Public Health Reports

Vol. 57 • FEBRUARY 13, 1942 • No. 7

THE OCCURRENCE OF HYALINE SCLEROSIS AND CALCI-FICATION OF BLOOD VESSELS IN RATS ON SULFA-GUANIDINE

By FLOYD S. DAFT, Senior Biochemist, L. L. ASHBURN, Passed Assistant Surgeon, SAMUEL S. SPICER, Assistant Surgeon, and W. H. SEBRELL, Surgeon, United States Public Health Service

Sulfaguanidine has been used by Black, McKibbin, and Elvehjem (1); by Mackenzie, Mackenzie, and McCollum (2); and by Dann (3) in the diet of rats with the purpose of preventing or decreasing the synthesis of essential nutrients by the intestinal flora. Black et al. (1) state "The reduced growth on the basal diet plus 0.5% sulfaguanidine may be due to inhibition of intestinal synthesis of essential growth factors which liver extract supplies, or to a toxicity which is counteracted by a factor in liver extract. Results which indicate that the effect is due to inhibition of intestinal synthesis are shown * * *."

We wish to report at this time the finding of extensive hyaline sclerosis and calcification of blood vessels in 7 young rats observed in the course of some preliminary experiments with purified B complex deficient diets containing 1 percent of sulfaguanidine, supplemented with thiamin, riboflavin, pyridoxine, pantothenic acid, nicotinic acid, and choline, and given continuously for 62 to 192 days. This pathologic change has been found so far in the small arteries of the heart, lungs, kidney, pancreas, and the submucosa of the intestinal tract.

The location and degree of involvement are variable. The vessel wall is often completely replaced by a homogeneous or glassy material which is metachromatic or lightly basophilic with eosin and polychrome methylene blue. This glassy material as seen in routine paraffin sections is markedly shattered into variably sized and shaped plates. It forms an orange-brown lake with alizarin red S, it is brown, black marginally, when stained by the von Kossa method for the demonstration of insoluble calcium salts, and rarely shows associated deposition of hemosiderin.

These preliminary findings are being reported because sclerotic changes have not been described previously in experimental animals given sulfaguanidine. It is impossible for us at the present time to

state whether this pathologic condition has its basis in a dietary deficiency induced by sulfaguanidine, or whether the sulfaguanidine or a compound derived from it has contributed directly to the sclerotic changes.

REFERENCES

Black, S., McKibbin, J. M., and Elvehjem, C. A.: The use of sulfaguanidine in nutrition experiments. Proc. Soc. Exp. Biol. and Med., 47: 308-310 (1941).
 Mackenzie, Julia B., Mackenzie, C. G., and McCollum, E. V.: The effect of sulfanilylguanidine on the thyroid of the rat. Science, 94: 518 (1941).
 Dann, W. J.: The synthesis of nicotinic acid by the rat. J. Biol. Chem., 141: 803 (1941).

DENTAL STATUS OF ADULT MALE MINE AND SMELTER WORKERS¹

By H. P. BRINTON, Associate Statistician, United States Public Health Service, D. C. JOHNSTON, D. D. S., and E. O. THOMPSON, D. D. S.

Information regarding the dental status of adult males is scarce (1), although much has been written concerning dental conditions among school children. It was possible to include a detailed examination of oral conditions in connection with a study of bituminous coal mine workers, nonferrous metal mine workers, and smelter workers in the State of Utah which was made by the United States Public Health Service in cooperation with the State Board of Health in 1939. In all there were 2.365 dental examinations recorded which represent 83 percent of the schedules secured in the medical study. It is believed that these persons for whom dental records were obtained are representative of persons employed in the mines and smelters studied.

The dental record form used in this study was that originated by Klein and Palmer (2) with slight modifications. It is shown in figure 1. Each worker was examined in a good light with a mouth mirror and a well sharpened explorer. If necessary, any calculus or debris was cleaned away from the teeth so that an accurate check of gingival conditions could be made. Each examination, which took approximately 10 minutes, was performed by one of the authors. Comparability of results within this study is thereby assured, since only one person was responsible for recording the findings.

Table 1 shows the number and percent examined for each age group, by industry. It will be observed that in the metal mines there was a greater concentration of persons under 35 years of age than is found in the other two industries. Smelters showed a larger percentage of

¹ From the Division of Industrial Hygiene, National Institute of Health.

The data upon which this study is based were collected in connection with a field study made in cooperation with the Utah State Board of Health. This field study dealt with the working environment and the health of workers in bituminous coal mines, nonferrous metal mines, and nonferrous metal smelters in Utah. All dental examinations were performed by Dr. Thompson.

workers in the older age groups. There was nearly the same percentage of coal mine workers and smelter workers 25-34 and 35-44 years of age. On the whole, the differences in age distribution are not sufficiently great to affect interindustry comparisons of dental conditions.

U. S. Public Health Service-Utah Study

Dental Record

No Oral cavity Gingivitis Pyorrhea	Date		ormal		Disease	d	
Gingivitis			Vild		Severe.		
Pyorrhea	: De	TOA:	I	II	III_	IV.	
Saliva	· Norn	nal	- Viscid	R	opy	Odorous	
Evidence of	metallic no	isoning		Lead	····	Other	_
Evidence of Occlusion	· .	700'	T	II	III	IV	
C. Inc.	L. Inc.	Cusp.	1st Bics.	2d Bics.	lst Mol.	2d Mol.	
			Uppe	er left			
		1 1	1 1	1	1 1		
		1					
					<u> </u>		
			Upper	Right			
		1 1					
1							
		1 1					
		1 1					
			Lowei	r Left			
		1 1	1 1 1				
		1 1					
	1	1 1					
	1	1 1					
		!					
	l	·	• Lower	Right	· ·	·	
			1 1 1				
			1 1 1	1			
1 1							
	1						
		1		1 1			
							- 0 h

FIGURE 1.—Record form used in the dental survey. Each tooth or tooth position is represented by 2 boxes. In the left box is placed a symbol to show condition of the tooth, and in the right box a symbol to show the position of any caries, fillings, or other findings yielded by the tooth. For further details see publication mentioned in reference 3.

 TABLE 1.— Number and percent of workers given dental examinations according to age group, by industry

	Metal	mines	Coal	mines	Smelters		
Age group in years	Number	Percent	Number	Percent	Number	Percent	
All ages	690	100. 0	459	100. 0	1, 216	100. 0	
15-24 25-34 35-44 45-54 55-64	83 308 162 90 47 86.0	12.0 44.6 23.5 13.1 6.8	70 155 131 82 21 36. 5	15. 2 33. 8 28. 5 17. 9 4. 6	113 395 347 256 105	9.3 32.5 28.5 21.1 8.6	
Average age	36. 0		36. 5		89.0		

Number of teeth missing, filled, or with untreated dental caries.-The amount of dental caries experience observed in the permanent teeth per 100 men of particular age groups may be expressed in terms of the number of teeth with untreated dental caries, the number of extracted teeth (including teeth indicated for extraction), and the number of filled teeth. All three rates may be considered separately or may be combined into a single rate, known as the D. M. F.² rate. In calculating this rate each item is mutually exclusive with respect to any particular tooth. A tooth containing both a filling and one or more carious lesions is counted as a filled tooth. All teeth indicated for extraction are considered as missing teeth (3). Thus, the same tooth may not be counted more than once. The unit of measurement is the individual tooth, not the tooth surfaces. In each mouth the total number of teeth given consideration is 28. The four third molars are disregarded because of the difficulty of obtaining accurate information on many third molars without a radiodontic examination.

In previous studies the D. M. F. rate has usually been applied to school children, hence the problem of missing teeth, attributable to factors other than caries, has been of little importance. Among young persons the entire rate may be considered as representing caries experience without undue qualification. However, with respect to adults, especially persons over 35 years of age, the reason for missing teeth becomes more important. It can safely be assumed that an unknown proportion of the missing teeth was lost from causes other than caries. Only a specially designed survey of the particular group under study could determine this proportion accurately. Pyorrhea rather than decay is often the cause of lost teeth among older persons. For Utah metal mine, coal mine, and smelter workers 35–64 years of age, it was found that about two-thirds showed evidence of pyorrhea. Undoubtedly the edentulous condition of certain workers was due to this disease.

Table 2 shows the number of teeth missing, filled, and with untreated dental caries according to age group. The D. M. F. rate per 100 men for all ages is 1,446 among coal mine workers, 1,485 among metal mine workers, and 1,542 among smelter workers. It is observed that among young persons, metal mine workers and smelter workers have a slightly higher D. M. F. rate than coal mine workers; among workers 35-44 years of age all three industrial groups have nearly the same rate, while in the two oldest age groups coal mine and metal mine workers have a higher rate than smelter workers. There is a less rapid increase with age in the D. M. F. rate for smelter workers than for the other two industrial groups. Smelter workers have the most unfavorable rate in youth and the most favorable rate in the age group 45-64 years.

² Decayed, missing, filled.

	Number		Number	of teeth—		Number of teeth (per 100 men)-					
Age group, in years	of work- ers ex- amined	Total D. M. F.	Un- treated dental caries	Missing	Filled	Total D. M. F.	Un- treated dental caries	Missing	Filled		
	·	Metal Mines									
All ages	690	10, 244	1, 878	5, 794	2, 572	1, 485	272	840	373		
15-24 25-34 35-44 45-54 55-64	83 308 162 90 47	889 3, 967 2, 476 1, 833 1, 079	301 1, 011 372 154 40	235 1, 629 1, 533 1, 418 979	353 1, 327 571 261 60	1, 071 1, 288 1, 528 2, 037 2, 296	363 328 230 171 285	283 529 946 1, 576 2, 083	425 431 352 290 128		
				C	oal Mine	8					
All ages	459	6, 635	1, 326	4, 253	1, 056	1, 446	289	927	230		
15-24 25-34 35-44 45-54 55-64	70 155 131 82 21	684 1, 750 2, 021 1, 729 451	272 555 351 131 17	208 772 1, 302 1, 548 423	204 423 368 50 11	977 1, 129 1, 543 2, 109 2, 147	389 358 268 160 81	297 498 994 1, 388 2, 014	291 273 281 61 52		
		Smelters									
All ages	1, 216	18, 749	2, 901	10, 937	4, 911	1, 542	239	899	404		
15-24 25-34 85-44 45-54 55-64	113 395 347 256 105	1, 300 5, 261 5, 453 4, 607 2, 128	468 1, 264 737 352 80	318 1, 961 8, 259 8, 548 1, 851	514 2, 036 1, 457 707 197	1, 150 1, 331 1, 571 1, 800 2, 027	414 320 212 138 76	281 496 939 1, 386 1, 763	455 515 420 276 188		

 TABLE 2.— Number of teeth missing, filled, and with untreated dental caries according to age group by industry

An examination of 3,351 male employees of the Metropolitan Life Insurance Company, as reported by Hollander and Dunning (4), yielded the following D. M. F. rates per 100 persons:

Age	Number of persons	Number of affected and missing teeth	D. M. F. rate
All ages	8, 351	58, 741	1, 753
15-24	1, 441 804 537 413 156	20, 519 15, 081 10, 731 8, 766 3, 644	1, 424 1, 876 1, 998 2, 123 2, 336

It will be observed that these rates which are based on 32 teeth (excluding unerupted teeth) do not differ greatly from the rates for Utah coal mine, metal mine, and smelter workers for the two oldest age groups, but for the younger age groups the male life insurance employees have much higher rates. The effect of this is to make the increase with age less rapid than among the Utah workers.

