

An annual report in a series begun by the Communicable Disease Center in 1955, summarizing the findings of its nationwide surveillance activities.

Arthropod-Borne Encephalitis in the United States, 1957

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ENCEPHALITIS virus activity decreased in 1957, according to reports from epidemiologists of 46 States to the Communicable Disease Center, Public Health Service. Eastern encephalitis (EE) epizootics occurred in the Gulf States and as far north as South Carolina, but only five confirmed human cases came to our attention: two in Florida and three in Louisiana (fig. 1). Minimal virus activity was recorded in New Jersey and Massachusetts.

Western encephalitis (WE) virus activity was prominent only in the Mountain States in 1957, with California and Texas registering few cases (fig. 1). The majority of the reported human cases were centered about a small outbreak in the Denver, Colo., area.

The major public health problem in 1957 among the arthropod-borne diseases in the United States continued to be St. Louis encephalitis (SLE), with the bulk of cases in

Texas and California (fig. 1). Florida registered its first proved case, the only geographic extension of the North American arthropod-borne encephalitides beyond previous historical limits (1). The sizable outbreak of SLE occurring in the lower Rio Grande Valley appears to be the only major concentration of human cases of encephalitis in 1957.

Data Collection

Since 1955 information has been collected from State and local health departments, medical and veterinary virus diagnostic laboratories, the Disease and Eradication Division of the U.S. Department of Agriculture, and other sources.

Most of the appraisal of the 1957 data was carried out by the epidemiologists, laboratory directors, and public health veterinarians in State health departments. The National Office of Vital Statistics of the Public Health Service gave statistical advice, and cooperation was afforded by virus laboratories of several academic institutions, the National Institutes of Health Rocky Mountain Laboratory at Hamilton, Mont., the Walter Reed Army Institute of Research, Washington, D.C., and the Fourth U.S. Army Medical Laboratory in Dallas, Tex. Continued mutual exchange of data in 1957 resulted in four concurrent seasonal reports

Dr. Murray serves as assistant chief of the Surveillance Section, and Dr. Brody as intelligence service officer assigned to that section in the Epidemiology Branch of the Communicable Disease Center, Public Health Service, Atlanta, Ga. Dr. Alan W. Donaldson, assistant chief of operations, and Dr. Mario Pizzi, chief of the Surveillance Section at the Center, aided in the compilation of the data; and Ida L. Sherman, of the Center's Statistics Section, gave statistical assistance.

Table 1. Human cases of encephalitis, by State, in 1957

State	Report data ¹	Cases appraised as arthropod-borne encephalitis						Fatal cases
		EE		WE		SLE		
		Con- firmed	Pre- sump- tive	Con- firmed	Pre- sump- tive	Con- firmed	Pre- sump- tive	
Maine.....	8							
Massachusetts.....	23							
Rhode Island.....	13							
Connecticut.....	8							
New York.....	272							
New Jersey.....	24							
Pennsylvania.....	25							
Ohio.....	74							
Indiana.....	76							
Illinois.....	130							
Michigan.....	84							
Wisconsin.....	23							
Minnesota.....	2							
Iowa.....	13							
Missouri.....	15					1		
North Dakota.....	37			1				
South Dakota.....	5			1				
Nebraska.....	7							
Kansas.....	33				4		7	
Maryland.....	29							
District of Columbia.....	10							
Virginia.....	53							
West Virginia.....	5							
North Carolina.....	55							
South Carolina.....	15							
Georgia.....	17							
Florida.....	24	2				1		
Kentucky.....	50		1			4		
Tennessee.....	16							
Alabama.....	22							
Mississippi.....	25							
Arkansas.....	11							
Louisiana.....	4	3						
Oklahoma.....	23							
Texas.....	196			7		61	78	² 3
Montana.....	8			1				
Wyoming.....	3			1				
Colorado.....	67			22		4		
New Mexico.....	6							
Arizona.....	5							
Utah.....	10			2		1		³ 1
Nevada.....	1			1				
Washington.....	14							
Oregon.....	52							
California.....	542			3		23		³ 2
Total.....	2, 135	5	1	39	4	95	85	6

¹ Reported Incidence of Notifiable Diseases in the United States, 1957, Morbidity and Mortality Weekly Report, Annual Supplement, vol. 7, No. 53, National Office of Vital Statistics, Public Health Service.

² One confirmed case and two presumptive cases of St. Louis encephalitis.

³ Confirmed.

and an annual summary report, which form the basis of information for this presentation.

