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Rabies Problems and Control

A Nation-wide Program

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Few events arouse more terror in a community than the cry of "mad dog." The fear and anxiety which accompanies this disease has hovered over the country since the days of colonization. Records indicate that rabies was present in the colonies as early as 1753, and by 1860 the disease had found its way into most of the States east of the Mississippi River. It then moved westward with the growth of the Nation, and finally invaded California in 1899 (*1*).

In the last 15 years there has been an alarming increase in the incidence of rabies throughout many parts of the country. Its effects on health, agricultural economy, and wild-life conservation are disastrous. Each year over 30,000 persons are required to take the long and often painful series of vaccine inoculations as a result of exposure to rabid or suspected dogs. The annual cost to the country for human vaccine treatments and livestock losses exceeds $5 million.

Surveys of present rabies control activities throughout the Nation on State and local levels have indicated a lack of uniformity which has minimized the effectiveness of individual control activities (*2*). Many communities have demonstrated effective rabies control programs; however, neighboring communities may have ineffective programs, or none at all. Epidemics may thus be reintroduced into rabies-free areas. Where one State employs one type of control program, the State to the north of it may employ another which conflicts with the strategy and tactics of its neighbor, while the State to the west may have no planned program at all. The hard fact is that the rabid animal respects no border lines, State or county, but is driven by pathological impulse to roam for miles, causing the spread of an epidemic from one area into another.

The Subcommittee on Rabies, National Research Council in 1945 (*1*) and the National Conference on Rabies in 1947 (*3*) unanimously

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agreed that nation-wide uniformity of control procedures will be necessary for the eradication of rabies from the United States, and that this can be achieved only if a properly authorized national agency assumes the responsibility of coordinating rabies control activities.

A proposal has been made to form a Federal rabies control advisory committee composed of members from the Public Health Service, Bureau of Animal Industry, and Fish and Wildlife Service. The principal objective of this inter-departmental policy committee will be to draw a pattern of uniform control methods, based on the latest scientific information, for adoption and action by the States. In the operation of this national policy, the Public Health Service has agreed to (1) distribute to the States information on the latest accepted diagnostic techniques; (2) institute an accurate system of reporting; (3) keep local control authorities posted on the most effective immunization techniques; (4) assist in the drafting of licensing and dog-control ordinances, and (5) prepare and distribute educational material to insure wholehearted cooperation by the general public.

The Public Health Service has embarked on a functional plan for participating in the national program by offering its technical and administrative services to the States for a coordinated attack on the rabies problem.

Serving as the nerve center for rabies control activities is the Rabies Control Branch, Veterinary Public Health Division, Communicable Disease Center. This Branch, with headquarters at Montgomery, Alabama, is active in investigations directed toward all aspects of the control of rabies. These investigations include the improvement and standardization of laboratory diagnostic techniques; training of State and local public health laboratory personnel through organized practical short courses; study of the immunology and pathology of the disease; testing and improvement of new experimental vaccines for animal immunization; preparation and distribution of educational material; epidemiological evaluation of reservoirs of infection; operation of field demonstration control projects; the furnishing of aid in epidemics, and the provision for consultation services in the development of permanent and long-range rabies control programs at the State and local levels.

Laboratory Diagnosis

The attack against any mass disease problem must necessarily begin with adequate diagnostic services. At the Rabies Control Branch laboratory studies are in progress on the comparative evaluation of various diagnostic techniques. The objectives are to determine the most efficient methods of making a diagnosis with the utmost accuracy, speed, economy and practicability. For example, in the

microscopic examination of animal brain tissue for Negri bodies, trial surveys have shown that the cumbersome practice of preparing histologic sections is not necessary. A film of brain tissue when properly prepared is just as accurate for purposes of diagnosis and is manifestly simpler, quicker and less costly.

The laboratory has also found that the three most acceptable methods for the application of the suspected brain tissue on the microscopic slide are: first, the so-called rolling technique in which a piece of brain tissue is rolled over the surface of the slide with a wood applicator; second, the smear technique in which a small piece of tissue is placed on one end of the slide, and is crushed with the aid of another slide and drawn down the length of the slide, creating a homogeneous spread of tissue; third, and perhaps best, the impression method in which a small section of tissue is placed on blotting paper and the slide is applied to the cut surface of the section with just enough pressure to leave a thin film of tissue imposed on the slide. In the impression technique an optimum amount of nerve tissue can be concentrated in a small area without damage to neuronal and interstitial structure (*4, 8, 9, 10, 11*).

A multitude of differential stains for use on brain-tissue smears for Negri-body examination are being used routinely with varying degrees of success in diagnostic laboratories throughout the country. In comparative studies on most of the staining techniques used for this purpose, we have achieved by far the most satisfactory results with Sellers' stain. Because the methylene blue and basic fuchsin of this stain are dissolved in methyl alcohol, the tissue film requires no preliminary fixation; it is fixed and stained simultaneously. This is probably the most important factor in making the Sellers' technique the most rapid and the most easily handled (*5*).

Since Negri bodies cannot always be found in the brains of animals dying of rabies, it is important that animal inoculation for demonstration of the virus be done on Negri-negative specimens. Extensive surveys of large numbers of rabies cases have shown that 10 to 12 percent of those cases proved positive by mouse inoculation had been missed by direct smear microscopic examination for Negri bodies.

It is therefore strongly recommended that laboratories which furnish rabies diagnostic services be equipped to do animal inoculation tests on Negri-negative brain tissues. In this way, vital assistance is given the physician handling a dogbite case where there is a question of human exposure, and necessary support in the form of more accurate reporting is given to the rabies control authorities who are aiming at eventual eradication of the disease.

The operation is simple and inexpensive. The preferred animal is the white mouse since it is uniformly susceptible, low in cost and easily

handled. The intracerebral inoculation of a suspension of infected brain material will produce typical and constant symptoms in 5 to 11 days with the consistent production of Negri bodies (*8, 10, 12*). The details of the test have been standardized for practical use at our laboratory and are available for distribution to all agencies responsible for the diagnosis of rabies (*13*).