It will be noted in each industry that the number of permanent teeth with untreated dental caries per 100 men becomes steadily smaller with advancing age. This is most marked among smelter workers and least marked among coal mine workers. On the other hand, the number of missing teeth per 100 men increases rapidly among the older age groups. It is obvious that a neglected tooth is likely at a later age to become a missing tooth and hence can appear no longer in the classification of untreated dental caries.

A dental study of a group of pottery workers showed the same tendency for unfilled carious teeth to become less common with advancing age, while missing teeth became more common (5).

The maximum rate for filled teeth is reached in the 25-34-year age group among metal mine and smelter workers, but occurs a decade earlier, in the 15-24 year group, among coal mine workers. For each age group filled teeth are less common among coal mine workers than among either of the other two industrial groups. Teeth with untreated dental caries are found to be slightly more frequent among coal mine workers of all ages than among the others. However, despite this adverse influence, the total D. M. F. rate of coal mine workers is not unfavorable, suggesting the presence of other environmental factors which might possible compensate for the apparently lesser amount of dental care.

As previously explained, the number of missing teeth per 100 men is based on a count which includes persons who have lost some of their teeth as well as persons who have lost all their teeth. This loss cannot be attributed solely to caries. There is remarkably little difference in the age-specific rates for missing teeth in the industries studied, especially so among the first three age groups. For example, in the 35-44-year age group, the industry with the highest rate was less than 6 percent greater than the industry with the lowest rate. After 45 years of age the rate for missing teeth rose more rapidly for coal mine and metal mine workers than for smelter workers.

The number of missing teeth compared with all carious, filled, or missing teeth (or M/D. M. F.) was highest at each age group for coal mine workers, ranging from 30.4 percent for persons 15-24 years of age to 93.8 percent for persons 55-64 years of age. In other words, among the 21 coal mine workers in the oldest age group there were 423 teeth missing compared with 28 defective teeth which remained. Moreover, only 137 teeth were neither affected by decay nor lost. Among metal mine workers in the same age group missing teeth constituted 90.7 percent of all affected teeth and among smelter workers there were 87.0 percent missing. Since the rate for missing teeth is cumulative, it is not surprising that the position of the three industrial groups at the youngest age is maintained throughout all succeeding It would appear that coal mine workers at each age age groups. group are most likely to lose teeth which become affected, although they have a smaller proportion of teeth decayed (teeth with untreated

dental carics plus filled teeth). Both metal mine and smelter workers have a greater proportion of teeth decayed, but not such a large percentage of those affected are lost as among coal mine workers.

Missing teeth may be considered from the viewpoint of persons who are not edentulous. The following table shows the number of missing teeth per 100 men who had some teeth remaining:

Age	Metal mines	Coal mines	Smelters
All ages 15-24 25-34	519 283 437 575 932 1, 115	549 297 453 687 930 737	543 281 393 633 778 855

The above rates compared with the rates including edentulous persons are the same for the first age group because in this group no individual had all teeth missing. Among persons of older age, differences in the relative position of the three industries are not great except for the decline in rate for coal mine workers between 45-54 and 55-64 years of age. The omission of edentulous persons reduces the rapidity of rise in rate with age, since most of the persons so affected are over 45 years.

Edentulous workers.—Edentulous workers numbered 366, or 15.5 percent of all persons examined. According to industry, as shown in table 3, there were 16.8 percent of the workers in coal mines who had lost all teeth in both jaws, 15.8 percent of the smelter workers, and 14.1 percent of the workers in metal mines who were so affected. A study of 228 male pottery workers showed a slightly more favorable experience, with 12.3 percent of the workers having both jaws edentulous (5).

Age group, in years	Number	of edentulou	s workers	Percent of workers having edentulous mouths ¹			
	Metal mines	Coal mines	Smelters	Metal mines	Coal mines	Smelters	
All ages	97	77	192	14.1	16.8	15.8	
15-24. 25-34. 35-44. 45-54. 55-64.	0 12 27 31 27	0 3 19 42 13	0 17 49 77 49	0 3.9 16.7 34.4 57.4	0 1.9 14.5 51.2 61.9	0 4.3 14.1 30.1 46.7	

TABLE 3.—Number and percent of edentulous workers according to age group by industry

1 The populations upon which these percentages are based are shown in table 1.

No edentulous workers were found in the age group 15-24 years. In the age groups 25-34 and 35-44, which taken together represented

437752•-42-2

over 60 percent of the workers examined in each industry, edentulous persons comprised between 7 and 8 percent, compared with 4.8 percent among pottery workers. When considered by 10-year age groups it is noted that coal mine workers have a more favorable experience when young than either metal mine or smelter workers, have about the same incidence as the others when 35-44 years, and have a definitely unfavorable experience after 45 years of age. This may be related to the finding that among the younger coal mine workers there were more teeth with untreated dental caries and less filled teeth. Less care when young might affect the loss of all teeth when older. All three industrial groups show a rapid increase with age in the percent edentulous, but this is most marked among coal mine workers. For example, between the age groups 35-44 and 45-54 years the percentage edentulous among coal mine workers increases more than three times, while in the other two industries during the same period the rate is only slightly more than doubled.

In the present study 93 percent of the edentulous workers were wearing artificial dentures. Among male pottery workers there were 99 percent with dentures.

Gingivitis.—Gingivitis as here defined is any general inflammation of the gingival tissue. It was diagnosed as mild when characterized by a slight degree of swelling, redness, and soreness, but no pus, and as severe when there was a pronounced swelling, redness, and soreness with pus present.

		P	ercent affect	Number affected							
Industry	Number of workers	Deg	gree of gingiv	vitis	Degree of gingivitis						
	examined	Mild	Severe	Mild and severe	Mild	Severe	Mild and severe				
		15-34 years									
Metal mines Coal mines Smelters	379 222 491	44. 6 87. 4 42. 6	9.5 5.4 11.0	54. 1 42. 8 53. 6	169 83 209	36 12 54	205 95 263				
	35-64 years										
Metal mines Coal mines Smelters	214 160 533	43. 5 45. 0 44. 8	34. 1 33. 1 31. 3	77.6 78.1 76.1	93 72 239	73 53 167	166 125 406				
	All ages										
Metal mines Coal mines Smelters	593 382 1, 024	44. 2 40. 6 43. 7	18.4 17.0 21.6	62. 6 57. 6 65. 3	262 155 448	109 65 221	371 220 609				

TABLE 4.— Number	and	percent	of	workers	with	gingivitis,	in	two	age gr	oups,	by
				industr	y						

Table 4 shows the percentage of workers affected with mild and with severe gingivitis. The older group, representing persons 35-64 years of age, shows a much greater prevalence of the severe type of gingivitis than does the younger group, but for the mild type age appears to make little difference. Among persons 15-34 years of age there was less gingivitis and it was less severe for coal mine workers than for the other two industrial groups. In the older age group there was no appreciable difference by industry in the percentage of persons affected with either mild or severe gingivitis.

Peridontoclasia (pyorrhea alveolaris).—Peridontoclasia or pyorrhea is described as a purulent inflammation of the dental periosteum. It is a chronic infection which is characterized by the breaking down and destruction of the alveolar tissue. Pockets are formed between the gum tissue and the tooth root.

In this study pyorrhea-affected workers were divided into four classes:

Class I. Pockets up to 3 mm. deep around less than half the full complement of teeth.

Class II. Pockets up to 3 mm. deep around more than half of the teeth.

Class III. Pockets more than 3 mm. deep around less than half of the teeth.

Class IV. Pockets more than 3 mm. deep around more than half of the teeth. This group includes all cases in which the remaining teeth are hopelessly pyorrhetic.

		Percent affected					Number affected				
Industry	Num- bet of workers		Class of pyorrhea				Class of pyorrhea				
	ex- amined	I	п	ш	IV	All classes	I	п	ш	IV	All classes
	15-34 years										
Metal mines Coal mines Smelters	379 222 491	14. 5 16. 2 26. 5	12.1 7.7 7.7	4.0 4.5 4.7	2.6 .9 .8	33. 2 29. 3 39. 7	55 36 130	46 17 38	15 10 23	10 2 4	126 65 195
					3!	5-64 yea	-8				
Metal mines Coal mines Smelters	214 160 533	17. 8 16. 2 26. 1	14.0 13.1 13.1	11. 7 19. 4 16. 5	19. 6 20. 0 10. 9	63. 1 68. 7 66. 6	38 26 139	30 21 70	25 31 88	42 32 58	135 110 355
	All ages										
Metal mines Coal mines Smelters	593 382 1, 024	15. 7 16. 3 26. 3	12.8 9.9 10.5	6. 7 10. 7 10. 8	8.8 8.9 6.1	44. 0 45. 8 53. 7	93 62 269	76 38 108	40 41 111	52 34 62	261 175 550

 TABLE 5.— Number and percent of workers with pyorrhea, in two age groups, by industry

Table 5 shows the number of persons affected according to these four classes of pyorrhea. Among persons 15-34 years of age, 29.3 percent of the coal mine workers, 33.2 percent of the metal mine workers, and 39.7 percent of the smelter workers had pyorrhea. The favorable showing of coal mine workers when analyzed by class of pyorrhea is influenced by the fact that this group had 20.7 percent with less than half of the teeth affected (Classes I and III), compared with 31.2 percent for smelter workers, and it had 8.6 percent with more than half of the teeth affected (Classes II and IV), compared with 14.7 percent for metal mine workers. Edentulous persons do not enter into this calculation, but if they were included the position of coal mine workers would be still more favorable.

For all classes of pyorrhea in each industry, the percentage affected was greater among persons 35-64 years of age than in the younger age group. This increase was most pronounced for Class IV (pockets more than 3 mm. deep around more than half of the teeth) and for Class III (pockets more than 3 mm. deep around less than half of the teeth). Thus it is evident that both the proportion of teeth affected and the severity of the infection increase with age. The percentage in Class I (pockets up to 3 mm. deep around less than half of the teeth) shows almost no change with age.

When the proportions affected according to class of pyorrhea are compared by industry for persons 35-64 years of age it is observed that Class I is more common and Class IV less common among smelter workers than among the other two industrial groups. Class II is nearly the same for all three industries. Class III is less common among metal workers. Because of a relatively high incidence of Class III and Class IV pyorrhea, coal mine workers have a slightly higher percentage of the total for pyorrhea in the older age group.

Lead line.—The lead line, or Burtonian line, was observed in certain groups of the workers studied. It is characterized by a fine line of blue-black granules which are deposited immediately below the gingival crest. Aub (6) states that it is due to a deposit of lead sulfide about the blood vessels in the tips of the interdental papillae. Thus, it is more easily noticed in persons who have peridontoclasia. In a lead smelter there were 19 persons who showed a lead line; all also had gingivitis and all but one had pyorrhea.

