
Wisconsin	1	0	0	16	86	23	40	34	40	0	0	0
W. NO. CEN.												
Minnesota	1	4	2	----	----	----	5	5	6	0	0	0
Iowa	30	0	2	----	2	----	4	3	4	0	0	0
Missouri	6	14	14	----	----	1	2	6	5	0	0	1
North Dakota	0	1	1	3	----	2	0	13	2	0	0	0
South Dakota	1	10	5	----	----	2	2	1	1	----	0	0
Nebraska	5	6	2	4	----	----	26	3	3	0	0	0
Kansas	4	1	5	1	----	1	5	6	6	0	1	0
SO. ATL.												
Delaware	0	0	0	----	1	----	1	2	1	0	0	0
Maryland [2]	1	2	4	----	1	1	5	13	5	2	2	1
Dist. of Col	1	0	1	----	----	----	1	6	0	1	0	0
Virginia	18	19	32	90	41	41	5	29	6	1	2	1
West Virginia	11	4	10	3	----	9	0	9	7	0	0	0
North Carolina	40	53	72	4	----	----	7	24	18	1	1	0
South Carolina	19	43	18	169	80	104	4	14	7	0	3	1
Georgia	21	35	35	27	11	4	1	21	3	0	0	0
Florida	5	5	8	1	2	----	6	3	3	0	1	1
E. SO. CEN.												
Kentucky	19	14	14	----	----	2	10	16	12	0	0	0
Tennessee	14	15	20	9	18	9	5	28	11	6	1	1
Alabama	18	20	30	10	8	8	4	7	5	0	0	1
Mississippi [2]	9	15	15	----	----	----	----	----	----	0	2	1
W. SO. CEN.												
Arkansas	17	4	16	7	9	9	4	11	10	0	0	0
Louisiana	0	7	8	----	26	2	0	3	1	0	2	1
Oklahoma	7	10	8	10	10	16	1	2	2	0	0	1
Texas	30	33	33	156	310	83	11	21	20	0	0	1
MOUNTAIN												
Montana	0	9	0	----	2	1	0	3	3	0	0	1
Idaho	0	0	0	----	----	----	1	1	4	0	0	0
Wyoming	0	3	1	9	3	----	3	1	1	1	0	0
Colorado	8	6	6	21	23	5	4	10	6	0	0	0
New Mexico	2	0	2	----	----	----	0	5	1	1	1	0
Arizona	1	0	0	55	32	23	3	12	3	0	0	0
Utah [2]	1	0	0	3	4	3	30	2	3	0	0	0
Nevada	0	0	----	----	----	----	0	0	----	0	0	----
PACIFIC												
Washington	7	0	0	----	----	----	43	11	10	1	1	0
Oregon	1	1	1	11	12	10	16	18	7	0	0	0
California	12	13	17	28	24	11	49	51	38	5	1	1
Total	349	393	504	700	728	420	492	658	591	43	31	31
37 weeks	8,541	8,836	13,646	83,065	492,650	161,915	468,877	826,898	350,169	2,584	1,544	1,544

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended September 19, 1942, and comparison with corresponding week of 1941 and 5-year median—Continued