Eastern Encephalitis

Five confirmed human cases of eastern encephalitis paralleled the reported occurrence of cases in horses in both early seasonal occurrence and geographic distribution, with the exception of an unusually early onset (February) in one of the two cases in Florida (table 1). The Florida patients recovered with very severe sequelae, whereas two patients in Louisiana recovered completely, but a third in that State was the only death reported. A presumptive case of EE was reported from McCracken County, Ky., in an 8-year-old girl who recovered, with persistent hemiparesis.

Information from the southern States revealed a prolonged seasonal incidence among horses, confirmed cases occurring from May through September. The clinical course of the disease in affected horses was characteristically violent, terminating in death in 24 to 48 hours. In all, 28 virus isolations were made from horse brains submitted to four laboratories from five States (table 2).

Ecological studies in Baldwin County, Ala., yielded the only virus isolation from mosquitoes in 1957 (2). A small endemic focus was suggested by isolations of virus from a number of species of wild birds and mosquitoes over a period of several months.

In contrast with 1955 and 1956, EE in pheasants was rare. The disease was evident in one captive pheasant flock in southern New Jersey in late September. One virus isolation was made. Although no reported cases in horses and pheasants occurred in Massachusetts, evidence of minimum virus activity was indicated in study areas by virus isolations from one wild and two sentinel pheasants, and the presence of antibodies in immature chickens, turkeys, starlings, and swine. From this area, the first human biting record for *Culiseta melanura* in a natural setting was established in September 1957 (3).

Similar ecological studies were conducted in Florida, Georgia, and South Carolina. In Georgia and South Carolina, antibodies were demonstrated in wild birds and immature feral swine, although no virus was isolated from mosquitoes, small mammals, or fowl. Negative

Figure 1. Geographic distribution of the arthropod-borne encephalitides in man, horses, birds, and mosquitoes in the United States, 1957.