It is possible that in some healthy mouths the lead line was not detected. In edentulous persons where the gums had healed over the destroyed alveolar process no lead line was found, even when it had been present previously.

Among the 40 persons (none edentulous) employed in a metal mine producing lead carbonate ores who showed a lead line, all but one had gingivitis and 72 percent were found to have pyorrhea. The dental caries experience for this group was favorable as compared with all metal mine workers, the D. M. F. rates per 100 men being 1,087 and 1,590, respectively. For persons under 35 years of age the corresponding rates were 1,004 and 1,242. It would appear that persons showing a lead line are likely to have gingivitis and pyorrhea, but with respect to untreated dental caries, missing teeth, and filled teeth, considered together, a lead line is not associated with unfavorable experience.

In certain metal mines and smelters it is known that many of the workers were exposed to appreciable concentrations of lead. None of the persons working only in coal mines are thought to have had a lead exposure. Possibly this factor, common to the environment of metal mine and smelter workers but absent from the environment of coal mine workers, had some influence on the generally more favorable experience of the latter group, 15–34 years of age, with respect to the occurrence of dental caries, loss of teeth, gingivitis, and pyorrhea.

According to Aub, Fairhall, Minot, and Reznikoff (7), lead workers commonly have "bad teeth." It is possible that lead, even in comparatively small concentrations, may exert an adverse influence on the health of the gums. For example, it was observed that among persons 15-34 years of age working in a smelter which processes lead ores, 50.4 percent showed pyorrhea, while in a copper smelter 35.8 percent were so affected.

SUMMARY

Dental examinations were made on 2,365 adult male workers in three industries in the State of Utah. It was found that the D. M. F. rate (number of teeth with untreated dental caries, plus filled teeth, plus missing teeth) per 100 men was 1,446 among coal mine workers, 1,485 among metal mine workers, and 1,542 among smelter workers. When the component parts of this rate were considered, it appeared that coal mine workers were most likely to lose teeth once they had become affected, but they had a smaller proportion of decayed teeth (teeth with untreated dental caries plus filled teeth) than either metal mine or smelter workers. The lower D. M. F. rate for all coal mine workers was due to the more favorable experience of this group under 35 years of age. Above this age, workers in the other two industries had about the same D. M. F. rates as coal mine workers.

There was a smaller proportion of edentulous persons among coal mine workers 25-34 years of age than among metal mine or smelter workers of the corresponding age groups. Among older persons the position was reversed, and coal mine workers showed the highest proportion of edentulous.

Among persons 15-34 years of age there was less gingivitis and it was less severe for coal mine workers than for the other two industrial groups. The older age group showed little difference by industry.

The incidence of pyorrhea, likewise, was favorable among the younger group of coal mine workers, but not among the older workers.

It was shown that persons who were found to have a lead line had a much greater incidence of gingivitis and pyorrhea but lower D. M. F. rates than all workers in these industries. It is suggested that the generally more favorable dental experience of coal mine workers 15-34 years of age may be partially due to the circumstance that they presumably have not been exposed to lead, while certain metal mine and smelter workers have had lead exposures.

REFERENCES

- (1) Gafafer, W. M., and Messner, C. T.: Results of a dental examination of 1,908 white and colored males at the Ohio State Reformatory. Pub. Health
- Rep., 51: 321-332 (1936).
 (2) Klein, Henry, and Palmer, C. E.: A procedure for recording and processing of dental examination findings. J. Dent. Res., 19: 243 (1940).
- (a) Finite Field Field (1998).
 (b) Field (1998).
 (c) Knutson, J. C., and Klein, Henry: Studies on dental caries. Pub. Health Rep., 53: 1021-1032 (1938).
 (c) Hollander, F., and Dunning, J. M.: A study by age and sex of the incidence of dental caries in over 12,000 persons. J. Dent. Res., 18: 43-60 (1939). A brief report of findings is given in the Stat. Bull., Metropolitan Life Insurance Co., 22: 12-14 (January 1941).
 (5) Flinn, R. H., Dreessen, W. C., Edwards, T. I., Riley, E. C., Bloomfield, J. J., Sayers, R. R., Cadden, J. F., and Rothmann, S. C.: Silicosis and lead poisoning among pottery workers. Pub. Health Bull. No. 244. Government Printing Office, Washington, D. C., 1939.
 (6) Aub, J. C.: Lead poisoning. In Textbook of Medicine, by Russell Cecil, 4th edition. W. B. Saunders and Co., Philadelphia, 1937.
 (7) Aub, J. C., Fairhall, L. T., Minot, A. S., and Reznikoff, P.: Lead Poisoning. Medical Monographs 7: 1663. Williams and Wilkins Co., Baltimore, 1926.

REPORT ON MARKET-MILK SUPPLIES OF STANDARD MILK ORDINANCE COMMUNITIES¹

Compliance of the Market-Milk Supplies of Certain Standard Milk Ordinance Communities With the Grade A Pasteurized and Grade A Raw Milk Requirements of the Public Health Service Milk Ordinance and Code, as Shown by Compliance (Not Safety) Ratings of 90 Percent or More Reported by the State Milk-Sanitation Authorities During the Period January 1, 1940, to December 31, 1941

The accompanying list gives the semiannual revision of the list of certain Standard Milk Ordinance communities in which the pasteurized market milk is both produced and pasteurized in accordance with the Grade A pasteurized milk requirements of the Public Health Service Milk Ordinance and Code and in which the raw market milk sold to the final consumer is produced in accordance with the Grade A raw milk requirements of said ordinance and code, as shown by ratings of 90 percent or more reported by State milksanitation authorities.

These ratings are not a complete measure of safety, but represent the degree of compliance with the Grade A requirements of the Public

¹ From the States Relations Division.

Health Service Milk Ordinance and Code. Safety estimates should also take into account the percentage of milk pasteurized, which is given in the following tables.

The milk ordinance recommended by the Public Health Service is now in effect in hundreds of communities ranging in population from 1,000 to 3,500,000 and located in 35 States.

The primary reason for publishing the rating lists from time to time is to encourage these communities to attain and maintain a high level of excellence in the enforcement of this ordinance. No comparison with communities operating under other milk ordinances is intended or implied.

It is emphasized that the Public Health Service does not intend to imply that only those communities on the list are provided with high-grade milk supplies. Some communities which have high-grade milk supplies are not included, because arrangements have not been made for the determination of their ratings by the State milk-sanitation authority. In other cases the ratings which have been determined are now more than 2 years old and have therefore lapsed. In still other communities with high-grade milk supplies there seems, in the opinion of the community, to be no local necessity nor desire for rating or inclusion in the list, nor any reasonable local benefit to be derived therefrom.

The rules under which a community is included in this list are as follows:

(1) All ratings must have been determined by the State milk-sanitation authority in accordance with the Public Health Service rating method (Pub. Health Rep., 53: 1386 (1938). Reprint No. 1970), based upon the Grade A pasteurized milk and the Grade A raw milk requirements of the Public Health Service Milk Ordinance and Code.

(2) No community will be included in the list unless both its pasteurized milk and its raw milk ratings are 90 percent or more. Communities in which only raw milk is sold will be included if the raw milk ratings are 90 percent or more. Communities which receive, without local inspection, milk from other sheds will be included in the list only if the locally inspected supply, as well as the shipped-in supply, shows a rating of 90 percent or more.

(3) The rating used will be the latest rating submitted to the Public Health Service, but no rating will be used which is more than 2 years old. In order to promote continuous rigid enforcement rather than occasional "clean-up campaigns" it is suggested that when the rating of a community on the list falls below 90 percent no resurvey be made for at least 6 months, resulting in removal from the next semiannual list. (4) The Public Health Service will make occasional check surveys of cities for which ratings of 90 percent or more have been reported by the State. If such check rating is less than 90 percent but not less than 85, the city will be removed from the 90-percent list after 6 months unless a resurvey submitted by the State during this probationary interim shows a rating of 90 percent or more. If, however, such check rating is less than 85 percent, the city will be removed from the list immediately. If the check rating is 90 percent or more, the city will be retained on the list for a period of 2 years from the date of the check survey unless a subsequent rating submitted during this period warrants its removal.

Communities are urgently advised to bring their ordinances up to date at least every 5 years, since ratings will be made on the basis of later editions if those adopted locally are more than 5 years old.

Communities which are not now on the list and desire to be rated should request the State milk-sanitation authority to determine their ratings and, if necessary, should improve their status sufficiently to merit inclusion in the list.

Communities which are now on the list should not permit their ratings to lapse, as ratings more than 2 years old cannot be used.

State milk-sanitation authorities who are not now equipped to determine municipal ratings are urged, in fairness to their communities, to equip themselves as soon as possible. The personnel required is small, as in most States one milk specialist is sufficient for the work.

TABLE 1.—Standard Milk Ordinance communities in which all market milk is pasteurized. In these communities market milk complies with the Grade A pasteurized milk requirements of the Public Health Service Milk Ordinance and Code to the extent shown by pasteurized milk ratings of 90 percent or more ¹

Community	Percent- age of milk pas- teurized	Date of rating	Community	Percent- age of milk pas- teurized	Date of rating
ILLINOIS Aurora Brooklyn * Cahokia *	100 100 100	May 3, 1940. Oct. 8, 1941. Do.	MINNESOTA Rochester Winona	100 100	May 29, 1941. Septemter 1940.
Canteen ² Centerville ² Champaign East St. Louis ² Elgin	100 100 100 100 100	Do. Do. July 23, 1941. Oct. 8, 1941. July 12, 1940.	MISSOURI St. Louis NORTH CAROLINA	100	June 7, 1940.
Fairmont City ³ National City ³ Stites ³ Washington Park	100 100 100 100	Oct. 8, 1941. Do. Do. Do.	Clinton Fort Bragg Greenville Sylva	100 100 100 100	June 5, 1940. June 4, 1940. June 15, 1940. May 10, 1940.

¹ Note particularly the percentages of milk pasteurized in the various communities listed in these tables. This percentage is an important factor to consider in estimating the safety of a city's milk supply ___________

The inclusion of a community in this list means that the pasteurized milk sold in the community, if any, is of such a degree of excellence that the weighted average of the percentages of compliance with the various items of sanitation required for Grade A pasteurized milk is 90 percent or more and that, similarly, the raw milk sold in the community, if any, so nearly meets the requirements that the weighted average of the percentages of compliance with the various items of sanitation required for Grade A raw milk is 90 percent or more. However, high-grade pasteurized milk is safer than high-grade raw milk, because of the added protection of pasteurization. To secure this added protection, those who are dependent on raw milk can pasteurize the milk at home in the following simple manner: Heat the milk over a hot flame to 165° F., stirring constantly; then immediately place the vessel in cold water and continue stirring until cool.