Animal brains shipped to diagnostic laboratories are often grossly decomposed on arrival, making it impossible to inject mice without the danger of introducing complicating bacterial infection. Suitable agents for treating suspensions of such contaminated material are 10 percent ether, 0.5 percent phenol, 1:5,000 merthiolate, pure glycerol or 500 units of sodium penicillin G per milliliter of tissue emulsion. All of these agents will kill the contaminating bacterial without affecting the virulence of the virus. Comparative evaluations of these agents in our laboratory have earmarked the penicillin treatment of brain suspensions as the preferred technique. Such suspensions are ready for inoculation within 30 minutes as compared to 2, 6, 6, and 48 hours for tissue emulsions treated with ether, phenol, merthiolate and glycerol, respectively.

Implementing the diagnostic reference services of the Rabies Control Branch, an organized short course in the laboratory diagnosis of rabies is offered twice each year at the laboratories of the Communicable Disease Center, Atlanta, Georgia. This training is open to all grades of employed laboratory personnel including directors and senior staff members. Although first consideration is given to the laboratories of State and local public health departments and other official agencies responsible for the diagnosis of rabies, applicants from hospitals and similar institutions are considered when vacancies occur.

This one-week refresher course is designed essentially for practical laboratory training. The students carry out the various procedures to gain proficiency and to keep abreast of new and improved methods. It is supplemented by lectures and demonstrations. Phases of the course covered include orientation and background, preparation of stains, gross brain dissection, tissue-film preparation and staining, mouse inoculation and symptomatology, mouse brain smears and staining, microscopy (the Negri-body and differential diagnosis—other virus inclusion bodies), cost and materials, review and unknowns.

Canine Rabies Vaccination

One of the principal projects at the laboratory of the Rabies Control Branch is the study of the efficacy of canine rabies vaccination. Current studies in the laboratory and analytical observations of field trials have produced satisfactory evidence that annual vaccination of

dogs is an essential means of controlling rabies and should be encouraged to augment other measures such as licensing, quarantine and the elimination of strays.

The following organizations and official agencies have endorsed canine rabies vaccination: American Veterinary Medical Association, American Medical Association, American Public Health Association, American Animal Hospital Association, United States Livestock Sanitary Association, National Research Council, Public Health Service, and Bureau of Animal Industry (*3*).

Those States, counties and municipalities which put the annual vaccination requirement into effect several years ago did so on a scientific basis. Evidence, presented by Johnson of the International Health Division, Rockefeller Foundation, after carefully planned, well-controlled experiments and field studies, showed that immunity is maintained at a high level for 6 months and is effective 1 year after vaccination (*6*). Our experience in the Public Health Service has thus far corroborated the findings of the 9 years of research by the Rockefeller Foundation.

Mass immunization of dogs has been used with excellent results in many communities throughout the country. One of the most forceful demonstrations of the effectiveness of canine vaccination was presented just a year ago during an outbreak of rabies in Memphis, Tenn. Rabies incidence, which had been at a substantial endemic level in Memphis and in Shelby County for years, suddenly began to reach alarming epidemic proportions in the late winter and spring of 1948. By March, positive animal cases were being reported at the rate of more than one a day. The number of cases was twice that reported for the same period in 1947, and four times as many as in 1946. Over 150 persons had undergone the full series of anti-rabic vaccine treatments, which in the first 3½ months exceeded the total number of treatments for any previous entire year. At that time we were called in to assist in the planning and operation of an emergency control program.

It was noted that the disease continued to spread in spite of a strict dog quarantine, adequate stray dog control and a good licensing law. It was estimated that about 8,000 dogs were vaccinated annually. Working swiftly and efficiently, the Memphis and Shelby County Health Departments set up machinery for a voluntary dog-vaccination program by mobilizing the practicing veterinarians of the community and alerting dog owners through every conceivable medium. A series of 70 emergency dog-inoculation clinics were operated over a 6-day period at strategic locations throughout the city and county. The vaccination charge was $1 per dog, regardless of dose. As a result, 23,000 dogs were inoculated during the 6-day emergency program. Added to those vaccinated by veterinarians in their routine practice,

preceding and following the campaign, it is estimated that 80 percent of the dog population was immunized.

The results of the Memphis program were phenomenal. In the ensuing months, the positive cases began to drop until the last case of animal rabies and the last human anti-rabic vaccine treatment were reported in July. Both city and county remained entirely free of rabies until March 10, 1949, when the first rabid animal since July 22, 1948, was picked up at the city limits. Seven months without a single case of rabies was a new and refreshing experience for Memphis.

Despite the thorough dog control activites, it was not possible to eliminate rabies from the area until mass immunization was added in the emergency program of 1948. The results of this episode stand as dramatic testimony to the importance of canine vaccination.

Great progress has been made in recent years in the improvement of canine rabies vaccine. The product now in use is a 20-percent phenol and heat-killed brain emulsion vaccine. Its manufacture has been standardized by Federal regulation, and all canine rabies vaccine on the market today is required by the Bureau of Animal Industry to pass the stringent Habel mouse potency test of the Public Health Service.

Investigations in animal rabies vaccination are being continued at the laboratory of Rabies Control Branch, and experimental activities along these lines have been expanded to include studies in the duration of immunity, dosage for maximal immunity response, efficacy of newly developed vaccines inactivated with a variety of chemical substances and by ultraviolet irradiation, and safety and relative antigenicity of experimental live virus vaccines such as the chick embryo vaccine.