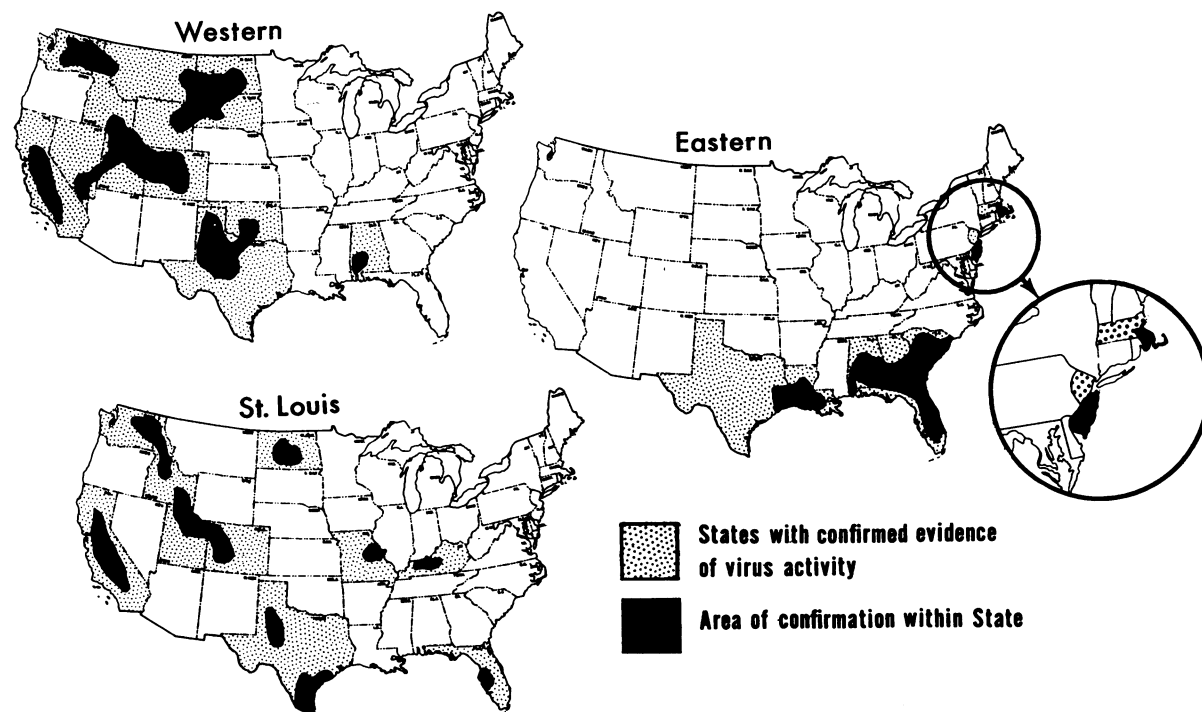


Table 2. Reported encephalitis cases in horses, by State, in 1957

State	Re-ported cases ¹	Total deaths ¹	Virus isolation ²	Serology ³
New Jersey	2	2		
Indiana	4	2		
Illinois	14	6		
Wisconsin ⁴	4			
Minnesota	15			
Iowa	2			
Missouri	4			
North Dakota	9			
South Dakota	58	18		
Nebraska	77	22		
Kansas	28	1		
Delaware	2	2		
North Carolina	14	14		
South Carolina	59	38	4	
Georgia	83	67	7	
Florida	368	237	5	
Tennessee	8	8		
Alabama	67	64	5	
Mississippi ⁴	3	3		
Arkansas	5	5		
Louisiana	92	85	7	
Oklahoma	13	2		3
Texas	133			
Montana	34			
Idaho	79	14		
Wyoming	16	3		
Colorado	80	9		3
New Mexico	69	17		
Arizona ⁴	18			
Utah	77	11		19
Washington	36			7
Oregon	36	7		5
California	16	2		4
Total	1,525	639	28	41

¹ Data from Animal Disease Eradication Division, U.S. Department of Agriculture. ² All eastern encephalitis. ³ Western encephalitis. ⁴ Four cases from these States were confirmed, but the test system is not known.

antibody and viral findings from a study in Florida are equally important epidemiologically.

Western Encephalitis

About 40 confirmed human cases of WE occurred in 1957, as in each year since 1955, when routine surveillance of encephalitis began. For the first time, however, the majority of cases emanated from a single epidemic, a small outbreak in Denver, Colo. Data from minor foci,

which cover a more restricted geographic area than in previous years, are presented in table 1.

About half of the human cases that occurred in Colorado were in the Denver area. Cases occurred from mid-July to the first of October. Although more than 100 clinical cases were reported, laboratory confirmation was obtained for only 22. The age pattern of these confirmed cases conforms closely to the national experience over recent years, with almost 50 percent of the cases occurring in infants (table 3).

Table 3. Age distribution of confirmed encephalitis cases, 1957

Age group, in years	EE	WE	SLE
0-1		12	4
1-4	1	4	5
5-9	¹ 2	3	9
10-14		3	2
15-19	2		7
20-29	1		20
30-39		2	15
40-49		2	8
50-59		1	4
60-69			5
70-79		3	4
80-89			1
Unknown		9	11
Total	5	39	95

¹ One case was presumptive.

The disease in horses was concentrated mainly in an area extending from the northwestern corner of Utah up through Idaho to the western portions of Oregon and Washington. Very few human cases were noted in these areas. Sporadic cases also occurred in the Dakotas, Montana, Wyoming, and Nevada.

Although close surveillance of encephalitis was continued in California in 1957, only three cases of WE were confirmed and one of these possibly originated outside the State (4). One of the patients, a 3-year-old boy, became ill on March 23, which is the earliest known date of onset recorded in the State.

Since WE is not particularly lethal to horses, virus isolations are infrequent. All confirmed cases in horses in 1957 were proved by serologic methods; they occurred in California, Colorado, Oklahoma, Utah, Washington, Wisconsin, Oregon, Arizona, and Mississippi.

In several States large numbers of mosquito pools, primarily *Culex tarsalis*, were examined for virus. Most investigators processed pools of 50 mosquitoes.

The results reported for 1957 by the California State Department of Public Health are compared with results in the State for other years, where similar techniques in collection were used (4):

Isolations	1954	1955	1956	1957
Pools tested-----	989	1, 113	1, 047	920
Pools positive-----	238	82	145	93
WE virus-----	151	68	143	44
SLE virus-----	87	14	2	49

Some 65 pools of *C. tarsalis* were positive for WE in collections from the Denver and Greeley areas. From 5 to 20 pools were positive among those tested from Texas, Idaho, North Dakota, and Washington. All isolations were from pools of *C. tarsalis* except the pools of *Culex quinquefasciatus* from Cameron County, Tex.

Western encephalitis made a late seasonal appearance in the region of Baldwin County, Ala., where eastern encephalitis is known to be endemic. In late October and November, three isolations were made from pools of *C. melanura* and three from wild birds.

St. Louis Encephalitis

After an interval of 2 years, SLE returned during 1957 in epidemic force to the Rio Grande Valley of Texas. The disease occurred for the second consecutive year in the high plains region also, but to a much lesser extent.

The outbreak in Cameron County, Tex., with some 119 clinical cases, was fairly classic for SLE. The area is semitropical, with an unusually large wild bird population. After a period of heavy rains, a long drought provided ideal conditions for the emergence of numerous *C. quinquefasciatus* mosquitoes. Cases began occurring around mid-July, reaching a peak during the last week in July and the first week in August. By the end of the month no new cases were being reported.