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever		
	Week ended		Median 1937–41	Week ended		Median 1937–41	Week ended		Median 1937–41	Week ended		Median 1937–41
	Sept. 19, 1942	Sept. 20, 1941		Sept. 19, 1942	Sept. 20, 1941		Sept. 19, 1942	Sept. 20, 1941		Sept. 19, 1942	Sept. 20, 1941	
NEW ENG.												
Maine	0	0	0	6	6	5	0	0	0	0	0	0
New Hampshire	0	3	0	1	0	0	0	0	0	0	0	1
Vermont	2	1	1	3	3	3	0	0	0	4	0	0
Massachusetts	6	20	4	73	51	35	0	0	0	6	1	3
Rhode Island	0	3	1	2	3	1	0	0	0	1	1	1
Connecticut	6	10	1	15	19	12	0	0	0	1	1	4
MID. ATL.												
New York	27	113	91	78	65	70	0	0	0	7	18	22
New Jersey	20	27	21	22	19	16	0	0	0	3	6	6
Pennsylvania	15	70	40	66	42	73	0	0	0	20	17	20
E. NO. CEN.												
Ohio	9	34	34	87	64	79	0	0	0	7	6	19
Indiana	4	15	10	21	22	34	1	0	2	1	4	8
Illinois	52	25	25	49	73	94	0	0	0	10	9	16
Michigan [3]	8	20	20	27	76	81	0	0	0	1	10	10
Wisconsin	0	1	2	43	48	39	2	0	0	2	1	1
W. NO. CEN.												
Minnesota	5	24	24	14	25	25	0	1	1	1	2	2
Iowa	4	2	12	16	17	20	0	1	1	1	6	2
Missouri	3	5	5	18	18	27	0	1	1	4	9	14
North Dakota	0	0	0	4	4	5	0	0	0	0	1	1
South Dakota	1	0	2	10	9	9	0	0	0	0	0	0
Nebraska	11	1	5	7	3	11	0	0	0	0	1	0
Kansas	10	5	5	22	48	35	0	0	0	1	7	10
SO. ATL.												
Delaware	3	1	0	4	7	4	0	0	0	0	0	2
Maryland [3]	0	24	1	18	11	13	0	0	0	2	11	11
Dist. of Col	0	2	2	8	5	5	0	0	0	1	0	4
Virginia	0	4	4	28	20	20	0	0	0	6	7	13
West Virginia	0	2	2	28	24	26	1	0	0	6	9	15
North Carolina	1	8	4	36	42	46	0	0	0	5	10	10
South Carolina	3	11	1	18	1	8	0	0	0	13	6	14
Georgia	0	22	2	23	23	20	0	1	0	2	16	13
Florida	1	6	1	5	2	3	0	0	0	1	1	4
E. SO. CEN.												
Kentucky	5	7	7	29	19	31	0	0	0	14	15	25
Tennessee	3	24	1	27	44	28	3	0	0	14	15	15
Alabama	0	57	3	32	13	19	0	0	0	5	8	9
Mississippi [3]	3	5	4	2	3	6	0	0	0	5	12	9
W. SO. CEN.												
Arkansas	8	2	1	4	2	6	1	2	0	8	16	14
Louisiana	0	2	2	2	2	4	1	0	0	6	25	18
Oklahoma	0	3	3	6	5	9	0	0	0	5	3	11
Texas	2	5	5	16	14	24	0	0	0	28	22	49
MOUNTAIN												
Montana	0	0	0	9	8	15	0	0	0	0	1	1
Idaho	0	0	0	3	1	3	0	0	0	0	3	4
Wyoming	0	0	0	1	3	3	0	0	0	0	0	0
Colorado	4	4	4	9	20	11	0	0	1	4	4	6
New Mexico	2	0	1	0	4	6	0	0	0	5	1	5
Arizona	0	2	2	1	3	2	0	0	0	5	1	3
Utah [3]	0	2	2	4	2	7	0	0	0	0	1	0
Nevada	0	0	------	------	0	------	0	0	------	1	0	------
PACIFIC												
Washington	1	5	5	12	8	15	0	0	0	1	3	3
Oregon	0	12	2	8	6	10	0	0	0	2	0	2
California	10	10	10	32	42	66	0	0	1	10	14	14
Total	229	599	599	949	949	1,182	9	6	42	219	304	468
37 weeks	2,398	5,798	5,609	92,221	92,815	119,962	634	1,173	8,184	4,919	6,106	9,211

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended September 19, 1942—Continued