Reporting

One of the three primary resolutions adopted by the National Rabies Conference held in Philadelphia in 1947 was "that rabies in animals should be made a reportable disease and the information be properly analyzed and distributed to all the States." Following this resolution, arrangements were made by the Public Health Service to print information concerning incidence of rabies in animals, as well as in man, in PUBLIC HEALTH REPORTS which reaches all disease-control agencies in the country. State health officers were asked to include rabies in animals in their weekly telegraphic reports to the Public Health Service. This important statistical information is compiled and distributed so that each State will have a week-by-week picture of the extent and movement of the infection in neighboring and other States. This service has proved invaluable during the past year in notifying authorities of new foci of infection so that control work could be started before the disease had time to spread.

The State Program

One of the most vital functions of the Veterinary Public Health Division is the assignment of qualified public health veterinarians to State health departments throughout the country. These Public Health Service veterinary officers are responsible for the organization and development of sound rabies control programs in the States to which they are assigned. They establish the extent and limits of the States' problem and set into motion the mechanism of control according to the results of their surveys.

Many State health departments employ full-time veterinarians of their own who cooperate with the Public Health Service. It is urged that this arrangement be effected in every State where rabies is prevalent, since it has been shown that the only States which are beginning to achieve a measure of success are those with programs under the supervision of a qualified public health veterinarian.

These men, whether Federally assigned or State employed, are the keystones in the fight against rabies. Through the offices of the Rabies Control Branch and Veterinary Public Health Division, they report the progress of their respective programs, learn of the problems and activities of other State programs, and obtain latest information on the technical and administrative aspects of effective control procedures. Through State professional societies, they stimulate the interest of the private practicing veterinarians of the State and enlist the active support of practitioners in local control programs. They serve as liaison officers between State diagnostic laboratories and local health units.

In administering the State-wide program, the health department veterinarian coordinates the efforts of local control by encouraging accurate reporting; alerting counties on the presence of rabies in neighboring areas; appointing local rabies inspectors; improving methods for the shipment of specimens to diagnostic laboratories; making canine vaccines available where needed; surveying facilities for collection and impoundment of stray dogs; preparing and distributing educational material throughout the State, and, by frequent visits, advising and consulting with local control authorities on current policies and methodology of control practices.

The Local Program

The actual legwork of control operations is done at the local level. Field demonstrations have proved that local programs work best on a county-wide basis or on a multicounty unit basis according to the extent of the local health jurisdiction.

It is suggested that all local rabies control programs include three broad measures. The first is *impounding and destruction of all stray*

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and ownerless dogs. This requires the operation of a local pound or humane shelter where stray dogs may be kept for a specified number of days and, if unclaimed at the end of that period, humanely destroyed. Strays should be collected by teams of dog wardens and assistants using trucks with proper enclosures. The second is *annual anti-rabies vaccination of all dogs.* The importance of canine vaccination in an efficient control program is now a firmly established fact and needs only a well-coordinated educational campaign to bring this fact to the public. The third is *registration or licensing of all dogs.* Licensing of all dogs in a community is an important adjunct of a successful control program. If properly enforced, it serves to defray the expenses for the over-all control program, assures a reasonably accurate dog census, rids the area of ownerless strays, and places the responsibility of dog control activities squarely on the dog owner.

The foregoing are essentials of a successful control program. If there is a local ordinance with or without the benefit of State enabling legislation, it should be administered by the local health department and enforced by city and county police officials. The ordinance should contain enforcing clauses. It should be well conceived and simply drafted and contain all important details with regard to its operation. The health officials should strive to launch an effective educational campaign in conjunction with any regulatory measures. This latter step is paramount for the success of the program.

Some additional provisions which may be incorporated into the program are:

1. Except in heavily populated cities, vaccinated dogs, when properly tagged, may be allowed at large 30 days after vaccination. The vaccine is not fully effective until the end of that time.

2. In the face of an outbreak of rabies in the community, a strict quarantine should be placed on all dogs, requiring that they be confined at home or kept on a leash when out of doors.

3. Dogs under 6 months of age, which are particularly susceptible to rabies and not as readily immunized as adult dogs, should be confined.

4. Biting dogs and suspected rabid animals should be impounded and held under observation for 12 to 14 days so that proper medical disposition of dogbite and suspected human exposure cases may be effected. Dogs exposed to rabies should be destroyed or kept confined under observation for 6 months.

5. In case of rabies outbreaks in wild animals, such as foxes, adequate trapping programs should be instituted in cooperation with the State wildlife conservation authorities.

It should be pointed out again that adequate diagnostic facilities and human anti-rabies vaccine should be made available by the local

health unit or branch laboratory of the State health department. All cases of rabies in man and animals should be reported to the local health officials.

Vaccination as a prerequisite to registration and combining the two as a single operation is a sound idea and will make the control program simpler and less cumbersome. The dog owner will appreciate the fact that he has only one trip to make each year when he can have his dog vaccinated and registered at the same time. He should be issued a single official uniform tag for the dog's collar and a single official uniform certificate of vaccination. The certificate can be made in triplicate, with the original for the dog owner, one copy for the health department's registration files and one copy for the veterinarian. A single fee should be charged which will be low enough to cover all classes of dog owners and high enough to defray expenses of vaccination services and the operation of stray dog control activities.

Another suggestion is that dog inoculation clinics be operated by veterinarians duly authorized by the health department. The clinics can be held at strategic points throughout the city or county over a 1- or 2-week period. It has been found that the effective control of rabies is enhanced by the desired immunization procedure of getting as many dogs as possible vaccinated in the shortest possible period of time. Temporary neighborhood clinics have the added advantage of making it more convenient for people to get their dogs vaccinated.

Education

No matter how soundly a local control program is developed and no matter how well an ordinance is drafted, it still must be supported by the people if it is to succeed. This can be achieved only by a well-planned educational program. In speaking of rabies, Denison has stated "there is no disease about which the public is more misinformed" (7). It is in the province of all of us as health workers to dispel superstitions, prejudices and misinformation. People will be happy to cooperate if they learn that canine vaccination is of proved value, that dog-registration ordinances are for their own protection in combating a deadly disease and not just another devious form of government revenue, that the conception of "dog days" during the hot summer months has no bearing on rabies, that the use of the "mad-stone" is a superstitious fantasy, and that dogs do not just "get rabies" spontaneously but as the result of exposure to another rabid animal.