The attack rate was 160 cases per 100,000 inhabitants for the entire area, with considerable local variations. Harlingen was the major

urban center affected. The attack rate there was about 140 per 100,000.

The distribution by age and sex did not differ from other SLE epidemics in this area east of the Rockies. Cases occurred in all age groups, with the greatest concentration between 21-40 years of age (51 cases), but the highest attack rate occurred among persons over 60. The large number of men between 21-40 years who became ill is partially explained by the age distribution of the population which is affected by the proximity of an Air Force base and the employment of numerous braceros. There were three deaths: two men, ages 60 and 84, and one woman, age 86. A total of 42 cases were serologically confirmed in two laboratories as SLE by fourfold or greater rise in complement fixation antibody.

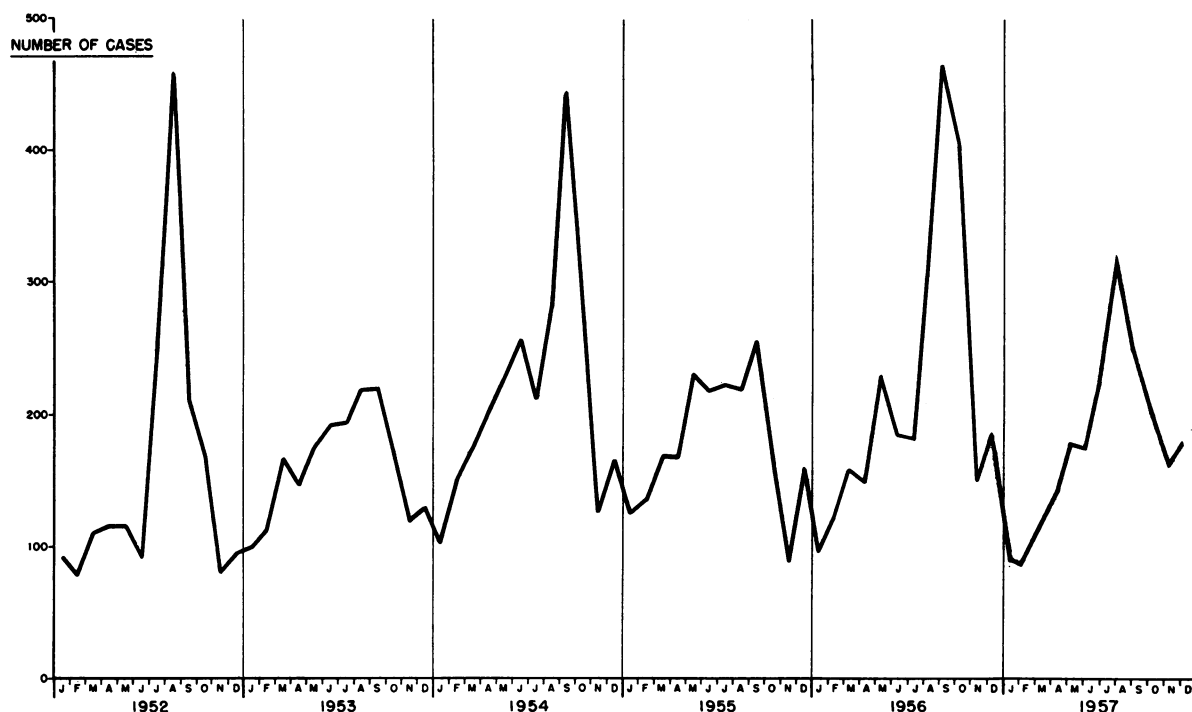
During the outbreak, control measures were instituted by State, local, and military and other Federal agencies. These were directed principally toward a large-scale dusting campaign, using a 3 percent gamma isomer of benzene hexachloride ($C_6H_6Cl_6$).

In California, confirmation of 23 cases of SLE from 11 counties was reported. The age distribution of the patients was quite similar to that in previous years, with eight below age 10 and nine over age 30. This distribution is higher than for WE in this area, where more than two-thirds of the cases are in infants and children, but lower than for SLE cases occurring east of the Rockies, where more than two-thirds were in adults. Virus isolations from *C. tarsalis* pools revealed 49 recoveries, as compared with 2 in 1956.

In Colorado, where SLE predominated in 1956, only four cases were confirmed, but these were of unusual interest as all but one occurred in infants, paralleling the age pattern in the larger WE epidemic in that State. Four confirmed cases were registered in Kentucky, two of which occurred in Jefferson County, the site of a sizable urban outbreak in 1956. Perhaps even more significant was a single case from Clayton County, Mo., which is the first proved case, to our knowledge, in the St. Louis area in many years. There was also a strongly presumptive case in Illinois.