Division and State	Whooping cough		Anthrax	Week ended Sept. 19, 1942								
	Week ended			Dysentery			Encephalitis, infectious	Leprosy	Rocky Mt. spotted fever	Tularemia	Typhus fever
	Sept. 19, 1942	Sept. 20, 1941		Amebic	Bacillary	Unspecified					
NEW ENG.											
Maine	35	10	0	0	0	0	0	0	0	0	0
New Hampshire	0	3	0	0	0	0	0	0	0	0	0
Vermont	43	3	0	0	0	0	0	0	0	0	0
Massachusetts	215	123	0	0	0	0	1	0	0	0	0
Rhode Island	23	42	0	0	0	0	0	0	0	0	0
Connecticut	61	34	0	0	1	0	0	0	0	0	0
MID. ATL.											
New York	337	370	1	2	45	0	2	0	1	0	0
New Jersey	183	153	0	0	1	0	0	0	0	0	0
Pennsylvania	241	214	1	1	2	0	0	0	0	0	0
E. NO. CEN.											
Ohio	139	279	0	0	2	0	1	0	2	0	0
Indiana	48	10	0	0	1	0	1	0	0	0	0
Illinois	298	197	0	0	17	0	3	0	4	0	0
Michigan [2]	256	263	0	1	3	0	1	0	0	0	0
Wisconsin	204	222	0	0	0	0	0	0	0	1	0
W. NO. CEN.											
Minnesota	55	90	0	2	0	0	1	0	0	0	0
Iowa	6	21	0	0	0	0	1	0	0	0	0
Missouri	1	12	0	0	0	0	1	0	2	0	0
North Dakota	4	10	0	0	0	0	1	0	0	0	0
South Dakota	0	50	0	0	0	0	1	0	0	0	0
Nebraska	9	21	0	0	0	0	0	0	0	0	0
Kansas	39	58	0	0	0	0	0	0	0	0	0
SO. ATL.											
Delaware	2	0	0	0	0	0	0	0	0	0	0
Maryland [2]	46	69	0	0	0	3	0	0	0	0	0
Dist. of Col	23	13	0	0	0	0	0	0	0	0	0
Virginia	47	27	0	0	0	139	0	0	1	0	1
West Virginia	17	24	0	0	0	0	0	0	0	0	0
North Carolina	52	97	0	0	3	0	0	0	1	0	2
South Carolina	26	60	0	0	12	0	0	0	0	0	5
Georgia	9	35	0	4	4	0	0	0	1	1	51
Florida	5	13	0	1	0	0	0	0	0	0	8
E. SO. CEN.											
Kentucky	24	88	0	0	4	0	0	0	0	0	0
Tennessee	28	33	0	2	0	2	0	0	1	3	0
Alabama	42	13	0	0	0	0	0	0	0	0	15
Mississippi [2]	----	----	0	0	0	0	0	0	0	1	0
W. SO. CEN.											
Arkansas	28	10	0	5	30	0	0	0	0	1	2
Louisiana	2	1	0	0	0	0	0	0	0	0	15
Oklahoma	4	5	0	0	0	0	0	0	1	0	1
Texas	99	93	0	9	112	0	0	0	0	1	83
MOUNTAIN											
Montana	34	12	0	0	0	0	1	0	0	0	0
Idaho	4	0	0	0	0	0	0	0	0	0	0
Wyoming	41	27	0	0	0	0	0	0	0	1	0
Colorado	17	83	0	0	6	0	1	0	0	0	0
New Mexico	14	21	0	0	1	0	0	0	0	0	0
Arizona	7	13	0	0	0	26	0	0	0	0	0
Utah [2]	14	27	0	0	0	0	0	0	0	0	0
Nevada	3	3	0	0	0	0	0	0	1	0	0
PACIFIC											
Washington	16	51	0	1	0	0	4	0	0	0	0
Oregon	15	33	0	0	0	0	0	0	0	0	0
California	187	240	0	3	15	0	5	0	0	0	0
Total	3,003	3,276	2	31	259	170	25	0	15	9	133
37 weeks	133,994	159,294	----	----	----	----	----	----	----	----	----

[1] New York City only.
[2] Period ended earlier than Saturday.