TABLE 2.—Standard Milk Ordinance communities in which some market milk is pasteurized. In these communities the pasteurized market milk complies with the Grade A pasteurized milk requirements and the raw market milk complies with the Grade A raw milk requirements of the Public Health Service Milk Ordinance and Code to the extent shown by pasteurized and raw milk ratings, respectively, of 90 percent or more¹

				. .	
Community	Percent- age of milk pas- teurized	Date of rating	Community	Percent- age of milk pas- teurized	Date of rating
ALABAMA			ILLINOIS		
Dothan Tuscaloosa	84 86	June 23, 1941. May 24, 1940.	Chicago Decatur Evanston ²	92	Apr. 11, 1941. Oct. 3, 1940. Apr. 17, 1940.
ARKANSAS	-		Glenco. Highland Park	99.8	Apr. 11, 1940. Do.
El Dorado Fayetteville		June 1940. November 1940.	Kenilworth Lake Bluff Lake Forest	99.8	Do. Do. Do.
Fort Smith	48	September 1940. October 1940.	Oak Park. Peoria	99.8	Jan. 17, 1941. May 23, 1940.
Little Rock Pine Bluff	56 43	October 1941. November 1941.	Waukegan Winnetka	99.9 99.8	Apr. 3, 1940. Apr. 11, 1940.
Texarkana	62	September 1941.	IOWA	88.0	11p1. 11, 1010.
COLORADO			Washington	74	Jan. 7, 1941.
Pueblo	59	April 1941.	KANSAS		
FLORIDA			Chanute Lawrence	40 69	May 1940. Do.
Coral Gables Dania	97 95	April 1940. Mar. 28, 1940.	Wellington Wichita	54 75	April 1940. December 1939.
Deerfield Fort Lauderdale	95	Do. Do.		79	December 1939.
Hallandale	95	Do. Do.	RENTUCKY Bowling Green	68	June 12, 1941.
Jacksonville Miami	78	April 1941. April 1940.	Glasgow	52 40	June 1941. December 1941.
Pompano Tallahassee	95	Mar. 28, 1940. September 1941.	Lexington Louisville	66 99.2	September 1940.
	30	September 1931.	Owensboro Paducah	80 1	July 23, 1941. February 1941.
GEORGIA		36 14 1040	Richmond	28	Jan. 14, 1941.
Statesboro	40	Mar. 14, 1940.	Somerset	9 (November 1940.

[Note.—All milk should be pasteurized or boiled, either commercially or at home, before it is consumed. See text for home method]

¹ Note particularly the percentage of milk pasteurized in the various communities listed in these tables. This percentage is an important factor to consider in estimating the safety of a city's milk supply. ³ Has not adopted the milk ordinance recommonded by the Public Health Service.

437752°-42-8

TABLE 2.—Standard Milk Ordinance communities in which some market milk is

ADDE 2.—Summers Mus orainance communities in which some market milk is pasteurized. In these communities the pasteurized market milk complies with the Grade A pasteurized milk requirements and the raw market milk complies with the Grade A raw milk requirements of the Public Health Service Milk Ordinance and Code to the extent shown by pasteurized and raw milk ratings, respectively, of 90 percent or more—Continued

[Norz.-All milk should be pasteurized or boiled, either commercially or at home, before it is consumed. See text for home method]

Community Percent- age of milk pas- teurized Date of rating		Community	Percent- age of milk pas- teurized	Date of rating	
LOUISIANA			OKLAHOMA-con.		
Monroe	41	Mar. 7, 1941.	Tulsa. Wewoka	74 52	Apr. 6, 1940. July 8, 1940.
MICHIGAN					
Crystal Falls Iron River Stambaugh	41 51 51	July 24, 1940. Do. Do.	OREGON Astoria Eugene. .Portland Seaside	60 82	June 20, 1941. Nov. 1, 1940. Apr. 3, 1940. June 20, 1941.
MINNESOTA			1		·
Moorhead	88	Feb. 14, 1941.	SOUTH CAROLINA Walterboro	26	Dec. 6, 1939.
MISSOURI			11	20	Dec. 6, 1939.
Cleation	a)	Dec. 14, 1939.	TENNESSEE		
Clayton Ferguson Glendale Kirkwood Maplewood University City		Do. Do.	Bristol Memphis	80 90	December 1941. December 1940.
Maplewood	ğ	June 7, 1940. Dec. 14, 1939.	TEXAS	78	Amg 19 1040
Webster Groves	8	Do. Do.	Amarillo Big Spring Brownwood	78 53 64	Aug. 12, 1940. Aug. 8, 1940. May 31, 1941. July 20, 1940. June 27, 1940. June 27, 1940. June 19, 1940. May 2, 1940. May 2, 1940. May 2, 1940. May 13, 1940. June 28, 1940 Sept. 10, 1941. Feb. 4, 1941. June 12, 1940.
NEW MEXICO			II Brvan	14	July 20, 1940.
Albuquerque	77	Dec. 20, 1941	Canyon Crystal City	42 39	Aug. 9, 1940. June 27, 1940.
Las Vegas	65	Dec. 20, 1941. July 18, 1941. December 1939.	Dallas	85	Dec. 7, 1940.
Santa Fe	44	December 1939.	Dallas Fort Worth Jacksonville	82 85	June 19, 1940. May 2, 1940.
NORTH CAROLINA			Lamesa Lubbock	47	Mar. 26, 1941.
Asheville	66	June 14, 1940.	Lubbock	80 43	NOV. 21, 1941. Aug. 1. 1940.
Black Mountain	24	June 14, 1940. May 21, 1940 Oct. 1940.	Palostino	23	Jan. 30, 1940.
Durham Fayetteville	91 55	Oct. 1940. June 4, 1940.	San Angelo San Antonio	65 82	May 13, 1940 June 28, 1940
Greensboro	86	June 4, 1940. Aug. 1940.	Seguin	18	Sept. 10, 1941.
Goldsboro Hendersonville	62 73	June 5, 1940	Sherman Texarkana	53 45	Mar. 25, 1941.
Hope Mills	25	June 4, 1940	Tyler	42	June 12, 1940.
Kinston Lumberton	12 36	Aug. 1940. June 5, 1940 June 28, 1940. June 4, 1940 July 9, 1940. May 29, 1940. Jan. 10, 1941. Anr. 9, 1940			
Mars Hill	15	Jan. 10, 1941.	Ogden Salt Lake City	93	Sept. 15, 1941.
Rockingham	53 36	Apr. 9, 1940	Salt Lake City	96	Dec. 24, 1940.
Roxboro. Waynesville		Apr. 9, 1940 July 2, 1940. May 9, 1940. June 5, 1940.	VIRGINIA		
Weaverville	40	June 5, 1940.			3.6
NORTH DAKOTA			Abingdon Bristol Pulaski	38 80	Mar. 21, 1941. December 1941.
			Pulaski	99	Dec. 18, 1941.
Fargo. Valley City	90.8 32.5	Feb. 16, 1941. July 24, 1941	South Boston	75 98	Dec. 18, 1941. May 29, 1941. Nov. 15, 1941.
			Waynesboro Williamsburg	55	May 26, 1941.
OHIO	1		WASHINGTON		
Athens	80	July 6, 1940.			
ORLAHOMA	f		Camas Pullman	6 87	June 18, 1941.
			Vancouver	28	Aug. 26, 1941. Nov. 28, 1940.
da Bartlesville	55 45	June 27, 1940. Dec. 19, 1939. Nov. 15, 1941. June 4, 1940. July 22, 1940	Walla Walla Yakima	61 72	May 28, 1941. May 14, 1941.
Slackwell	38	Nov. 15, 1941.	1 0FUINS	' 2	may 14, 1941.
Muskogee	82	June 4, 1940.	WYOMING		0-4 10 10/1
Okmulgee	60 63	Mar. 26, 1940	Casper Cheyenne	67 75	Oct. 10, 1941. Dec. 24, 1941.

³ The percentage of the total milk supply pasteurized cannot be accurately determined owing to the overlapping of milk routes.

[Norz.-All milk should be pasteurized or boiled, either commercially or at home, before it is consumed. See text for home method]

Community	Date of rating	Date of rating Community			
ALABAMA		NOBTH CABOLINA-continued			
Bridgeport Demopolis Lanett. Seottsboro Stevenson FLORIDA	May 27, 1941. Oct. 23, 940. Mar. 19, 1940. May 27, 1941. Do.	Jackson Kenansville Lillington Mount Olive Murfreesboro Parmele Ræford.	June 6, 1940. June 5, 1940. July 17, 1940. June 20, 1940.		
Apalachicola	January 1940.	Red Springs Rich Square Robersonville	May 29, 1940. July 16, 1940. June 20, 1940.		
KANSAS Horton	June 1940.	Rosehill Scotland Neck Wallace	July 16, 1940. May 23, 1940.		
KENTUCKY Owenton MISSOURI	November 1941.	Warsaw Weldon Williamston Winton	July 16, 1940.		
Brentwood NOBTH CAROLINA	June 7, 1940.	TEXAS Colorado Del Rio	Nov. 13, 1941. June 29, 1940.		
Angier Bethel Calypso Ocats Dunn Erwin Falson	June 6, 1940. May 15, 1940. May 23, 1940. June 6, 1940. Do. Do. May 23, 1940.	VIRGINIA Blackstone Boydton Lawrenceville WEST VIRGINIA	Apr. 4, 1941. Oct. 23, 1941.		
Farmville	May 15, 1940.	Grantsville	May 12, 1941.		

¹ Note particularly the percentage of milk pasteurized in the various communities listed in these tables. This percentage is an important factor to consider in estimating the safety of a city's milk supply.

NOTIFIABLE DISEASES IN THE UNITED STATES, 1940

Morbidity and Mortality Summaries for Certain Important Communicable Diseases

The Public Health Service has recently issued a compilation of morbidity and mortality data for the United States, by States and months, for a group of important notifiable diseases as reported by State health authorities in 1940.¹ A summary of this compilation is presented here, which includes case and death rates, case fatality rates, and for some diseases the estimated expectancy (median for the years 1933 to 1939, inclusive) for purposes of comparison.

Some States do not report cases of certain communicable diseases or are required to report cases only when the disease is epidemic (influenza, for example), while in other instances the case reports are manifestly incomplete, a few States reporting more deaths than cases. Therefore, in some instances the number of States included for the different diseases and in some items for a particular disease are not

¹ The Notifiable Diseases—Prevalence in States, 1940. Supplement 166 to the Public Health Reports. Government Printing Office, Washington, 1941.

the same. For a few diseases the reports of both cases and deaths were considered sufficiently complete to include the 48 States and the District of Columbia.

In comparing the numbers of cases reported in 1940 with the estimated expectancy based on reports for prior years, or with the figures for any particular earlier year, it should be borne in mind that there has been a gradual improvement in the reporting of communicable diseases. In the rates the factor of population increase is eliminated, and rates are therefore of greater value for comparative purposes. A large increase in the case rate is likely to represent an actual increase in the prevalence of the disease.

The populations used are estimates as of July 1, 1940, based on the enumerated populations of the 1940 census as of April 1, 1940, and the 1930-40 intercensal changes.