The single case of SLE that occurred in Florida in a 21-year-old man was unique. It

Figure 2. Reported infectious encephalitis cases in the United States, 1952-57.



is the first report of this disease entity in the State and the first diagnosis made by virus isolation from cerebrospinal fluid. Isolation of SLE virus from body fluids has been successful only once previously, in 1946 from peripheral blood (5).

Indicative of a persistent low level of SLE virus activity in other areas were isolations of the virus in pools of unengorged *C. tarsalis* mosquitoes in North Dakota, Idaho, Colorado, and Washington. A pool of engorged *Culex pipiens* mosquitoes collected from a chicken coop in the vicinity of two human cases in Bullitt County, Ky., provided further verification of virus activity in that area.

National Case Reporting

The monthly incidence of acute infectious encephalitis in humans for 1957 has been compiled from weekly morbidity reports submitted by States to the National Office of Vital Statistics. Comparison with corrected final monthly totals of reported cases for recent years indicates a lower third quarter peak for 1957

than for 4 of the past 5 years (fig. 2). This total represents all reported cases of post- and para-infectious encephalitis and lymphocytic choriomeningitis along with the arthropod-borne encephalitis. Although many cases in 1957 reported as encephalitis were later shown to be aseptic meningitis, the total of 2,135 cases is below that of the previous 3 years. In 1956 the figure was 2,624. Table 1 gives figures of acute encephalitis by State, as well as confirmed cases and deaths from arthropod-borne encephalitis.

The 1,525 cases in horses, with 639 deaths reported by States to the U.S. Department of Agriculture (6), was the largest number of encephalitis cases in equines reported since 1953 (table 2). As for the past 3 years, about one-half of the reports on horse cases were from the east coast, where there are proportionately smaller numbers of horses. This may be partially a reporting artifact since EE prevalent in the area is 90 percent fatal and therefore well reported. The milder course of western encephalitis in horses, as reflected by a low case fatality rate, may fail to stimulate reporting of this dis-

ease in large horse populations of the western United States.

Discussion

Control and ultimate eradication of arthropod-borne encephalitis is dependent to a large extent on the gradual accumulation and interpretation of information. While few human cases occurred in 1957, the viruses were widely dispersed throughout nature. By means of active surveillance, certain general trends and findings have become apparent.

Only five cases of EE appeared in humans in 1957, while a large epizootic occurred among horses in the Gulf States. Human cases were confined to Florida and Louisiana. Only one death occurred among these cases, which is consistent with the finding that this disease is somewhat milder in the Gulf States than in Massachusetts, the other major area of concentration of EE cases.

Evidence is accumulating that *C. melanura* is the most important vector in the avian-mosquito cycle of EE. Whether this mosquito is the vector for human cases is not clear, although the first human biting record for *C. melanura* in nature was obtained during 1957.

As would be expected in a mosquito-borne disease, weather apparently influenced virus activity. From North Carolina northward very little rain fell during 1957 and there was almost no virus activity. A major epizootic, however, occurred along the Gulf. In 1956, when rain was plentiful in New England, the virus was considerably more prominent.

While most of the human cases of WE were centered about the Denver area, horse cases and virus isolation from birds and mosquitoes clearly indicate that this disease is very widespread in nature. Cases in humans continue to occur predominantly among infants. Evidence from studies in California (7) indicates that younger cases are most likely to have sequelae. When one considers that an increasing area in the United States comes under irrigation each year and that the extremely efficient vector *C. tarsalis* is becoming more abundant, the magnitude of the potential hazard of WE is demonstrated.

Since the first epidemic of SLE in St. Louis

in 1933, this disease has appeared periodically in epidemic form. The epidemic in Cameron County, Tex., in 1957 was typical of the disease. SLE virus, like that of WE, occurs widely throughout nature.

The factors maintaining these viruses in nature and the sudden precipitation of epidemics are being studied intensively. One fact which seems to be emerging is that large epidemics of SLE are preceded by periods of heavy rain, followed by drought. This cycle apparently favors the breeding of the major vector *C. quinquefasciatus-pipiens*, which breeds best in still water with a high concentration of inorganic salt and organic materials.

Investigations continue on the mechanism of overwintering of the virus and the biology of the mosquito vectors. The possible role of mammals as hosts for the virus and the migratory pattern of birds and their nesting habits in relationship to virus activity are also being studied. In the laboratory, levels of viremia of possible hosts and their infectivity for possible vectors are being elucidated. In the field, the value of predicting epidemics by periodic collection of mosquitoes for virus isolation and regular bleeding of sentinel birds to detect the introduction of the virus into an area are being tested, while the prognostic use of meteorological data such as ground and air temperature and rainfall are under investigation. The problems are varied and diffuse, but experience in 1957 slowly brings us a step closer to the goals of effective control of arthropod-borne encephalitis.