WEEKLY REPORTS FROM CITIES

City reports for week ended September 5, 1942

This table lists the reports from 86 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
Baltimore, Md	2	0	2	1	3	2	8	0	2	0	0	43
Barre, Vt	0	0	------	0	0	0	0	0	0	0	0	0
Billings, Mont	0	0	------	0	1	0	0	0	0	0	0	1
Birmingham, Ala	1	0	------	0	0	0	4	2	0	0	0	0
Boston, Mass	0	0	------	0	2	1	9	0	17	0	1	31
Bridgeport, Conn	0	0	------	0	0	0	1	0	2	0	1	0
Brunswick, Ga	0	0	------	0	0	0	0	0	0	0	0	0
Buffalo, N. Y	2	0	------	0	1	0	2	1	3	0	0	14
Camden, N. J	0	0	------	0	0	0	0	0	1	0	0	4
Charleston, S. C	1	1	------	1	1	0	0	1	1	0	0	0
Charleston, W. Va	0	0	1	0	0	0	0	0	0	0	0	0
Chicago, Ill	7	0	------	1	5	3	16	8	16	0	2	179
Cincinnati, Ohio	1	0	------	0	1	0	0	5	5	0	0	13
Cleveland, Ohio	0	0	6	0	3	0	3	6	10	0	0	35
Columbus, Ohio	0	0	------	0	0	0	1	0	9	0	1	8
Concord, N. H	0	0	------	0	0	0	0	0	0	0	0	0
Cumberland, Md	0	0	------	0	0	0	0	0	0	0	0	0
Dallas, Tex	1	0	1	1	0	0	2	0	0	0	0	11
Denver, Colo	2	1	5	0	2	0	2	0	0	0	0	12
Detroit, Mich	3	0	1	0	4	0	11	2	15	0	1	120
Duluth, Minn	0	0	------	0	0	0	0	0	0	0	0	5
Fall River, Mass	0	0	------	0	1	0	2	0	4	0	0	6
Fargo, N. Dak	0	0	------	0	1	0	1	1	0	0	0	0
Flint, Mich	1	0	------	0	0	0	1	0	2	0	0	2
Fort Wayne, Ind	0	0	------	0	0	0	2	0	0	0	0	1
Frederick, Md	0	0	------	0	0	0	0	0	0	0	0	0
Galveston, Tex	0	0	------	0	0	0	1	0	0	0	0	1
Grand Rapids, Mich	0	0	------	0	0	0	0	1	0	0	0	5
Great Falls, Mont	0	0	------	0	1	0	2	0	0	0	0	1
Hartford, Conn	0	0	------	0	0	0	3	1	3	0	0	17
Helena, Mont	0	0	------	0	0	0	0	0	0	0	0	0
Houston, Tex	2	0	------	0	0	0	7	0	0	0	2	0
Indianapolis, Ind	0	0	------	0	3	0	5	3	3	0	0	10
Kansas City, Mo	1	0	------	0	0	0	3	0	3	0	0	2
Kenosha, Wis	0	0	------	0	0	0	0	0	0	0	0	14
Little Rock, Ark	0	0	------	0	0	0	2	0	0	0	0	0
Los Angeles, Calif	0	0	7	0	7	1	6	2	4	0	1	15
Lynchburg, Va	1	0	0	0	0	0	2	0	0	0	0	8
Memphis, Tenn	0	0	------	2	1	0	2	2	3	0	0	13
Milwaukee, Wis	0	0	------	0	5	0	0	1	7	0	0	32
Minneapolis, Minn	0	0	------	0	0	1	3	1	4	0	0	1
Missoula, Mont	0	0	------	0	0	0	1	0	0	0	0	0
Mobile, Ala	0	0	------	0	0	0	0	1	0	0	0	0
Nashville, Tenn	0	0	------	0	0	0	2	0	1	0	0	7
Newark, N. J	0	0	------	0	4	0	3	4	0	0	0	18
New Haven, Conn	0	0	------	0	0	0	1	0	1	0	0	7
New Orleans, La	0	0	2	2	0	0	6	0	2	0	4	0
New York, N. Y	6	1	4	0	15	7	37	7	20	0	4	149
Omaha, Nebr	0	0	------	0	0	0	3	0	1	0	0	3
Philadelphia, Pa	1	0	------	0	4	1	7	1	15	0	3	70
Pittsburgh, Pa	1	0	------	0	0	1	6	3	1	0	0	6
Portland, Maine	0	0	------	0	11	1	3	0	1	0	0	0
Providence, R. I	0	0	------	0	4	0	2	0	1	0	1	8
Pueblo, Colo	0	0	------	0	0	0	0	0	0	0	0	0
Racine, Wis	0	0	------	0	0	0	0	0	2	0	0	8
Raleigh, N. C	0	0	------	0	0	0	0	0	0	0	0	1
Reading, Pa	0	0	------	0	0	0	2	0	0	0	0	6
Richmond, Va	0	0	------	0	0	0	1	0	1	0	0	1