SUMMARY

CHICKENPOX (38E) *

47 States (furnishing complete reports of cases and deaths): 1 Cases reported, 1940 (population 129,054,000) Estimated expectancy based on years 1933-39 Cases per 100,000 inhabitants, 1940 Deaths registered, 1940. Deaths per 100,000 inhabitants, 1940 Cases reported for each death registered, 1940 8 States: 1 Cases reported, 1940 (population 131,892,000)	264, 863 216. 3 211. 4 88 0. 1 3, 172
Cases per 100,000 inhabitants, 1940.	212.5
DIPHTHERIA (10)	
48 States: 1	
Cases reported, 1940 (population 131,892,000)	15, 536
Estimated expectancy based on years 1933-39	31, 783
Cases per 100,000 inhabitants, 1940 Cases per 100,000 inhabitants, estimated expectancy	11.8
Cases per 100,000 innabitants, estimated expectancy	24.8
Deaths registered, 1940 Deaths per 100,000 inhabitants, 1940	1, 467
Cases reported for each death registered, 1940	1.1
Cases reported for each death registered, 1940	11
DYSENTERY (AMEBIC) (27B)	•
30 States (furnishing complete reports of cases and deaths): ¹	
Cases reported. 1940 (population 110.012.000)	3,034
Cases per 100.000 inhabitants, 1940	
Deaths registered, 1940	199
Deaths per 100,000 inhabitants, 1940	0.2
Cases reported for each death registered, 1940	15
43 States: 1	
Deaths registered, 1940 (population 125,064,000)	257
Deaths per 100,000 inhabitants, 1940	0.2
DYSENTERY (BACILLARY) (27A)	
31 States (furnishing complete reports of cases and deaths): ¹	
Cases reported, 1940 (population 102,455,000)	19, 731
Cases per 100,000 inhabitants, 1940	19.3
Deaths registered, 1940	764
Deaths per 100,000 inhabitants, 1940	0.7
Cases reported for each death registered, 1940	-26
43 States: 1	001
Deaths registered, 1940 (population 125,064,000)	901
Deaths per 100,000 inhabitants, 1940	0.7
•Figures in parentheses in the subheadings are disease title numbers from the International List of	Causes
of Death, 1938.	
1 The District of Columbia is also included but not counted as a State	

¹ The District of Columbia is also included but not counted as a State.

235

ENCEPHALITIS, EPIDEMIC OR LETHARGIC (37)

26 States (furnishing complete reports of cases and deaths): 1 Offsee reported, 1940 (population 57,671,000) Cases per 100,000 inhabitants, 1940 Deaths registered, 1940 Cases reported for each death registered, 1940	791 1.4 313 0.5 2.527
48 States: 1 Deaths registered, 1940 (population 131,892,000) Deaths per 100,000 inhabitants, 1940	789 0.6
47 States: 1 GONORBHEA (26)	
Cases reported, 1940 (population 121,985,000) Cases per 100,000 inhabitants, 1940	179, 989 147. 6
INFLUENZA (33)	
39 States (furnishing complete reports of cases and deaths): 1 Cases reported, 1940 (population 97,221,000). Cases per 100,000 inhabitants, 1940. Deaths registered, 1940. Cases reported for each death registered, 1940.	428, 640 440. 8 17, 430 17. 9 24. 592
48 States: 1 Deaths registered, 1940 (population 131,892,000) Deaths per 100,000 inhabitants, 1940	
MALARIA (28)	
41 States (furnishing complete reports of cases and deaths): Cases reported, 1940 (population 127,399,000). Cases per 100,000 inhabitants, 1940. Deaths per 100,000 inhabitants, 1940. Cases reported for each death registered, 1940. 48 States: 1 Deaths registered, 1940 (population 131,892,000). Deaths per 100,000 inhabitants, 1940.	1, 393
Deaths per 100,000 innabitants, 1940	1. 1
48 States: 1	291, 162 220. 8 681 0. 5 428
MENINGITIS, MENINGOCOCCUS (6)	
43 States (furnishing complete reports of cases and deaths): 1 Cases reported, 1940 (population 126,962,000). Estimated expectancy based on years 1933-39. Cases per 100,000 inhabitants, 1940 Cases per 100,000 inhabitants, setimated expectancy. Deaths registered, 1940. Cases reported for each death registered, 1940. 48 States: 1 Deaths registered, 1940 (population 131,892,000). Deaths per 100,000 inhabitants, 1940.	1, 638 3, 307 1. 3 2. 7 601 0. 5 2. 725 628 0. 5
MUMPS (44C)	
42 States (furnishing complete reports of cases and deaths): Cases reported, 1940 (population 101,287,000) Estimated expectancy based on years 1933-39. Cases per 100,000 inhabitants, 1940 Cases per 100,000 inhabitants, estimated expectancy Deaths registered, 1940 Deaths per 100,000 inhabitants, 1940 Cases reported for each death registered, 1940	116, 608 122, 714 115. 1 124. 4 92 0. 1 1, 267
45 States: 1 Deaths registered, 1940 (population 113,601,000) Deaths per 100,000 inhabitants, 1940	104 0. 1
PELLAGRA (69)	
21 States (furnishing complete reports of cases and deaths):1 Cases reported, 1940 (population 52,710,000) Cases per 100,000 inhabitants, 1940 Deaths registered, 1940 Cases reported for each death registered, 1940 47 States: 1	8, 895 16. 9 1, 700 3. 2 5. 232
Deaths registered, 1940 (population 118,391,000) Deaths per 100,000 inhabitants, 1940	2,040 1.7

¹ The District of Columbia is also included but not counted as a State.

PNEUMONIA (ALL FORMS) (107-109)

83 States (furnishing complete reports of cases and deaths): 1	
Cases reported, 1940 (population 103,563,000) Cases per 100,000 inhabitants, 1940	141, 213
Cases per 100,000 inhabitants, 1940	136.4
Deaths registered, 1940	55, 940
Deaths registered, 1940. Deaths per 100,000 inhabitants, 1940. Cases reported for each death registered, 1940.	54.0 2.524
48 States: 1	4.041
Detts resistered, 1940 (nonulation 131,892,000)	72, 239
Deaths registered, 1940 (population 131,892,000)	54.8
POLIOMYELITIS (36)	
48 States: 1	
Cases reported, 1940 (population 131,892,000)	9, 826
Cases reported, 1940 (population 131,892,000) Estimated expectancy based on years 1933-39 Cases per 100,000 inhabitants, 1940. Cases per 100,000 inhabitants, estimated expectancy.	4, 428
Cases per 100,000 inhabitants, 1940	7.5
Daste per 10,00 minutations, estimated expectancy	1,004
Deaths registered, 1940. Deaths per 100,000 inhabitants, 1940. Cases reported for each death registered, 1940	0.8
Cases provided for each death registered, 1940	9. 787
BOCKY MOUNTAIN SPOTTED FEVER (39C)	
27 States (furnishing complete reports of cases and deaths):	
Cases reported, 1940 (population 74,895,000) Cases per 100,000 inhabitants, 1940	457
Cases per 100,000 inhabitants, 1940	0.6
Deaths registered, 1940	82
Deaths registered, 1940. Deaths per 100,000 inhabitants, 1940. Cases reported for each death registered, 1940	0.1
Cases reported for each death registered, 1940	5. 573
47 States:1 Deaths registered 1040 (nepulation 190 054 000)	82
Deaths registered, 1940 (population 129,054,000) Deaths per 100,000 inhabitants, 1940	0.1
SCARLET FEVER (8)	
48 States: ¹	
Cases reported, 1940 (population 131,892,000)	155, 464
Estimated expectancy based on years 1933-39	200, 243
Cases per 100,000 inhabitants, 1940	117.9
Dashb per 100,000 infabricants, estimated expectancy	100.4
Deaths registered, 1980. Deaths registered, 1980.	0.5
Gases reported, 1940 (population 131,892,000) Estimated expectancy based on years 1933-39 Cases per 100,000 inhabitants, 1940 Cases per 100,000 inhabitants, estimated expectancy Deaths registered, 1940 Deaths per 100,000 inhabitants, 1940. Cases reported for each death registered, 1940	238
SEPTIC SORE THEOAT (115B)	
39 States (furnishing complete reports of cases and deaths):	
Cases reported, 1940 (population 90,849,000)	8, 997
Cases per 100,000 innabitants, 1940	9.9
Deaths registered, 1940. Deaths per 100,000 inhabitants, 1940. Cases reported for each death registered, 1940.	714 0.8
Cases ponorted for each death registered 1940	12.601
46 States:1	
Deaths registered, 1940 (population 123,787,000)	1.135
Deaths per 100,000 inhabitants, 1940	0.9
SWALLPOX (34)	
48 States: ¹ Cases reported, 1940 (population 131,892,000) Estimated expectancy based on years 1933-39 Cases per 100,000 inhabitants, 1940 Cases per 100,000 inhabitants, estimated expectancy Deaths registered, 1940. Deaths per 100,000 inhabitants, 1940. Cases reported for each death registered, 1940.	9 70=
Cases reprived a test (population 101,086,000)	2, 795 7, 15 3
Cases per 100.000 inhabitants. 1940	2.1
Cases per 100,000 inhabitants, estimated expectancy	5.6
Deaths registered, 1940	15
Deaths per 100,000 inhabitants, 1940	0.01
Cases reported for each death registered, 1940	186
48 States: 1 SYPHILIS (30)	
Cases reported, 1940 (population 131,892,000)	458 400
Cases per 100,000 inhabitants, 1940.	347.6
TUBERCULOSIS (ALL FORMS) (13-22)	
41 States (furnishing complete reports of cases and deaths): 1	
Cases reported, 1940 (population 118,165,000)	99, 267
Cases per 100,000 inhabitants, 1940.	84.0
Destas registered, 1940.	53, 462
Deaths registered, 1940 Deaths per 100,000 inhabitants, 1940 Cases reported for each death registered, 1940	45. 2 1. 857
AN NUMBER OF T	
Deaths registered, 1940 (population 131,892,000)	60, 363
Deaths registered, 1940 (population 131,892,000) Deaths per 100,000 inhabitants, 1940	45.8

¹ The District of Columbia is also included but not counted as a State,

237

TUBEBCULOSIS (RESPIRATORY SYSTEM) (18)