In planning campaigns for many communities, we have successfully used such media as newspapers, radio, television, placards, sound trucks, mimeographed schedules of clinic stations, printed pamphlets, church announcements, and talks before civic and school groups in which audio-visual aids were utilized. In this connection, the Pro-

duction Division in cooperation with the Rabies Control Branch of the Communicable Disease Center is engaged in the production of audio-visual media for disseminating information on rabies-control methods. Two sound filmstrips on rabies were released during the past year and copies of each have been widely distributed throughout the country. They have proved to be valuable adjuncts in local control operations.

The first filmstrip, "The Fight Against Rabies", acquaints the audience with symptoms of disease in animals and man; refutes popular misconceptions such as the influence of climate and season on rabies prevalence; stresses the 100 percent fatality rate of the disease; presents the hazards of an uncontrolled epidemic; gives mode of transmission, and suggests means by which citizens can cooperate with control authorities in combating its introduction and spread through a community. Many of the points on control are illustrated by simple dramatization. Forceful material for mass immunization of dogs is also presented. The filmstrip provides excellent orientation for health department workers as well as being an effective educational device for the layman.

The second filmstrip, "The Laboratory Diagnosis of Rabies", is being used as a training aid for public-health laboratory workers in bringing to them visual demonstrations of the most efficient and practical techniques in the laboratory diagnosis of rabies.

Now in the script stage of production is a new motion-picture film on rabies eradication which may be released later this year.

The Wildlife Problem

In many sections of the United States the rabies problem is complicated by the presence of the disease in wildlife. Wild animal rabies is now present in the States of the Appalachian Range from New York to Georgia, westward in the Southern tier to eastern Texas, and in the Midwestern belt that extends from western Pennsylvania through Iowa. Most of the cases reported are foxes, but civet cats, skunks and coyotes are also reported.

Without the problem of wildlife rabies, eradication of this disease from the United States would be a substantially easier task. Although we have a good vaccine for prophylactic measures in domestic animals, mass immunization tactics cannot be applied to the susceptible wildlife. In areas where wildlife rabies exists, coordinated programs between public health and wildlife conservation departments can be effectively developed.

Organized trapping programs sponsored by State game and fish commissions assisted by the Fish and Wildlife Service have produced good results in smothering serious outbreaks of rabies in wildlife. "Encirclement" and "thinning out" trapping techniques are suggested by wildlife conservation authorities and are based on the observation

that rabies epizootics occur when there is an overpopulation of foxes.

The disease in foxes, when present in epizootic proportions, will run its course in a year or more, the resulting mortality reducing the number of foxes until they are no longer a source of danger. However, besides the devastating effect of the disease in the foxes themselves, there is always the danger of some affected animals leaving the area and setting off a chain reaction of infection in a susceptible animal population at some distant place. There have been a few instances on record where infected wildlife served as the link in the transmission of rabies between isolated animal populations. The objective in trapping procedures is to reduce the fox population more quickly than the disease will and thereby shorten the period of infection and the danger of its spread to other animals and man.

Additional Control Services

In addition to the services available by the Communicable Disease Center for the control of rabies, activities of the National Institutes of Health, Foreign Quarantine Division, and Public Health Service Regional Offices are serving to strengthen the national control program.

Those aspects of rabies and its control which relate to the human disease are being studied in the Institute of Microbiology, National Institutes of Health. Here basic information is being sought through research of the disease in man. Another important activity at the Institute is the routine potency testing, improvement and establishment of minimum requirements for rabies biologics production.

At the end of the war, the Armed Forces requested that the Public Health Service include animal rabies provisions in their quarantine regulations. These regulations, now in effect, are administered by the Foreign Quarantine Division and require that all animal pets coming from countries where rabies is known to exist be vaccinated not more than 6 months prior to debarkation at the port of entry.

Throughout the country, Public Health Service Regional Offices are available for consultation on rabies and other disease control problems. Regional office staffs stimulate reporting, and encourage and assist in coordinating control activities in the regions. For States which require financial aid in the development of rabies control programs, grants-in-aid funds are available from the Public Health Service under P. L. 410, sec. 314c, 78th Congress for the operation of general health programs. These grants to the States are administered by the Regional Offices.

Conclusion

The eventual eradication of rabies from the United States is not an unobtainable goal. Its achievement can mark one of man's great victories over disease. The nature and extent of the problem is well

known, the implements for attaining it are available and the strategy has been planned. It is felt that the integration of the services outlined in the foregoing pages with those of the State and local rabies control agencies in a unified national program will provide the *modus operandi* to reach this goal.

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Pilot Mental Health Clinic

First Annual Report of Prince Georges County Clinic

By Mabel Ross, M. D.*

The Prince Georges County Mental Health Clinic is a demonstration clinic under the National Mental Health Act and is financed by congressional appropriation for this purpose. It was established in January 1948, in Prince Georges County, Maryland, which includes suburban and rural areas in its 482 square miles and has a population of over 150,000.

The clinic was set up at the request of citizens and organizations of the county, who, with the county and State health departments, worked out the details of organization with the Mental Hygiene Division of the Federal Public Health Service. A group of interested citizens formed an interim board and, among other things, made the arrangements between the county and the University of Maryland to have the clinic housed in a building on the university campus. This group then organized a meeting of the representatives of organizations in the county which were interested in mental health. Under a constitution adopted at this meeting the representatives formed a committee-at-large to meet annually and elect the members of the advisory board. The 12-member advisory board of the Mental Health Clinic meets monthly with the clinic staff in an advisory capacity and acts as liaison with the community.