City reports for week ended September 5, 1942—Continued

	Diphtheria cases	Encephalitis, infectious cases	Influenza		Measles cases	Meningitis, meningococcus cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
Roanoke, Va	0	0	------	0	0	0	0	0	0	0	0	1
Rochester, N. Y	0	1	------	0	0	0	1	2	1	0	1	13
Sacramento, Calif	0	0	------	0	1	0	1	0	1	0	0	6
Saint Joseph, Mo	0	0	------	0	0	0	0	0	1	0	0	0
Saint Louis, Mo	1	1	------	0	1	0	9	3	9	0	3	8
Saint Paul, Minn	0	0	------	0	2	0	3	1	4	0	0	47
Salt Lake City, Utah	0	0	------	0	6	0	1	2	0	0	0	2
San Antonio, Tex	1	0	------	1	0	0	0	1	0	0	0	3
San Francisco, Calif	0	0	1	1	12	1	3	0	2	0	0	15
Savannah, Ga	0	0	------	0	0	0	0	0	1	0	1	3
Seattle, Wash	1	0	------	0	4	0	2	0	1	0	0	20
Shreveport, La	0	0	------	0	0	0	5	0	0	0	2	0
Spokane, Wash	0	0	------	0	4	0	0	0	1	0	0	7
Springfield, Ill	0	0	------	0	0	0	1	0	1	0	0	10
Springfield, Mass	0	0	------	0	0	0	1	0	10	0	0	8
Superior, Wis	0	0	------	0	0	0	0	0	0	0	2	2
Syracuse, N. Y	0	0	------	0	3	0	4	0	0	0	1	15
Tacoma, Wash	0	0	------	0	10	0	1	0	1	0	0	2
Tampa, Fla	0	0	------	0	0	0	1	0	0	0	0	0
Terre Haute, Ind	1	0	------	0	0	0	0	0	0	0	0	0
Topeka, Kans	0	0	------	0	0	0	0	0	0	0	0	1
Trenton, N. J	0	0	1	0	0	0	1	0	3	0	0	7
Washington, D. C	2	0	------	0	1	0	7	0	5	0	0	10
Wheeling, W. Va	0	0	------	0	0	0	1	0	1	0	0	6
Wichita, Kans	0	0	------	0	0	0	4	0	0	0	0	7
Wilmington, Del	0	0	------	0	0	0	4	0	2	0	1	2
Winston-Salem, N. C	1	0	------	0	0	0	1	0	0	0	0	2
Worcester, Mass	0	0	------	0	0	0	4	0	1	0	0	34

Anthrax—Cases: New Orleans, 1.
Dysentery, amebic—Cases: Birmingham, 3; Boston, 2; Detroit, 1; San Francisco, 1.
Dysentery, bacillary—Cases: Baltimore, 5; Chicago, 4; Columbus, 1; Detroit, 1; Los Angeles, 8; Nashville, 5; New Haven, 1; Richmond, 1; St. Louis, 8; San Francisco, 3.
Rocky Mountain spotted fever—Cases: Columbus, 1.
Typhus fever—Cases: Brunswick, 1; Houston, 1; Mobile, 3; Nashville, 1; New York, 2; Savannah, 2; Raleigh, 2.

Rates (annual basis) per 100,000 population, for the group of 86 cities in the preceding table (estimated population, 1942, 33,662,622)

Period	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
		Cases	Deaths						
Week ended Sept. 5, 1942	6.20	4.96	1.55	19.21	35.63	31.75	0.00	4.96	173.33
Average for week 1937–41	9.23	4.54	1.41	[1] 29.74	36.00	32.56	0.31	9.70	184.22

[1] Median.

TERRITORIES AND POSSESSIONS

Hawaii Territory

Plague (rodent).—During the week ended August 22, 1942, 6 rats proved positive for plague were reported in Hamakua, Paauhau area, island of Hawaii. During the same week one rat proved positive for plague was reported in the Makawao area, about 9.4 miles from the port of Kahului, on the Island of Maui, Hawaii Territory.

Panama Canal Zone

Notifiable diseases—June 1942.—During the month of June 1942, certain notifiable diseases were reported in the Panama Canal Zone and terminal cities and vicinities, as follows:

Disease	Panama		Colon		Canal Zone		Outside the Zone and terminal cities		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Chickenpox	7				3		1		11	
Diphtheria	11		6		4				21	
Dysentery (amebic)					5		3	1	8	1
Dysentery (bacillary)	1	1			1		6	6	8	7
Leprosy	1								1	
Malaria [1]	36	3	12	1	1,029	2	318	5	1,395	11
Measles	5		4		55		3		67	
Meningitis, meningococcus	1				2				3	
Mumps	1				3				4	
Paratyphoid fever					3		1		4	
Pneumonia					76				[2] 76	
Trachoma					1				1	
Tuberculosis		21		6	11	3		7	[2] 11	37
Typhoid fever	1								1	
Whooping cough					7				[2] 7	

[1] Includes 97 recurrent cases.
[2] Reported in the Canal Zone only.