19 States (furnishing complete reports of cases and deaths); ¹ Cases reported, 1940 (population 56,240,000)	47.472
Cases per 100 000 inhabitants, 1940	QA A
Deaths registered, 1940. Deaths per 100,000 inhabitants, 1940. Cases reported for each death registered, 1940.	24, 305
Construction constructions, 1940	43.2
4 States: 1	1.953
Deaths registered 1940 (nonulation 120 405 000)	51.066
Deaths per 100,000 inhabitants, 1940.	42.4
TULABEMIA (26A)	
40 States (furnishing complete reports of cases and deaths): 1	
Cases reported, 1940 (population 121,487,000)	1,612
Cases per 100,000 inhabitants, 1940	1.3
Deaths registered, 1940 Deaths per 100,000 inhabitants, 1940	191
Cases reported for each death registered, 1940	
47 States: 1	8. 440
Deaths registered, 1940 (population 129,054,000)	191
Deaths per 100,000 inhabitants, 1940	0.1
TYPHOID FEVER (1) AND PARATYPHOID FEVER (2)	
48 States: 1	
Cases reported, 1940 (population 131,892,000)	9, 809
Estimated expectancy based on years 1933-39	17,046
Cases per 100,000 inhabitants, 1940.	7.4 13.3
Deaths registered 1940	1,439
Deaths per 100,000 inhabitants, 1940	1.1
Cases per 100,000 inhabitants, 1940. Cases per 100,000 inhabitants, estimated expectancy Deaths registered, 1940. Deaths per 100,000 inhabitants, 1940. Cases reported for each death registered, 1940.	6.817
TYPHUS FEVER (39A, B)	
20 States (furnishing complete reports of cases and deaths):	
Cases reported, 1940 (population 80,841,000) Cases per 100,000 inhabitants, 1940	1, 589 2. 0
Deaths registered, 1940.	. 97
Deaths per 100,000 millabitants, 1940	U. I
Cases reported for each death registered, 1940.	16. 381
47 States: 1	
Deaths registered, 1940 (population 129,054,000) Deaths per 100,000 inhabitants, 1940	101 0.1
Deaths per 100,000 minabitants, 1940	0.1
UNDULANT FEVER (5)	
47 States (furnishing complete reports of cases and deaths); 1	
Cases reported, 1940 (population 129,054,000)	3, 24 0
Cases per 100.000 inhabitants. 1940	
Deaths registered, 1940	116
Deaths per 100,000 inhabitants, 1940 Cases reported for each death registered, 1940	0.1
48 States: 1	21.001
Cases reported, 1940 (population 131,892,000)	3, 310
Cases per 100,000 inhabitants, 1940	2.5
WHOOPING COUGH (9)	
48 States: 1 Cases reported 1940 (population 131 992 000)	193 064
Cases reported, 1940 (population 131,892,000) Estimated expectancy based on years 1933-39	180,000
Cases per 100.000 inhabitants, 1940	139.4
Cases per 100,000 inhabitants, 1940. Cases per 100,000 inhabitants, estimated expectancy	147.6
Deaths registered, 1940 Deaths per 100,000 inhabitants, 1940	2, 875
Deaths per 100,000 inhabitants, 1940	2.2
Cases reported for each death registered, 1940	64

"The District of Columbia is also included but not counted as a State.

Disease	Num- bor of States ¹	Jan- uary	Feb- ruary	March	April	May	June	July	August	Sep- tember	00 tober	No- vember	De De Cember	Total
Anthrer In man (7) Chlokenpox (386) Diputue (310) Diputue (310) Diputue (310) Diputue (310) Diputue (310) Diputue (310) Diputue (310) Diputue (310) Matrix (32) Matrix (32) Matrix (33) Matrix (33) Pollomyelits (33) Pollomyelits (33) Pollomyelits (34) Tubereniols (35) Tubereniols (35) Tubereniols (7\$°°\$\$\$8°\$	4, 324 4, 324 4, 324 457 151 151 151 151 153 153 153 153 153 153	R 23 <th23< th=""> 23 23 23<td>254 258 258 258 258 258 258 258 258</td><td>8, 745 1, 745 1,</td><td>30, 534 11, 239 27, 259 27, 27, 259 27, 259</td><td>IS 465 IS 465 18 465 19 465 19 48 11 48</td><td>7, 174 7, 174 7, 174 7, 174 7, 174 7, 174 7, 175 7, 174 7, 174</td><td>4 8 4 5 1 4 7 6 7 8 8 8 8 9 8 8 8 9 8 8 8 8 8 8 8 8 8 8</td><td>1,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2</td><td>μ μ μ μ</td><td>30 31 32 33<</td><td>3, 73 1, 85 1, 85 1, 85 85 85 85 85 85 85 85 85 85</td><td>280, 300 15, 536 15, 536 19, 8143 19, 8143 19, 822 20, 815 20, 815 20,</td></th23<>	254 258 258 258 258 258 258 258 258	8, 745 1,	30, 534 11, 239 27, 259 27, 27, 259 27, 259	IS 465 IS 465 18 465 19 465 19 48 11 48	7, 174 7, 174 7, 174 7, 174 7, 174 7, 174 7, 175 7, 174 7, 174	4 8 4 5 1 4 7 6 7 8 8 8 8 9 8 8 8 9 8 8 8 8 8 8 8 8 8 8	1,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2	μ μ μ μ	30 31 32 33<	3, 73 1, 85 1, 85 1, 85 85 85 85 85 85 85 85 85 85	280, 300 15, 536 15, 536 19, 8143 19, 8143 19, 822 20, 815 20,
Undulativ (ever (2)	\$ \$\$ \$ \$	13, 718 32, 495 13, 362	200 12,868 37,096 13,836		211 13. 755 43. 007 16, 675	262	14. 190 37. 387 15, 987	040 16, 787 38, 965 16, 229		264, 735 36, 389 11, 934	004 38, 230 16, 056	16, 238 33, 613 18, 038	14, 805 35, 050 17, 205	

Cases reported, 1940, by months

I

The little of clumble is also included but not counted as a fate. Includes the number of desths used as cases in those States which reported no cases of the reported number of cases is less than the number of desths. The lolle when numbers of cases of a cases of the states which reported no cases or in these States where the reported number of cases is less than the number of desths.

Norz.—Figures in parentheses are disease title numbers from the International List of Causes of Death, 1938.

Deaths registered, 1940, by months

Total	
De- cember	23 ° ° ° ° 1 28 28 28 28 28 28 28 28 28 28 28 28 28
No-	9 111 111 112 112 112 112 112 11
0e- tober	224 221 221 222 234 234 234 234 234 234 234 234 234
Sep- tember	1 1 1 1 1 1 1 1 1 1 1 1 1 1
August	23 ³³ 1200 4.4. 28 1200 120
July	8888888888888 *5 2228888 2228888 2228888 2228888 2228888 2228888 22288888 2228888 2228888 2228888 2228888 2228888 2228888 2228888 2228888 22288888 22288888 22288888 22288888 22288888 22288888 22288888 22288888 22288888 22288888 22288888 22288888 22288888 22288888 22288888 22288888 222888888 222888888 222888888 2228888888 222888888 22288888888
June	* * * * * * * * * * * * * * * * * * *
May	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
April	8 15 15 15 15 15 15 15 15 15 15 15 15 15
March	9 9 9 117 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
Feb- ruary	117 1184 1184 1184 118 110, 230 110, 200 110, 200 100, 200 100, 200 100, 200 100, 200 100, 20
Jan- uary	246 14 25 5 5 5 5 5 5 5 5 6 10 10 10 10 10 10 10 10 10 10 10 10 10
Num- ber of States ¹	***************************************
Disease	Anthrear in mean (7) Chlockenpor (386). Diputiberta (10) Diputiberta (10) Dysentery (amobile (27b) Dysentery (amobile (27b) Dysentery (basillary) (27b) Dysentery (100000 (27c) Dysentery (10000 (27c) Dysentery (10000 (27c) Dysentery (10000 (27c) Maarta (23) Maarta (23) Maarta (23) Maarta (23) Maarta (23) Maarta (23) Maarta (23) Rables in man (38b). Rables in man (38b) Rables in man (38b) Polity (10000 (100

1 The District of Columbia is also included but not connied as a State. Includes 450 desition from dysentery (unspecified) not reported by months. Includes the numbers of desths at Gienn Dale Sanstorium.

Norg.-Figures in parentheses are disease title numbers from the International List of Causes of Death, 1938.

DEATHS DURING WEEK ENDED JANUARY 31, 1942

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

	Week ended Jan. 31, 1942	Correspond- ing week, 1941
Data from 87 large cities of the United States: Total deaths. Average for 3 prior years. Total deaths 4 weeks. Deaths under 1 year of age. Average for 3 prior years. Deaths under 1 year of age. Death con industrial insurance companies: Policies in force. Number of death claims. Death claims per 1,000 policies in force, annual rate. Death claims per 1,000 policies, 4 weeks, annual rate.	8, 837 9, 806 37, 334 13, 2 559 557 2, 268 64, 892, 393 13, 017 10, 5 10, 4	10,007 39,670 14,0 555 2,211 64,727,301 14,899 12,0 11,2

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 FEBRUARY 7, 1942

Summary

No unusual incidence of the important communicable diseases was reported during the current week, although measles, poliomyelitis, and whooping cough were slightly above the 5-year (1937-41) median expectancy. The number of reported cases of measles increased from 10,489 to 14,351, poliomyelitis from 24 to 30, and influenza from 4,899 to 5,667, as compared with the preceding week.

The highest incidence of influenza continues in the South Atlantic and South Central States, which reported about 83 percent of the total cases for the current week. Texas reported the largest number (1,693), South Carolina 871, Alabama 700, Arkansas 426, and Virginia 369. No other State reported more than 300 cases. The incidence is low in the New England, Middle Atlantic, and North Central areas.

The current incidence of meningococcus meningitis (60 cases) is below the 5-year median (65 cases), but the cumulative total (5 weeks ended February 7) of 290 cases is slightly above the 5-year cumulative median (275 cases). The current cases were distributed in 26 States (New York 9, Pennsylvania 5, and Maryland 5; no other State reported more than 4 cases).

Other reports include 28 cases of amebic dysentery (6 in Texas, 4 in Tennessee), 69 cases of bacillary dysentery (37 in Oklahoma), 50 cases of unspecified dysentery (36 in Virginia, 13 in Arizona), 44 cases of endemic typhus fever, 18 cases of tularemia, and 2 cases of anthrax (in New Jersey and Louisiana). A total of 30 cases of poliomyelitis was reported, as compared with 24 last week and a 5year median of 21 cases. The current cases were widely distributed.

The crude death rate for the current week for 88 large cities in the United States is 12.4 per 1,000 population, as compared with 12.5 for the preceding week and a 3-year (1939-41) average of 13.9.

Telegraphic morbidity reports from State health officers for the week ended February 7, 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.