This pilot clinic was established to study methods through which the mental health program can be made part of the over-all health program for a county and to determine methods which communities can apply to attack the factors contributing to the high incidence of psychiatric disorders. Toward this end it is necessary to service individual cases in order to demonstrate the value of psychiatric treatment in already existing disorders and also to develop confidence in the mental health principles stressed by the clinic. Behind and beyond the individual service, each case serves as a basis for study and research of the community factors contributing to the existing illness and the possible points at which preventive action might have made psychiatric treatment unnecessary. As an important part of the treatment of those referred to the clinic, the existing community facilities are given an active role in the treatment plan. This activity has definite educational value and makes available the basic principles of mental health to a wider group than just those patients who are referred to the clinic.

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The Prince Georges County Mental Health Clinic opened officially January 19, 1948, although one of the psychiatric social workers had been working with the County Health Department for the preceding 8 weeks. The present staff consists of two psychiatrists, two psychiatric social workers, one clinical psychologist, one mental health nurse, and three clerical staff members. The clinic sees patients only by appointment, which can be applied for by any resident of the county.

The activity of the clinic is divided into three parts for the purpose of this report: individual service and treatment; community activities; demonstration.

Individual Service and Treatment

From January 19, 1948, through January 18, 1949, 423 patients were seen by the Prince Georges County Mental Health Clinic. Of these, 281 were children under 18 years, and 142 were adults. These patients were referred by physicians, schools, the probation department, social agencies, ministers, and other local groups as well as by friends and relatives. Some of them came on their own initiative. Twelve and one-half percent were referred by local physicians who frequently carried on treatment of these patients in collaboration with the mental health clinic; 37½ percent were referred by friends, relatives, or came on their own initiative. Many learned of the clinic from publicity in newspapers and magazines, but the majority learned of it from other patients. At the end of the year there was a waiting list of 31 patients to be seen as soon as appointments could be arranged. All of the time allotted for examination and treatment is now being utilized, and the rate at which patients are discharged is somewhat less than the rate at which applications are being made. Treatment time is concentrated on individuals whose problems are interfering with satisfactory functioning at work, home, or school. The seriously ill are referred to other facilities for the necessary intensive psychiatric treatment.

During the year there were 18 cases which would have required care in a general or mental hospital or in an institution had it not been for the clinic. Four patients who had attempted suicide are now making a reasonably good social adjustment. Five potential divorces have thus far been avoided and in at least 16 cases the economic status of the family has definitely improved either because the patients were able to accept employment or change to full-time employment. In almost all instances this was not due solely to treatment at the clinic but was accomplished with the cooperation of appropriate community facilities.

As a result of the study of the cases referred to the clinic we are convinced that some of the more serious cases could have been pre-

vented had there been available in the past adjustment clinics in the schools, better guidance of parents through pediatricians or public health nurses, and improved child welfare services to deal with early problems of foster home or other placement of children.

Community Activities

The relationship between the clinic and the health department of Prince Georges County existed before the actual opening of the clinic. To study ways of including the mental health program in the general health program of the county, the mental health nurse of the clinic has carried out several activities with the cooperation of the staffs of the mental health clinic and the health department. Liaison with the supervisory and staff nurses of the health department included conferences concerning patients to be referred to the mental health clinic or problems in their own case load. Participation in the health department in-service educational program has been through mental hygiene conferences and by the attendance of public health nurses at the mental health clinic staff conferences.

Other activities included organization of mothers' discussion groups in prenatal and well baby clinics in the county. These groups of 6 to 10 mothers have met weekly or monthly to discuss various aspects of child care and development. Individual conferences were held with mothers and fathers attending the well baby clinic, with discussions centering around questions brought by the parents, such as: "Why does my 2-year-old take things away from the 6-month-old baby?" "Will my baby be 'spoiled' if I pick her up when she cries?" "My little girl, age 3, will not eat all of her food. Does she need a tonic?"

Recently, conferences were held with the public health nurses, and they indicated an interest in extending such discussion groups as part of the general health program. This is in keeping with the belief of the health department and the clinic that neither the patients nor the staff should think of mental health as separate from general health. The aim of a mental health demonstration is to be so incorporated into all health, educational, industrial, and community thinking that it is no longer recognizable as an entity.

To study the problems of a traveling clinic in a strictly rural area, a part-time clinic was established in November 1948 in Upper Marlboro, where the transportation problems are greater. This clinic has been held regularly twice a month.

The schools have sought help in individual cases and also have brought group problems for consultation. Discussion between the clinical psychologist and school representatives concerning individual children referred to the clinic, led in the summer of 1948 to setting up

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a reading class by the county department of education with the cooperation of the mental health clinic. As a result, the schools have set up some classes and plan to continue the summer sessions. Other problems of maladjusted children needing special education are being studied by the clinic and schools. Conferences were held in five schools, and the referred problems were used as the starting points for discussion. These were enthusiastically received.

The Parent-Teachers Association groups requested assistance in county institutes. They feel it is their responsibility to make teachers and parents aware that help is available for some of the school problems.

Although the courts have referred few cases, it has been possible to set up a good working relationship with the probation department. Despite being seriously overloaded, the men of this department have taken time to discuss cases before and after referring them to the clinic.

Other community activities included consultative conferences with the Welfare Board, Catholic Charities, Social Service League, Vocational Rehabilitation Service, and the Maryland State Employment Service.

The clinic staff has made many speeches to service clubs, Parent-Teachers Association, women's groups, university classes, homemakers' representatives, the Community Council, and the Medical Society. These talks almost invariably were followed by periods of discussion. Recognizing that all interested organizations in the county now have a working knowledge of the clinics, it is felt that they want more than a speech. For this reason, the clinic staff will try to work with the interested group in panel discussions, institutes, and working conferences planned toward action more than discussion of the clinic itself.

Demonstration

During the past year the clinic has had professional visitors from other States and other countries as well as from its own county and other parts of Maryland. Among them were psychiatrists, psychologists, nurses, social workers, and health officers. They came from private hospitals, other county clinics, State hospitals, and administrative departments. They came from New York, Virginia, West Virginia, North Carolina, Illinois, Iowa, Colorado, Texas, Arizona, and Oregon. They also came from China, Colombia, and Scotland.