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended August 22, 1942.—During the week ended August 22, 1942, cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis					2	1		1	5	9
Chickenpox				40	25	7	10	2	26	110
Diphtheria		11	1	14	2	4	2	1	1	36
Dysentery		2		17						19
German measles		3		1	7		2		3	16
Influenza					6				5	11
Lethargic encephalitis						3				3
Measles	1			71	13	3	20	5	3	116
Mumps		4		10	110	2	13	2	53	194
Pneumonia					2				1	3
Poliomyelitis		11	14	17	5				2	49
Scarlet fever		1	7	36	43	7	15	19	19	147
Tuberculosis	7		34	166	47		24	26	21	325
Typhoid and paratyphoid fever			4	18	6	2		3		33
Undulant fever				1	3					4
Whooping cough				254	68	2	10	2	32	368
Other communicable diseases		2		2	250	47	1	1	5	308

CUBA

Habana—Communicable diseases—4 weeks ended August 22, 1942.—During the 4 weeks ended August 22, 1942, certain communicable diseases were reported in Habana, Cuba, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Diphtheria	19	2	Tuberculosis	4	1
Malaria	10		Typhoid fever	39	3
Measles	7		Whooping cough	1	1
Poliomyelitis	15		Yaws	1	1

Provinces—Notifiable diseases—4 weeks ended August 15, 1942.—During the 4 weeks ended August 15, 1942, cases of certain notifiable diseases were reported in the Provinces of Cuba, as follows:

Disease	Pinar del Rio	Habana [1]	Matanzas	Santa Clara	Camaguey	Oriente	Total
Cancer	2	2	5	5		14	28
Diphtheria	1	23	4	4	1	2	35
Hookworm disease		23				2	25
Malaria	187	21		24	18	412	662
Measles	4	6		3		6	19
Poliomyelitis	3	26	1	2	8	37	77
Scarlet fever						1	1
Tuberculosis	8	11	7	26	17	42	111
Typhoid fever	13	57	19	51	29	56	225

[1] Includes the city of Habana.

FINLAND

Communicable diseases—May 1942.—During the month of May 1942, cases of certain communicable diseases were reported in Finland as follows:

Disease	Cases	Disease	Cases
Diphtheria	157	Poliomyelitis	3
Dysentery	5	Scarlet fever	634
Influenza	999	Typhoid fever	153
Paratyphoid fever	91		

PERU

Arequipa Province—Foot and mouth disease.—An outbreak of foot and mouth disease was reported in the Province of Arequipa on July 20, 1942, and on July 31 the Province was quarantined. On August 25 approximately 2,340 cases were reported present. To that date, only 1 human case had been reported. It is believed that the infection came from Nazca, where the disease had appeared 5 months previously, as Arequipa cattle are customarily sent there for pasturage during the fall and winter.

TANGANYIKA TERRITORY

Notifiable diseases—Year 1941.—During the year 1941, certain notifiable diseases were reported in Tanganyika Territory as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	13	2	Relapsing fever	2,219	15
Blackwater fever	72	8	Schistosomiasis	10,954	10
Cancer and other tumors	676	51	Senility		22
Cerebrospinal meningitis	2,749	541	Smallpox	92	6
Dysentery	2,992	35	Syphilis	36,487	19
Gonorrhea	15,829	3	Trypanosomiasis	584	204
Hookworm disease	16,386	139	Tuberculosis	3,618	86
Malaria	79,520	81	Typhoid fever	142	26
Paratyphoid fever	18		Yaws	77,999	6
Plague	2	2			

WORLD DISTRIBUTION OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

From medical officers of the Public Health Service, American consuls, International Office of Public Health, Pan American Sanitary Bureau, health section of the League of Nations, and other sources. The reports contained in the following tables must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

CHOLERA

[C indicates cases]

NOTE—Since many of the figures in the following tables are from weekly reports, the accumulated totals are for approximate dates.