	Г	oiphthe	ria		Influen	28		Measle	8		leningi lingoco	
Division and State	Wend	eek ed—	Me- dian		'eek led—	Me- dian		Veek ded—	Me- dian	W end	eek ed—	Me
	Feb. 7, 1942	Feb. 8, 1941	1937- 41	Feb. 7, 1942	Feb. 8, 1941	1937- 41	Feb. 7, 1942	Feb. 8, 1941	1937- 41	Feb. 7, 1942	Feb. 8. 1941	dian 1937- 41
NEW ENG.												
Maine New Hampshire Vermont Massachusetts Rhode Island Connecticut	0 0 4 8 8		00330		2	5	46 10	0 3 1 2 43 0	8 52 0 10 2 432 0 19	004	0 0 1 0 0	0 0 0 1 0 0
MID. ATL. New York New Jersey Pennsylvania	16 5 11	11 15 25	26 15 50	23				5 84	1 708	9 3 5	4 2 2	7277
E. NO. CEN.												
Ohio Indiana Illinois Michigan ⁹ Wisconsin	17 10 17 1 0		21 18 46 9 1	14 40 29 21 35	173 192 155	90 5 134 5 10) 7 17 11	8 183 1 1,831 0 1,320	3 12 37 37 420	2 0 1 1 1	3 0 1 0 1	2 1 3 0 0
W. NO. CEN. Minnesota Iowa Missouri North Dakota South Dakota Nebraska Kansas	3 4 5 2 0 4	3 13 4 0 1 1 4	3 4 10 1 2 5	2 7 8 35 	698 396 68 84 22 14 340	25 68 61 4 2	103 189 190 21	130 74 11 18 5 6	97 15 13 7 6	0 0 1 0 2 0	2 0 1 0 0 3	0 1 2 1 0 1
SO. ATL. Delaware Maryland ^a Dist. of Col Virginia West Virginia North Carolina Georgia Florida	0 13 1 14 8 12 14 7 5	1 5 6 7 16 7 4	0 7 3 19 11 36 5 7	40 1 369 27 80 871 117 14	10 351 79 5, 976 1, 185 599 3, 060 1, 509 887	263 19 1, 100	24 340 18 140 584 1,003 205 406 114	61 14 498 134 182 47 202	61 14 183 20 182 40	0 5 1 3 3 1 0 0 0	0 0 1 0 2 2 0	0 0 2 4 1 2 2 0
E. SO. CEN.												-
Kentucky Fennessee Alabama Mississippi ⁹	7 6 14 3	11 10 5 2	8 10 12 5	10 127 700	246 2, 003 3, 561	198 424 536	47 112 94	99	63 54 90	1 1 1 4	3 5 3	8 3 5 2
W. SO. CEN. Arkansas Louisiana Dklahoma Fexas	3 10 14 5 42	12 5 15 22	9 11 10 54	* 426 24 231 1, 693	767 218 657 2, 54 5	767 218 657 2, 545	* 289 47 252 1, 909	83 7 11 518	83 7 11 270	8 2 0 2	0 2 0 2	1 0 1 3
MOUNTAIN Montana	7	10	1	31	116	25	168	8	19	0	0	0
Vyoming Colorado New Mexico Irizona Irizona Vevada	7 0 6 2 5 0	209222	1 0 9 2 2 2	119 85 8 232 6 1	189 811 9 281 66	6 4 26 9 281 20	100 39 223 82 220 28 7	25 14 85 72 80 15 0	28 6 54 31 13 89	0 1 0 1 0	000000	0 0 0 0 0 0
PACIFIC Vashington Pregon California	1 1 17	0 8 18	3 2 32	11 28 175	52 54 1, 387	35 59 387	70 120 2, 501	70 325 101	70 85 811	0 0 1	0 0 3	0 1 2
Total	823	308	<i>č</i> 38	5, 667	31, 345	16, 583	14, 351	16, 973	11, 583	60	46	65
weeks	1,804	1, 537	3, 027	22, 592	87, 322	72, 550	50, 679	63, 701	48, 238	290	246	275

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended February 7, 1942, and comparison with corresponding week of 1941 and 5-year median—Continued

<u></u>	Pol	liomye	litis	80	arlet fe	ver		Smallpo	x	Typho typ	oid and boid fe	para- ver
Division and State	Wend	eek ed	Me-	W end	eek od—	Me-	W end	eek ed—	Me-	Wende	ed—	Me-
	Feb. 7, 1942	Feb. 8, 1941	dian 1937- 41	Feb. 7, 1942	Feb. 8, 1941	dian 1937- 41	Feb. 7, 1942	Feb. 8, 1941	dian 1937- 41	Feb. 7, 1942	Feb. 8, 1941	dian 1937- 41
NEW ENG.												
Maine New Hampshire Vermont Massachusetts Rhode Island Connecticut	0 0 1 0 1	0 0 0 0 0	0 0 0 0 0 0	15 6 337 13 54	9 4 143 10 43	4 9 205	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	0 0 5 0 2	0 0 1 0 1	0 0 1 0 1
MID. ATL. New York New Jersey Pennsylvania	1 2 2	0 0 1	1 0 0	445 130 298	380 309 24 8	661 175 475	0 0 0	0 0 0	0 0 0	6 0 4	5 0 0	6 1 8
E. NO. CEN. Ohio Indiana Michigan ³ Wisconsin	0 1 2 1 0	0 0 2 1 3	0 0 1 1	876 116 260 224 180	296 145 454 142 165	316 211 583 474 185	0 0 2 0 0	5 0 0 8 12	5 6 5 4 8	2 0 2 6 3	1 4 3 0 0	1 1 3 1 0
W. NO. CEN. Minnesota Iowa Missouri North Dakota South Dakota Nebraska	0 0 1 1 0	1 2 3 0 0	000000	97 63 131 30 54 34	49 46 76 16 17 25	136 130 115 28 29 42	0 1 0 0 1 0	6 3 3 0 0 0	6 33 12 1 11 3	1 1 1 0 0	0 0 0 1 0	0 0 1 0 0
Kansas SO. ATL.	0	0	0	90	72	192		0	10	0	0	0
Delaware Maryland ¹ Dist. of Col Virginia West Virginia North Carolina South Carolina Georgia Florida	0 0 0 1 2 1 0	0 1 0 0 3 0 0 2	0 0 0 1 0 1 0	56 90 11 48 60 68 9 17	7 82 9 47 30 48 6 21 2	6 56 19 40 46 48 7 21 11	0 0 0 0 1 1 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 1 3 0 0 25 3	0 2 1 4 0 2 0 0 0	0 2 1 4 0 3 2 2 2 2
E. 80. CEN.												-
Kentucky Tennessee Alabama Mississippi ^a	0 4 0 0	0 0 0 1	1 0 0 2	84 84 11 7	83 102 14 5	83 40 14 5	4 0 2 2	0 0 0 1	0 1 0 1	0 3 1 3	4 2 1 0	2 1 4 1
W. SO. CEN. Arkansas Louisiana Oklahoma Texas	1 0 0 3	1 0 1 0	0 0 1 0	3 10 6 25 49	9 4 18 30	9 13 34 102	0 0 1 2	2 2 1 0	2 0 1 7	2 3 1 3	2 3 0 8	2 6 2 8
MOUNTAIN Montana Idaho Wyoming Colorado Arizona Utab * Nevada	0 0 2 0 0 1 0 0	0 0 0 0 1 0 1 0	0 0 0 0 0 0 0	38 4 20 37 5 9 39 4	25 16 8 37 4 7 7 0	35 16 8 46 9 13 31	0 0 0 0 0 0	1 1 0 6 0 2 0 0	2 8 0 6 0 1 0	1 2 0 1 0 0 0 0	1 0 0 3 1 0 0	0 0 0 3 1 0
PACIFIC Washington Oregon California	0 0 1	0 0 2	0 0 2	25 6 133	24 18 105	59 45 220	0 0 0	0 0 0	3 5 8	0 0 0	0 1 5	1 0 5
Total	29	26	21	3, 925	3, 421	5, 601	17	53	813	85	56	96
δ weeks	138	149	121	18, 045	16, 773	26, 182	84	264	1, 457	400	371	554

See footnotes at end of table.

Telegraphic morbidity reports from State	health officers for the week ended February 7,
<i>1942</i> —	Continued

	Who	oping ugh			Wee	k ended	l Febru	ary 7, 1	1942		
Division and State		eek	An-	D	ysenter	У	En- cepha-	Lep-	Rocky Moun-	Tula-	Ţy.
	Feb. 7, 1942	Feb. 8, 1941	thrax	Amebic	Bacil- lary	Un- speci- fied	litis, infec- tious	rosy	tain spotted fever	remia	phus fever
NEW ENG.											
Maine New Hampshire Vermont Massachusetts Rhode Island	22 4 29 236 74 122	8 2 8 272 . 6	0	0 0 0 0 0	0 0 2 0 1	000000000000000000000000000000000000000	1 0 0 0	0 0 0 0	000000000000000000000000000000000000000	000000	0 0 0 0
Connecticut	122	52	0	0	1	0	0	0	0	Ó	0
MID. ATL. New York New Jersey Pennsylvania	594 232 243	337 102 435	0 1 0	2 0 0	10 0 1	000	2 0 3	0 0 0	0 0 0	000	1 0 0
E. NO. CEN. Ohio Indiana Illinois Michigan ¹ Wisconsin	268 39 183 294 327	341 9 107 175 150	0 0 0 0	1 0 2 0 0	• 0 0 10 0	0 0 0 0	000000	1 0 0 0	000000000000000000000000000000000000000	0 0 2 0 1	0 0 0 0 0
W. NO. CEN. Minnesota Iowa	56 42	58 29	0 0	0	0	0	0	0	0 0 0	0 1	0 0 0
Missouri North Dakota South Dakota Nebraska Kansas	38 8 8 1 41	53 18 8 15 70	0 0 0 0	000000000000000000000000000000000000000	0 0 0 0 0	1 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	0 0 0 0	1 3 0 0 0	0 0 0 0
80. ATL. Delaware Maryland ³ . District of Columbia Virginia. West Virginia. North Carolina Georgia. Florida	2 61 11 65 55 224 71 33 39	8 94 232 43 302 61 15 17	000000000000000000000000000000000000000	0 0 0 0 0 0 0 1	000000000000000000000000000000000000000	0 0 36 0 0 0 0	000000000000000000000000000000000000000	000000000000000000000000000000000000000	0 0 0 0 0 0 0 0	0 1 0 1 0 0 0 1 0	0 0 2 0 0 19 5
E. 80. CEN.										.	
Kentucky Tennessee Alabama Mississippi ³	122 41 9	38 73 49	0 0 0	0 4 0 0	1 2 0 0	0 0 0	0 0 0	0 0 0 0	0 0 2	1 1 2 0	0 1 6 1
W. SO. CEN. Arkansas Louisiana Oklahoma Text.o	11 0 8 119	25 1 31 387	0 1 0 0	1 0 0 6	0 1 0 37	0 0 0 0	0 0 0	0 0 0 0	0 0 0 0	3 0 0 1	0 3 0 4
MOUNTAIN Montana Idaho Wyoming Colorado New Mexico Arizona	25 9 1 24 29 72	7 14 9 59 13 5 74	0000000	000000000000000000000000000000000000000	000000000000000000000000000000000000000	0 0 0 0 13	000000000000000000000000000000000000000	000000000000000000000000000000000000000	000000000000000000000000000000000000000	000000000000000000000000000000000000000	0 0 0 0 0
Utah I Nevada	15 7	0	0	0	0	0	0	0	0	0 0	0 0
Washington Oregon California	114 34 265	123 13 424	000	0 0 11	0 0 4	. 0 . 0	000	0000	000	000	0 2 2
Total 5 weeks		4. 377 2, 264			<u>69</u>		<u>6</u> 	1	2	18	

¹ New York City only.
 ³ Period ended earlier than Saturday.
 ³ Figures for Arkansas include delayed reports as follows: Diphtheria, 1; influenza, 49; measles, 20; soarles fever, 1.