While the visitors were interested in the functioning of the clinic per se, practically all hoped the demonstration clinic would be able to answer the problems in their own situations. Most of their questions centered around the community relations of the clinic—what agencies are worked with directly, both on a referral and a

consultative basis; what were the extramural activities, both consultative and educational; what were the mechanisms of cooperation with the community agencies; how can cooperation with the local medical society be established and maintained; how can the interest and support of the community and local agencies be fostered?

There have been nonprofessional visitors also. Telephone inquiries regarding the clinic come almost daily—usually from out of the county—and here an attempt is made by the receptionist to direct the caller to other clinics. Publicity has also brought letters from all over the country—some curious and some appealing. Each letter has been answered, usually with referral to the State Mental Health Authority for information as to nearby clinics. In two instances patients suddenly appeared—one from Pennsylvania (referred to and aided by a mental hygiene clinic in that State) and one from Ohio (referred to the State Mental Health Authority). Most of the publicity resulted from an article in a national women's magazine stressing the community participation in planning the clinic and the individual service.

There also were letters from cities and counties in North Dakota, South Dakota, Ohio, Wisconsin and California, requesting information about setting up similar mental health clinics.

It appears that this clinic has begun to serve its function as a demonstration to other counties in other States throughout the country. With every bit of progress, wider possibilities open for community activity. With every report there is increasing evidence of the great numbers of people throughout the country who are seeking some pattern and direction in establishing mental health services. Many questions have been about community cooperation, and it has been a source of pride to the clinic staff to be able to stress the active part played by the people of Prince Georges County in having the mental health clinic set up in this county, and to point to the continued interest and active support of the advisory board. However, the most unusual feature of this demonstration clinic is the committee-at-large, representing all interested groups in the area and expressing a community sense of responsibility. We hope that, with the continued help of the people in the county, more community methods will be found to serve as patterns for the development of other community-wide programs for mental health.

Notifiable Diseases, Year 1948

The figures in the following table are the totals of the monthly morbidity reports received from State health authorities for the year 1948. These reports are preliminary and the figures are more or less incomplete and subject to correction by final reports. The figures may be assumed to represent the civilian population only, although in some instances a few cases in the military population may be included. The comparisons made are with similar preliminary reports; but, owing to population shifts in many States since the 1940 census, the figures for some States may not be comparable with those for prior years, especially for certain diseases. Each State health officer has been requested to include in the monthly report for his State all diseases that are required by law or regulation to be reported in the State, although some do not do so. The list of diseases required to be reported is not the same for each State. Only 11 of the common communicable diseases are notifiable in all the States. In some instances cases are reported, in some States, of diseases that are not required by law or regulation to be reported and the figures are included although manifestly incomplete. There are also variations among the States in the degree of, and checks on, the completeness of reporting of cases of the notifiable diseases; therefore comparisons as between States may not be justified for certain diseases. As compared with the deaths, incomplete case reports are obvious for such diseases as malaria, pellagra, pneumonia, and tuberculosis, while in many States other diseases, such as puerperal septicemia, rheumatic fever, and Vincent's infection, are not reportable.

In spite of these and other deficiencies inherent in morbidity reporting, these monthly reports, which are published quarterly and annually in consolidated form, have proved of value in presenting early information regarding the reported incidence of a large group of diseases and in indicating trends by providing a comparison with similar preliminary figures for prior years. The table gives a general picture of the geographic distribution of certain diseases, as the States are arranged by geographic areas.

Leaders are used in the table to indicate that no case of the disease was reported.

Consolidated monthly State morbidity reports for the year 1948

Division and State	Anthrax	Chickenpox	Conjunctivitis [1]	Diphtheria*	Dysentery, amebic	Dysentery, bacillary	Dysentery, undefined	Encephalitis, infectious	German measles	Hookworm disease	Influenza	Malaria [2]	Measles*	Meningitis, meningococcal*	Mumps	Ophthalmia [3]	Pellagra	Pneumonia, all forms
NEW ENGLAND																		
Maine	0	3,374	....	32	....	49	....	2	153	1	77	4	2,967	[4] 17	952	....	....	706
New Hampshire	1	790	....	1	....	....	....	....	46	....	49	....	1,228	12	432	....	....	72
Vermont	0	2,983	....	8	....	2	....	1	362	....	8	....	1,648	9	579	....	....	70
Massachusetts	3	18,127	166	303	4	121	....	34	1,076	....	....	23	37,108	73	14,216	277	....	[5] 1,393
Rhode Island	0	1,555	1	15	2	10	....	1	23	....	13	10	623	11	723	....	1	264
Connecticut	1	10,054	175	20	12	7	....	9	356	1	95	17	3,281	64	4,441	1	....	1,858
MIDDLE ATLANTIC																		
New York	8	26,523	48	330	463	371	....	45	[6] 2,681	[6] 113	[6] 233	76	57,776	269	[6] 9,693	41	....	11,063
New Jersey	16	27,098	....	123	59	4	1	3	2,128	....	207	36	42,855	97	32,152	5	....	3,189
Pennsylvania	16	25,820	....	328	13	13	1	16	....	....	128	....	39,185	223	15,598	8	....	3,888
EAST NORTH CENTRAL																		
Ohio	0	18,004	10	349	74	42	10	....	446	....	121	7	25,755	136	3,363	471	1	2,445
Indiana	0	3,638	3	433	14	19	8	43	226	....	408	10	17,448	36	3,933	....	1	500
Illinois	0	15,925	151	89	338	146	....	83	545	4	148	[7] 26	41,796	220	11,704	47	....	4,776
Michigan	0	20,478	171	127	518	117	....	5	783	38	78	26	42,952	106	13,202	7	....	2,075
Wisconsin	0	33,513	....	40	14	....	....	5	1,170	....	1,215	11	37,273	78	18,681	5	....	[5] 412