Summary

During 1957, surveillance of arthropod-borne encephalitis revealed fewer cases of the diseases than for the previous year among humans and more plentiful cases among horses. The only major epidemic was an epidemic of SLE in Cameron County, Tex. Five cases of EE in humans were reported, and an epizootic among horses occurred along the Gulf States. Human cases of WE were centered about the Denver area, while the sum of virus activity in man, animals, birds, and mosquitoes, for both SLE and WE, was widely distributed throughout the country. SLE continued to be the ma-

jor public health problem among the arthropod-borne encephalitides, with the epidemic occurring in Texas and confirmed cases occurring in six other States.

Several advances toward ultimate control of these diseases were made by better understanding of host and vector potentialities and the influence of meteorological conditions on viral spread.

REFERENCES

- (1) Alexander, E. R., and Murray, W. A., Jr.: Arthropod-borne encephalitis in 1956. *Pub. Health Rep.* 73: 329-339, April 1958.
- (2) Stamm, D. D.: Studies on the ecology of equine encephalomyelitis. *Am. J. Pub. Health* 48: 328-335, March 1958.
- (3) Hayes, R. O., and Doan, O. W., Jr.: Primary record of *Culiseta melanura* biting man in nature. *Mosquito News* 18: 216-217, September 1958.
- (4) California State Department of Public Health: Surveillance report on encephalitis. Nos. 1-18. Berkeley, 1957.
- (5) Blattner, R. J., and Heys, F. M.: St. Louis encephalitis. Occurrence in children in the St. Louis area during nonepidemic years 1939-1944. *J.A.M.A.* 129: 854-857, Nov. 24, 1945.
- (6) Hourrigan, J. L.: Reported incidence of infectious equine encephalomyelitis in the United States, calendar year 1957. *Animal Disease Eradication Division Notice*. Washington, D.C., U.S. Department of Agriculture, June 23, 1958.
- (7) Herzon, H., Shelton, J. T., and Bruyn, H. B.: Sequelae of western equine and other arthropod-borne encephalitides. *Neurology* 7: 535-548, August 1957.

Anticancer Drug Development

For the first time, a pharmaceutical firm has been contracted by the Public Health Service to develop, test, and manufacture antibiotics and related drugs for the treatment of cancer. The award, which runs until the end of 1959, was made by the Service's Cancer Chemotherapy National Service Center at the National Cancer Institute, to the Upjohn Co. of Kalamazoo, Mich.

Drugs found safe in research by the company will be evaluated in clinical trials under the direction of the service center. If the results indicate the drugs are of real value, the company is obligated to undertake their production.

Terms of the contract are in line with the new patent policy of the Department of Health, Education, and Welfare, which permits a contractor to patent and sell drugs or other chemical agents developed under contract with the Government. However, if the manufacturer fails to supply adequate quantities to meet the public need, the Surgeon General of the Public Health Service may license other firms to produce the drug.

publications

Health Statistics From the U.S. National Health Survey. Hospitalization: patients discharged from short-stay hospitals, United States, July 1957-June 1958. *PHS Publication No. 584-B7; 1958; 40 pages; 30 cents.*

Estimates of discharges and hospital days, percentage distributions, rates per 1,000 persons per year, and average length of stay are shown for four major characteristics: age, sex, hospital ownership, and type of hospital service.

The report also presents data dealing with socioeconomic variables, length-of-stay intervals, conditions for which the patients were hospitalized, and number and type of surgical cases. Appendixes carry technical notes on methods and give definitions of terms.

Salaries of State Public Health Workers, August 1958. *PHS Publication No. 647; 1958; 41 pages.*

Data in this report, taken from State and Territorial health department payrolls, include salaries of health officers, program directors, and various occupational groups.

Graphs and tables show distributions by State or by Bureau of the Census region.

Social Security Programs Throughout the World, 1958. *Social Security Administration Publication (Unnumbered); 1958; 115 pages; \$1.*

Intended to provide complete and up-to-date information, this report summarizes social security programs, including financial provisions, in 78 countries. It discusses old-age, invalidity, survivors, health, maternity, unemployment, and work injuries insurance as well as family allowance and other related programs.

The material, supported by 93 pages of charts, was drawn primarily from foreign laws or authoritative translations. It was supplemented by foreign service dispatches of the

Department of State and publications of the International Labor Office, the International Social Security Association, and social security agencies of foreign countries. Many of the summaries have been approved by social security officials in the countries concerned.