245

WEEKLY REPORTS FROM CITIES

City reports for week ended January 24, 1942

This table lists the reports from 89 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.

	eria	litis, lous,	Influ	len za	1996	itis, coo-	eius	litis	fe ver	cases	and boid ses	ing ses
·	Diphtheria cases	Encephalitis, infectious cases	Cases	Deaths	Measles cases	Meningitis, meningococ- cus, cases	Pneumonia desths	Pollomyelitis cases	Scarlet cases	Smallpox	Typhoid and paratyphoid fever cases	Whooping cough cases
Atlanta, Ga Baltimore, Md Billings, Mont Birmingham, Ala	0 4 0 4	0 0 0 0	8 2 14	2 2 0 2	0 207 0 1	0 1 0 0	4 20 1 7	0 0 0 0	10 20 0 5	0 0 0 0	0 2 0 1	0 25 0 3
Boise, Idaho Boston, Mass Bridgeport, Conn Brunswick, Ga Buffalo, N. Y	0 0 0 1 0	0 0 0 0	i	0 0 1 0 0	0 50 4 1 5	0 0 0 0	0 15 8 0 7	0 0 0 0	0 99 2 0 13	0 0 0 0	0 2 0 0 0	0 47 1 0 16
Camden, N. J. Charleston, S. C. Charleston, W. Va. Chicago, Ill Cincinnati, Ohio	1 0 1 15 2	000000	70 	0 2 0 2 0	6 1 2 23 2 2	0 0 0 0 0	1 0 4 30 4	0 0 1 0	7 3 1 128 21	0 0 0 0	0 1 0 0 0	2 0 118 11
Cleveland, Ohio Columbus, Ohio Concord, N. H Cumberland, Md Dallas, Tex	0 0 0 3	0 0 0 0	24 1 1	0 1 0 0 1	13 8 0 3 71	3 0 0 0 0	22 4 1 0 2	0 0 0 0	49 4 1 0 10	0 0 0 0 0	1 0 0 0 0	39 6 0 0 2
Denver, Colo Detroit, Mich Duluth, Minn Fall River, Mass Fargo, N. Dak	4 2 0 2 0	0 0 0 0	46 1 	0 1 0 0 0	63 51 3 2 0	0 0 0 0	5 17 0 0 0	0 0 0 0 0	6 117 5 42 0	0 0 0 0	0 0 0 0	15 64 2 0 1
Flint, Mich Fort Wayne, Ind Frederick, Md. Galveston, Tex Grand Rapids, Mich	0 0 0 0	0 0 0 0 0		0000000	1 0 1 0 5	000000	8 1 1 1 0	0 0 0 0	8 0 1 2 2	0 0 0 0	0 0 1 0	4 2 0 0 6
Great Falls, Mont Hartford, Conn Helena, Mont Houston, Tex Indianapolis, Ind	0 0 9 1	000000000000000000000000000000000000000		0 0 0 1	60 3 1 8 11	0000000	0 0 9 12	0 0 0 0	1 5 1 9 23	0 0 0 0	0 0 0 1 0	5 10 4 0 30
Kansas City, Mo Kenosha, Wis Little Rock, Ark Los Angeles, Calif Lynchburg, Va	1 0 0 6 0	0 0 0 0 0	 7 25	8 0 0 1 0	6 5 10 70 0	0 0 5 0	6 1 4 18 0	0 0 0 0 0	20 4 0 21 0	0 0 0 0	0 0 0 0 1	2 0 0 17 2
Memphis, Tenn Milwaukee, Wis Minneapolis, Minn Missoula, Mont Mobile, Ala	0 0 0 3	0 0 0 0 0	20 	2 0 1 0 1	1 17 23 0 8	0 0 0 0	6 0 2 3 2	0 0 0 0 0	2 85 28 1 1	00000	1 0 0 0 0	11 112 4 0 0
Nashville, Tenn Newark, N. J New Haven, Conn New Orleans, La New York, N. Y	0 0 0 18	0 0 0 0 1	5 	0 0 3 1	1 36 79 9 32	0 0 0 3	4 8 4 7 69	0 2 0 0 1	8 19 8 2 167	00000	0 0 2 3	3 34 14 0 260
Omaha, Nebr Philadelphia, Pa Pititsburgh, Pa Portland, Maine Providence, R. L	0 0 1 0 1	0 0 0 0 0	 4 8 	0. 1 1 0 0	7 16 11 4 30	0 1 0 0	7 23 12 1 5	0 0 0 0	6 110 18 4 10	00000	0 1 0 0 0	0 75 23 5 51
Pueblo, Colo Racine, Wis Raleigh, N. C Reading, Ps Richmond, Va	0 0 0 0 0	0 0 0 0		0 0 0 1 0	67 14 1 4 8	0 0 0 0 1	1 0 1 2 6	0 0 0 0	4 4 0 8	000000000000000000000000000000000000000	00000	2 21 9 1 0

·,	eria litis, ious,		Influ	lenza	505		e i a	141	ł			an a Bee
	Diphthe cases	Encephalitia, infectious, cases	Cases	Deaths	Measles cases	Meningitia, meningcocoe cus, cases	Pneumo- deaths	Pollomyelitia cases	Scarlet cases	Bundhox on	Typhold peratyp	Whoopin cough cases
Roanoke, Va Rochester, N. Y Sacramento, Calif St. Joseph, Mo St. Louis, Mo	0 0 1 0 0	0 0 0 0 0	 7	0 0 0 1	0 2 147 2 23	00000	0 1 1 4 18	0 0 0 0 0	0 1 4 3 10	0 0 0 0 0	0 0 0 0 0	0 21 18 0 8
St. Paul, Minn Salt Lake City, Utah San Antonio, Tex San Francisco, Calif Savannah, Ga	0 - 0 - 0 0	0 0 0 0	 4 18	0 0 1 1 3	150 4 2 40 37	0 0 0 0 0	4 1 10 7 4	0 0 0 0 0	8 4 2 13 0	00000	000000	、 8 0 5 1
Seattle, Wash Shreveport, La South Bend, Ind Spokane, Wash Springfield, Ill	0 1 0 0 0	000000	2	1 0 2 0	1 1 2 1 2	0 1 0 0	7 2 0 2 2	0000000	2 3 9 5 5	000000000000000000000000000000000000000	000000	24 0 1 4 0
Springfield, Mass Superior, Wis Syracuse, N. Y Tacoma, Wash Tampa, Fla	0 0 0 1	0 0 0 0 0	 1	0 0 2 1	14 2 1 0 1	0 0 1 0 1	5 0 3 0 1	00000	17 1 6 2 0	0000000	0 0 0 0 0	46 4 55 2 1
Terre Haute, Ind Topeka, Kans Trenton, N. J Washington, D. C Wheeling, W. Va	0 0 3 0	0 0 1 0 0	 3	0 0 0 1 0	0 1 17 43	0 0 1 0	1 2 12 2	0 0 0 0	0 4 5 15 1	0 0 0 0 0	0 0 0 0	0 10 7 26 0
Wichita, Kans. Wilmington, Del. Wilmington, N. C Winston-Salem, N. C Worcester, Mass.	0 1 1 0 0	0 0 0 0 0	 7	0 0 1 0	13 0 139 72 7	0 0 0 0	7 2 1 2 3	0 0 0 0 0	3 16 0 2 14	0 0 0 0	0 0 0 0 0	2 0 5 1 49

City reports for week ended January \$4, 1948-Continued

Tularemia.—Cases: Birmingham, 1; Memphis, 1. Dysentery, amebic.—Cases: Chicago, 1; Dallas, 2; Detroit, 1; Los Angeles, 4; New York, 2. Dysentery, bacillary.—Cases: Detroit, 1; Los Angeles, 1; New Haven, 1; New York, 3; Rochester, 1. Typhus fever.—Cases: Charleston, S. C., 2; Mobile, 1; New Orleans, 3.

Rates (annual basis) per 100,000 popul	ition for a group of 89 selected cities (popu-
lation, 194	2, 33,763,643)

Period	Diph- theria	Influenza		Mea-	Pneu-	Scar- let	Small-	Ty- phoid	Whoop-
	Cases	Cases	Deaths	sles cases	monia deaths	fever cases	pox cases	fever cases	cough cases
Week ended Jan. 24, 1942 Average for week, 1937-41	18.31 21.47	44. 83 428. 71	6. 43 23. 63	273. 86 464. 08	71. 30 135. 59	186. 50 220. 07	0.00 5.10	2. 45 2. 93	207. 31 179. 30

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended January 10, 1942.— During the week ended January 10, 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 Bruns- wick	Que- bec	On- tario	Mani- toba	Sas- katch- ewan	Al- berta	British Colum- bia	Total
Cerebrospinal meningitis. Chickenpox Diphtheria Dysentery		4 16 32	3 1	7 275 29 3	11 496	2 91 2	69 1	2 39	1 172 3	27 1, 161 68 3
German measles Influenza Measles Mumps	2	3 16 2 11	2	38 533 523	21 109 251	2 5 89 91	10 37 137	2 8 60	12 113 25 251	90 134 800 1, 324
Pneumonia Poliomyelitis Scarlet fever Tuberculosis	2 1	2 1 23 9	 5 9	88 87	11 231 37	3 20	39	2 62 4	4 36	20 3 506 147
Typhoid and paraty- phoid fever Undulant fever Whooping cough Other communicable dis-		12	3	18 1 175	3 1 79	1 1			1 13	22 3 283
eases		8		14	267		2	1	12	299

CUBA

Habana—Communicable diseases—4 weeks ended January 10, 1942.— During the 4 weeks ended January 10, 1942, certain communicable diseases were reported in Habana, Cuba, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths.
Diphtheria. Malaria. Measles. Poliomyelitis	25 36 7 1	1	Scarlet fever Tuberculosis Typhoid fever	2 4 29	 1 3

(247)

REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

Norz.—Except in cases of unusual prevalence, only those places are included which had not previously reported any of the above-mentioned diseases, except yellow fever, during the current year. All reports of yellow fever are published currently.

A cumulative table showing the reported prevalence of these diseases for the year to date is published in the PUBLIC HEALTH REPORTS for the last Friday of each month.

Cholera

India—Bombay—Correction.—On page 2477 of the PUBLIC HEALTH REPORTS of December 26, 1941, 115 cases of cholera were reported in Bombay, India. This is an error and should read 15 cases.

Plague

Argentina.—Plague has been reported in Argentina as follows: July 1-31, 1941, Cordoba Province, 9 cases; Mendoza Province, 3 cases. August 1-31, Cordoba Province, 7 cases. September 1-30, Cordoba Province, 1 case. October 1-31, Cordoba Province, 3 cases; Santiago del Estero Province, 2 cases. November 1-30, Cordoba Province, 2 cases. December 1-31, Cordoba Province, 7 cases.

Chile—Valparaiso.—During the week ended February 7, 1942, one case of bubonic plague was reported in Valparaiso, Chile, the last previous case being reported in October 1941.

Typhus Fever

Colombia.—During the month of September 1941, 5 cases of typhus fever were reported in Cundinamarca Department and 2 cases of typhus fever with 2 deaths were reported in Magdalena Department, Colombia.

Yellow Fever

Sierra Leone—Freetown.—A fatal case of yellow fever in a European, occurring during January 1942, has been reported in Freetown, Sierra Leone, Africa. The diagnosis was made from necropsy material sent to London. This is believed to be the first case of yellow fever reported in a European in this district since 1935. A suspected case was reported in Kailahun, Sierra Leone, during May 1938.

х