WEST NORTH CENTRAL																		
Minnesota	0	2,639	107	129	37	110	7	6	...	5	24	80	9,339	56	...	...	...	341
Iowa	0	[8] 3,400	...	60	12	1	...	19	1	...	43	12	10,151	65	3,115	...	...	116
Missouri	0	3,264	1	182	...	...	38	4	7	...	222	23	6,176	86	5,550	1	...	946
North Dakota	0	696	31	33	59	...	...	34	...	...	54	...	1,518	19	...	...	...	867
South Dakota	1	546	...	25	...	...	...	30	...	...	3	1	1,014	13	144	...	...	72
Nebraska	0	1,776	...	32	24	2	...	8	...	...	442	3	3,834	23	729	...	...	90
Kansas	0	5,075	47	133	4	7	2	21	114	...	760	2	1,354	26	3,100	...	...	571
SOUTH ATLANTIC																		
Delaware	1	318	...	12	...	...	...	3	...	...	...	...	1,112	9	555	...	...	29
Maryland	0	3,686	...	180	3	26	143	2	160	...	73	5	12,334	48	4,967	18	4	1,433
District of Columbia	0	967	...	13	13	84	...	...	...	...	2	3	3,058	19	230	...	...	766
Virginia	0	3,814	...	265	13	...	4,476	9	...	...	19,442	39	7,749	91	3,409	...	6	2,876
West Virginia	0	1,196	...	205	...	10	...	1	236	...	2,200	1	5,398	73	1,049	2	...	503
North Carolina	0	...	...	509	31	37	1	6	...	...	...	151	1,173	76	...	...	...	...
South Carolina	0	2,690	...	606	65	559	...	22	239	1,917	20,816	3,668	2,912	34	4,295	22	602	5,449
Georgia	0	1,629	38	480	21	254	17	7	...	5,168	1,296	95	1,466	40	2,330	1	79	1,726
Florida	0	1,402	24	327	153	179	40	5	56	5,008	366	111	4,802	48	1,329	26	10	551
EAST SOUTH CENTRAL																		
Kentucky	1	1,199	14	357	17	87	...	2	653	8	62	67	4,410	119	1,366	2	...	1,571
Tennessee	0	2,030	1	292	314	106	24	28	102	7	2,363	80	4,629	120	1,132	19	34	2,485
Alabama	0	1,439	...	614	26	...	...	9	35	...	6,924	319	2,042	100	818	...	17	2,537
Mississippi	0	[9] 318	...	266	109	192	...	8	...	3,210	745	120	1,304	56	371	29	12	924
WEST SOUTH CENTRAL																		
Arkansas	0	1,891	...	156	292	98	1,237	1	94	12	7,795	636	4,327	34	898	3	3	1,652
Louisiana	1	354	...	136	361	7	...	5	6	744	1,137	50	1,542	61	225	2	2	1,893
Oklahoma	0	1,418	...	163	46	16	81	2	172	22	3,971	403	1,626	61	889	2	18	1,058
Texas	0	[9] 14,563	...	924	839	20,081	7,796	3	...	...	58,604	3,594	51,121	242	7,815	66	193	10,863
MOUNTAIN																		
Montana	0	2,597	41	72	3	5	...	2	107	...	475	1	2,539	13	2,898	1	...	263
Idaho	0	1,242	52	74	3	3	7	...	187	...	933	...	1,770	11	2,720	...	...	322
Wyoming	0	870	7	12	2	...	...	4	173	...	33	...	2,400	7	657	...	...	110
Colorado	0	5,200	...	145	8	67	...	2	389	...	1,604	8	10,946	34	7,282	...	...	1,050
New Mexico	1	550	25	79	15	44	49	2	66	...	115	5	1,222	9	723	8	5	853
Arizona	1	1,679	15	161	39	305	981	6	364	...	11,225	15	5,291	14	1,012	7	11	1,615
Utah	0	3,889	...	[10] 160	2	5	...	...	120	[11] 2	762	2	[10] 7,553	4	1,953	...	...	201
Nevada	0	191	27	1	1	3	5	2	25	...	174	2	384	6	210	...	2	40
PACIFIC																		
Washington	1	8,620	218	91	23	11	154	2	706	...	3,267	3	12,914	46	12,246	...	...	912
Oregon	0	1,862	77	75	149	35	7	3	...	...	2,940	3	6,436	23	2,595	...	...	1,046
California	1	40,539	8	443	315	492	...	70	4,280	...	14,153	49	65,069	338	32,483	7	...	[5] 1,630
Total	53	331,431	1,458	9,610	4,510	23,727	15,085	575	18,287	16,260	165,805	9,797	613,810	[4] 3,375	238,764	1,078	1,001	80,072
Year 1947	71	317,565	1,863	12,405	3,130	16,979	9,516	669	12,657	12,972	443,339	17,317	221,115	3,399	155,852	1,196	1,555	77,995
Median 1943–47	44	301,423	1,329	14,943	3,341	30,872	9,421	669	38,339	15,236	452,101	53,575	612,068	8,035	175,643	1,571	3,891	108,777
Alaska	...	214	...	2	...	...	...	...	33	...	300	...	76	7	105	...	...	97
Hawaii Territory	...	1,941	21	1	9	58	...	...	221	9	11	4	2,429	1	3,251	...	...	[5] 78
Panama Canal Zone [12]	...	148	...	82	53	56	...	...	4	...	...	1,729	134	31	59	...	...	[13] 206