Place		January-June 1942	July 1942	August 1942—week ended—				
				1	8	15	22	29
ASIA								
Ceylon	C	82			12			
China: Kunming (Yunnanfu)	C	913						
India	C	33,699						
Calcutta	C	1,151	594	78				
Chittagong	C	55						
Rangoon	C	1						
India (French)	C	10						

PLAGUE

[C indicates cases; P, present]

AFRICA								
Basutoland	C	10						
Belgian Congo	C	2						
British East Africa:								
Kenya	C	535						
Nairobi	C	64						
Uganda	C	276						
Egypt: Port Said	C	1			1			
Madagascar	C	84			2		2	
Morocco	C	277		2	9	1	14	
Senegal	C							[1] 4
Union of South Africa	C	68						
ASIA								
China.[2]								
India	C	385						
Indochina (French)	C	70					1	
Palestine: Haifa	C	4			1			
EUROPE								
Portugal: Azores Islands	C	1						
NORTH AMERICA								
Canada: Alberta Province—								
Plague-infected fleas			P					
SOUTH AMERICA								
Argentina: Cordoba Province	C	7						
Brazil:								
Alagoas State	C	3						
Pernambuco State	C	6						
Chile: Valparaiso	C	1						
Peru:								
Ancash Department	C	6						
Lambayeque Department	C	3						
Libertad Department	C	6						
Salaverry—Plague-infected rats		P						
Lima Department	C	49						
Lima	C	15						
Piura Department	C	15						
OCEANIA								
Hawaii Territory: Plague-infected rats		24	3		2		7	
New Caledonia.[3]								

[1] Includes 3 suspected cases.

[2] Plague has been reported in China as follows: Chekiang Province, Apr. 1–10, 1942, 4 cases; Fukien Province, Jan. 1–Apr. 5, 1942, plague appeared in 11 localities; Hunan Province, week ended Apr. 18, 1942, 2 cases; Suiyuan Province, pneumonic plague appeared in epidemic form during the period Jan. 1–Apr. 4, in the northwestern area.

[3] According to information dated Sept. 7, 1942, one case of pneumonic plague was reported in Plumat, about 12 miles from Noumea, New Caledonia.

SMALLPOX

[C indicates cases]

Place		January–June 1942	July 1942	August 1942—week ended— 1	8	15	22	29
AFRICA								
Algeria	C	540	57					
Belgian Congo	C	249	72					
British East Africa: Tanganyika	C	15						
Dahomey	C	53	3					
French Guinea	C	76						
Gold Coast	C	1,075	20					
Ivory Coast	C	50						
Morocco	C	1,213	62	33	3	8	17	
Nigeria	C	1,302	54	56	49	56		
Niger Territory	C	512						
Portuguese East Africa	C	1	6					
Senegal	C	14	3					
Sudan (French)	C	158	8					
Tunisia	C	1						
Union of South Africa	C	567						
Zanzibar	C	[1] 2						
ASIA								
Ceylon	C	7						
China	C	9						
India	C	17,876	558					
Indochina (French)	C	2,556	194		58		42	
Iran	C	50						
Iraq	C	208	1					
Trans-Jordan	C	2						
EUROPE								
France:								
Seine Department	C	44						
Unoccupied zone	C	13						
Great Britain:								
England and Wales	C		3					
Scotland	C	5	37	6	1			
Portugal	C	36		1				
Spain	C	186	5	1				
Turkey	C				35	7	25	38
NORTH AMERICA								
Canada	C	2	2					
Mexico	C	37						
SOUTH AMERICA								
Brazil	C	1						
Colombia	C	296						
Venezuela (alastrim)	C	95	15					

[1] Imported.

TYPHUS FEVER

[C indicates cases; P, present]

AFRICA								
Algeria	C	32,016	1,811					
Basutoland	C	32						
British East Africa: Kenya	C	8						
Egypt	C	21,427	745		120	104	52	
Ivory Coast	C	4						
Morocco	C	23,330	1,788	134	115	78	58	
Nigeria	C	5						
Niger Territory	C	1						
Senegal	C	[1] 3						
Sierra Leone	C	7						
Tunisia	C	14,589	838		156			
Union of South Africa	C	507						

[1] Suspected.