Proceedings, 1958 Annual Conference, Surgeon General, Public Health Service and Chief, Children's Bureau, With State and Territorial Health Officers. *PHS Publication No. 653; 1959; 56 pages.* Includes remarks and addresses by the Secretary, Department of Health, Education, and Welfare, the Surgeon General, Public Health Service, the Chief, Children's Bureau, and the Chief, Division of Special Health Services, Bureau of State Services. Presents recommendations on Federal relations, environmental sanitation, infectious disease, hospitals and mental health, special health and medical services, long-term illness and health of the aging, Indian health, and migrant labor. Contains resolutions adopted by the Association of State and Territorial Health Officers.

More Than Bread. *Social Security Administration Publication (Unnumbered); 1958; by Helen C. Manning; 24 pages; 15 cents.*

Directed to community leaders, civic groups, and others interested in community welfare, this booklet describes social services in public assistance. It offers suggestions for community projects designed to increase understanding and support of social services.

Vignettes are used to show responsibilities shared by public welfare agencies and the community for helping needy people. The results achieved through social services are highlighted in reports of projects conducted in several States.

In addition to copies for sale by the Superintendent of Documents

(see note below) free copies in limited quantities may be obtained from the Office of the Assistant to the Director, Bureau of Public Assistance, Social Security Administration, Washington 25, D.C.

Reported Tuberculosis Data. Calendar year 1956. *PHS Publication No. 638; 1959; by Lawrence W. Shaw and Paul L. Roney; 25 pages; 25 cents.*

This fifth annual summary presents data supplied to the Public Health Service on the Annual Tuberculosis Report by the States and Territories. The data cover newly reported tuberculosis cases for each State by source of morbidity report, activity status, form and extent of the disease, race, sex, and age as well as X-ray casefinding activities and mortality.

Summary tables present United States totals for the years 1952 through 1956, and accompanying text points out pertinent characteristics inherent in the data.

Better Teeth for Life—Fluoridation. *PHS Publication No. 636; 1958; 16 pages; 15 cents.*

This popularly written booklet tells the story of the research that led to fluoridation of public water supplies. It also outlines the seriousness of the dental health problem and summarizes the progress of fluoridation in this country and abroad.

This section carries announcements of new publications prepared by the Public Health Service and of selected publications prepared with Federal support.

Unless otherwise indicated, publications for which prices are quoted are for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Orders should be accompanied by cash, check, or money order and should fully identify the publication. Public Health Service publications which do not carry price quotations, as well as single sample copies of those for which prices are shown, can be obtained without charge from the Public Inquiries Branch, Office of Information, Public Health Service, Washington 25, D. C.

The Public Health Service does not supply publications other than its own.

Signs

and

Symptoms

of trends in public health

Radiation from some luminous watches is "several times greater than natural background radiation and exceeds by more than 100 times that presently received from radioactive fallout," reported G. D. Chase and A. Osol in the October 1958 issue of *Science*.

In 5 years, they found, one is subjected to a dose of 5 rem; the International Commission of Radiation Protection recommends no dose in excess of 5 rem by age 30.

" "

Local 88 Medical Institute, a new medical center in St. Louis, Mo., financed with health and welfare funds of the Meat Cutters Union, Local 88, was dedicated in October, during the 86th APHA conference.

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National Science Foundation says survey of 127,000 American scientists showed that three out of four know at least one foreign language. Only about 2 percent have some knowledge of Russian, and 1 percent know Chinese or Japanese.

" "

The division of sanitary engineering, Pennsylvania Department of Health, has published a pamphlet entitled, "Your Clean Streams Program."

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Dr. Charles S. Cameron, dean, Hahnemann Medical College, has called for a permanent national commission to recommend and coordinate medical research and indicate the relative emphasis to be placed in each field. It should be possible, he says, to agree reasonably on the relative importance of, say, cerebral palsy and better teeth.

The North Carolina State Board of Health has issued a 527-page, indexed volume on Public Health and Related Laws of North Carolina.

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Twenty new medical schools would have to be added to the 87 now existing or planned if the 1955 ratio of 131.9 physicians per 100,000 population is to be maintained in 1975, G. St.J. Perrott and M. Y. Pennell report in the *Journal of Medical Education*, September 1958. They also point out that the Association of American Medical Colleges has advocated the establishment of new 2-year schools of basic medical sciences as a means of increasing the enrollment of third-year classes of existing medical schools by 400 students each year.

" "

Forty-five State health departments now recognize accident prevention as a public health responsibility and engage in some degree of activity; 13 departments have a full-time accident prevention staff of one or more persons.