TYPHUS FEVER—Continued

[C indicates cases; P, present]

Place		January–June 1942	July 1942	August 1942—week ended— 1	8	15	22	29
ASIA								
China	C	145						
India	C	6						
Iran	C	589	52					
Iraq	C	78	5			4		
Palestine	C	22		4	1			
Syria	C	22						
Trans-Jordan	C	5						
EUROPE								
Bulgaria	C	592	17	2				
Czechoslovakia	C	5						
France:								
Seine Department	C	1						
Unoccupied zone	C	226		1	1			
Germany	C	1,817						
Hungary	C	664	49	2	2	8		
Irish Free State	C	9				5		
Portugal	C	1						
Rumania	C	3,301	43	13	11	6	13	10
Spain	C	3,850	15	3				
Canary Islands	C	1						
Switzerland	C				1			
Turkey	C	P	32	3	3	12	6	11
Union of Soviet Socialist Republics	C	67						
NORTH AMERICA								
Guatemala	C	107	7					
Jamaica	C	27	3					
Mexico	C	376	30					
Panama Canal Zone	C	1						
Puerto Rico	C	3						
SOUTH AMERICA								
Chile	C	42	7					
Colombia	C	1						
Ecuador	C	14	37		12	6		
Venezuela	C	16						
OCEANIA								
Australia	C	18	1					
Hawaii Territory	C	26	5	1		2		

YELLOW FEVER

[C indicates cases; D, deaths]

AFRICA								
Belgian Congo: Libenge	D	[1] 1						
British East Africa: Kenya	C	1						
French West Africa	C	1						
Gold Coast	C	[2] 2						
Ivory Coast [3]	C	[2] 2						
Nigeria	C			[1] 1				
Senegal [4]	D					1		
Sierra Leone: Freetown	C	2						
Sudan (French)	D	[1] 1						
Togo: Hohoe	C	1						
SOUTH AMERICA [5]								
Brazil: Acre Territory	D	4						
Colombia:								
Boyaca Department	D	2	3					
Cundinamarca Department	D		3			[6] 1		
Intendencia of Meta	D	1	2					
Santander Department	D	2				[6] 2		

[1] Suspected.
[2] Includes 1 suspected case.
[3] During the week ended September 5, 1942, 2 deaths from suspected yellow fever were reported in Bobo Dioulasso, Ivory Coast.
[4] According to information dated February 9, 1942, 15 deaths from yellow fever among Europeans have occurred in Senegal.
[5] All yellow fever in South America is of the jungle type unless otherwise specified.
[6] For the period July 19–August 11, 1942.

THE TOXICITY AND POTENTIAL DANGERS OF TOLUENE, WITH SPECIAL REFERENCE TO ITS MAXIMAL PERMISSIBLE CONCENTRATION[1]

A Review

This study of the potential dangers of toluene covers experiments regarding its acute and chronic toxicity for humans, dogs, and rats. Exposure of humans to concentrations of 50 to 800 p. p. m. of toluene in air showed that such exposure had no effect on the circulation and respiration and caused only a moderate temporary lymphocytosis immediately after the exposure. It was found, however, that concentrations of 200 p. p. m. and more caused disturbances of the reaction time, incoordination, fatigue, and other subjective symptoms. It appears that as far as the toxicity is concerned the maximal permissible concentration of toluene in air for 8 hours exposure daily is 200 p. p. m. and that in operations which offer specific accident hazards this concentration may prove to be too high.

The elimination of hippuric acid in the urine and the concentration of toluene in the blood increase with the concentration of toluene in air. Especially with higher concentrations of toluene in air the administration of glycine reduces the toluene level in the blood of dogs and favors the excretion of hippuric acid with the urine, ascorbic acid being less effective in this respect.

Experiments with rats show that daily exposure for 7 hours on 5 days per week for 5 weeks to concentrations of 200 to 5,000 p. p. m. of toluene in air has no injurious effect on the blood-forming organs, as indicated by the absence of anemia and of changes in the bone marrow and the spleen. Exposure to concentrations of 2,500 to 5,000 p. p. m. of toluene in air results in rats in a daily shift of the blood picture, characterized by a decrease of the lymphocytes and the total white cell count with a moderate increase of the segmented cells. Exposure to concentrations of 600 to 5,000 p. p. m. of toluene in air caused in rats an enlargement of the liver and a decrease of the spleen volume, the former being associated with a change of the density of the liver cells.

These experiments indicate that toluene is less toxic than benzene with regard to the blood and blood-forming organs and less harmful than carbon tetrachloride with regard to the liver.

[1] The toxicity and potential dangers of toluene, with special reference to its maximal permissible concentration. By W. F. von Oettingen, P. A. Neal, D. D. Donahue, J. L. Svirbely, H. D. Baernstein, A. R. Monaco, P. J. Valaer, and J. L. Mitchell. Public Health Bulletin No. 279. Government Printing Office, 1942. For sale by the Superintendent of Documents, Washington, D. C. Price 10 cents.