" "

About 50 million people suffer "accidental" injury yearly, the National Health Survey, Public Health Service, reports after a 6-month study. About 40 percent are injured at home, 17 percent at work, and 10 percent by motor vehicles. The remaining 33 percent suffer accidents from other causes, including those in public places during recreation.

" "

Automobile Safety is a new, 8-page, quarterly, published by the Automobile Manufacturers Association.

A manual entitled "Emergency Childbirth" has been written by Dr. Gregory J. White, and published by the Police Training Foundation, Franklin Park, Ill.

" "

Britons, in addition to their government's free medical service, now can buy medical insurance which includes the services of family physicians.

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With the aim of discovering clues to prematurity and malformations at birth, the University of Pittsburgh Graduate School of Public Health has received \$60,000 from the National Institutes of Health, Public Health Service, and the Association for the Aid of Crippled Children to study methods of obtaining accurate, scientifically useful information from pregnant women. Two hundred women from the Pittsburgh area will be asked questions on their daily eating habits, physical activity, and characteristic symptoms.

" "

The British Occupational Hygiene Society is organizing an international symposium on Inhaled Particles and Vapors for April 1960. Those wishing to contribute papers should notify W. H. Walton, Worton Hall, Worton Road, Isleworth, Middlesex, England.

" "

Use of closed-circuit TV for training and instruction in science may be enhanced by Eidophor, a device which projects an image in color on a screen wider than 13 feet. The instruments promise advantages in resolution, definition, and color fidelity.

" "

The Atomic Energy Commission has announced a plan (subject to hearing) to license a Texas corporation to collect and prepackage low-level radioactive waste, encase it in reinforced concrete, and sink it at least 6,000 feet in the Gulf of Mexico about 180 miles south of Galveston, beyond the Continental Shelf. It is presumed that, even if the packages break, the radioactivity of surface water would not rise above permissible levels.

The Nation's first clearly established case of rabies infection in a human from a bat's bite was reported in December 1958 by the California State Health Department.

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The Atomic Energy Commission announced in November 1958 that it will report to the public on radiation accidents which took place in plants operating under licenses from the Commission. The Commission also plans to publicize special reports from licensees on safety matters.

“ ”

A program of integrated training for law and medical students in Massachusetts is being set up with the assistance of Professor William J. Curran, Medical Research Institute, Boston University. The training will help physicians become better witnesses in court and help lawyers to conduct questioning with better understanding of medicolegal cases.

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Maternal mortality rate in this country has declined 93 percent in the last four decades—from 1 death in 165 live births in 1915 to 1 death in approximately 2,300 live births today.

“ ”

For the first time, a serial research publication, entitled “Wildlife Disease,” is being issued in microfilm. The first copy appeared in January 1959. Original manuscripts are printed on 3" x 5" cards. A maximum of 47 pages of text are printed on each card. No more than one article appears on a card.

“ ”

Highway fatalities declined in 1958 for the second consecutive year. In 1957 there were 1,100 fewer highway fatalities than in 1956 when a record of 39,600 was set. In 1958 fatalities declined another 1,500 to 37,000.

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Vitamin preparations are the subject of a comprehensive report by the American Medical Association Council on Foods and Nutrition, published in full in the January 3, 1959, issue of the *Journal of the American Medical Association*.

Twelve home accident prevention seminars, sponsored by the Tennessee Department of Public Health, were held in a number of counties in that State during 1958. Exhibits, informational materials from insurance companies, and films accompanied talks and discussions.

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The Army has developed an emergency medical packet for use in treating mass casualties, civilian or military. It will be used by all three services. The packet has 23 items and medical material adequate to care for 100 casualties in 72 hours. The container is light and inexpensive, easily identified by color or symbol, and may be sealed against tampering. It is easily carried by one person.

A countywide glaucoma and diabetes screening survey was conducted in rural Graham County in western Kansas during April 1958. Of the 593 persons over 40 years of age screened for glaucoma, 23 were referred for further examination. Eleven of those referred were diagnosed as having the disease. Of the 694 persons over 35 years of age tested for diabetes, 22 were found to be positive.

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Fellowships in human ecology and its relation to health have been established by Cornell University Medical College. Inquiries should be addressed to Dr. E. Hugh Luckey, New York Hospital-Cornell Medical Center, 525 East 68th St., New York 21, N.Y.



State police conducted rigid carbon monoxide detection tests on 8,000 school buses throughout Pennsylvania during August 1958. Buses with even a trace of carbon monoxide were held for special inspection of the exhaust system.

Air samples from the front and rear of buses were taken with a

hand-held instrument equipped with a sensitive detector tube (see illustration). If carbon monoxide is present, the contents of the tube turn green. The amount of carbon dioxide present is indicated by the intensity of color, which is compared with a color scale mounted beside the tube.