See footnotes on pages 805 and 806

Consolidated monthly State morbidity reports for year 1948—Continued

Division and State	Poliomyelitis*	Rabies in man	Rheumatic fever	Rocky Mountain spotted fever	Scarlet fever*	Septic sore throat	Smallpox*	Tetanus	Trachoma	Trichinosis	Tuberculosis, all forms*	Tuberculosis, respiratory	Tularemia	Typhoid fever*	Paratyphoid fever	Typhus fever, endemic	Undulant fever*	Vincent's infection	Whooping Cough*
NEW ENGLAND																			
Maine	40		2		630	41				7	504	478		11	9	2	10	21	793
New Hampshire	23				167	127		1			164			2	[14] 6		7	29	309
Vermont	26				200	12		1			111			5	6		36	4	1,326
Massachusetts	177				6,053	82		8	3	41	2,998	2,814	5	34	75		37		2,772
Rhode Island	8		132		346	41		2		8	608	483		5	10		10	10	330
Connecticut	[4] 121				1,094	254		11		20	1,605	1,486		12	[14] 10		92		724
MIDDLE ATLANTIC																			
New York	1,402			21	[15] 7,897	(16)		22		238	14,623	[4] 13,777		99	[14] 61	19	246		5,722
New Jersey	807			11	2,505	141		10		28	3,136		1	34	3	1	49		2,694
Pennsylvania	741		1,108	13	7,795			2		16	4,949		9	186	[14] 29		92		4,100
EAST NORTH CENTRAL																			
Ohio	1,173		139	6	10,153	39	2	20	1	18	4,717		24	132	17	1	191	24	2,919
Indiana	397	2	15	14	2,024	37	3	11	4		2,507	2,346	45	58	7		70	17	988
Illinois	1,101		151	17	4,514	77		18	9	11	6,959	6,447	54	89	10		515	188	2,199
Michigan	772	1	588		5,934	515		24		7	6,109		5	52	[14] 139		221		2,668
Wisconsin	651			1	2,216	195	2		2		2,280		4	15	3		305		2,841
WEST NORTH CENTRAL																			
Minnesota	1,425		106	1	1,629	182		7	19	12	3,397		3	24	[14] 62		229	52	771
Iowa	1,260			3	1,280	43				1	741		4	18	1		412		463
Missouri	[4] 319		62	9	[4] 1,125	71	[4] 3	12	592		2,697		74	75	5	6	82	5	732
North Dakota	127		3		260		3		13		345	325		12	2		5	34	304
South Dakota	938			4	137	12		1	32		231		3	2	1		67	3	129
Nebraska	718		7		[15] 769	(16)	4		1	1	471		2	10			93		269
Kansas	324		2	3	1,024	32	8	9	1		1,103	1,078	13	17	4	1	129	120	1,460
SOUTH ATLANTIC																			
Delaware	128			5	162	1					347	347		9			2		61
Maryland	156		81	60	901	87		7		1	3,324	2,943	6	35	[14] 4	2	44	14	836
District of Columbia	169			5	351					1			5	16	12		2		233
Virginia	573		1	61	899	2,205		8			3,943	3,892	58	113	25	6	82		2,262
West Virginia	179		10	13	851	68	1	4	2		2,309	2,299	2	65	4		5	6	962
North Carolina	2,518			74	1,100	30	3				3,277	3,166	42	62	10	45	16		1,977
South Carolina	[4] 380		377	7	239	7,166		9			467		23	70	10	36	22		3,284
Georgia	237	1	69	32	849	230	1	45			3,170	3,106	80	117	70	225	146	49	539
Florida	283	1			359	126		73	69		3,162	2,393	20	105	[14] 135	170	74	167	731

EAST SOUTH CENTRAL																			
Kentucky	[4] 202	4	55	17	1,366	46	4	2	84		2,052	2,032	7	138	8	19	21	35	754
Tennessee	377	5	73	35	1,598	429		41	1	1	5,745		65	128	9	14	69	269	1,273
Alabama	214	1		16	651			43			2,788		19	54	4	172	74		1,255
Mississippi	162	2	20	1	269		[4] 2	5	2		2,800	2,721	49	65	3	42	61		143
WEST SOUTH CENTRAL																			
Arkansas	145	1	7	3	262	1,190	1	27	102	5	2,427	2,393	163	111	4	6	44		1,267
Louisiana	156	3	55	3	192	46	5	38			3,157	3,034	40	154	11	53	37		250
Oklahoma	362			27	595	166	[4] 1	6	322		2,230	2,187	82	72	[14] 57	1	78	11	1,054
Texas	1,765	5		1	1,296	3,593	2		120		13,298		74	318	53	344	561		12,053
MOUNTAIN																			
Montana	71		7	2	510	78	1		104	4	718	571	11	11	1		4	2	346
Idaho	119		51	7	218	306	5	1	111		243		1	8	10		29	28	289
Wyoming	82		4	14	118	6	1	1			69	20	31	7			11	14	157
Colorado	124		126	21	757	418	2	2			1,561		8	36	16		249	38	1,833
New Mexico	81		20	1	263	21		1	68		[10] 1,535	[10] 1,480	3	89			6		661
Arizona	170		40		179	204	2		478		2,357	2,280	2	27	3		18		1,235
Utah	213		102	4	512	31		1	1		[10] 126	[10] 120	[10] 45	2	[14] 5		[10] 92		[10] 683
Nevada	25		1	1	51	30			6		64	8					2	26	27
PACIFIC																			
Washington	385		333		1,856	103		1	17	2	2,360		3	12	[14] 17		43	452	894
Oregon	219		67	10	787	216		1	5		830	771	1	20	8		39		1,012
California	[4] 5,857		728	3	3,719	580		47	33	39	8,886	8,269	7	169	118	19	157		3,710
Total	[4] 27,902	26	4,542	526	[4] 78,662	19,277	[4] 56	522	2,202	461	133,500	[4] 73,266	1,093	2,905	[14] 1,057	1,184	4,886	1,618	74,294
Year 1947	10,734	21	4,386	565	84,379	15,905	173	488	1,103	428	130,474	70,056	1,360	3,062	1,006	1,901	6,147	2,332	155,991
Median 1943-47	13,514	27	4,386	452	142,274	9,525	356	439	1,618	317	118,307	67,824	887	4,221	741	4,517	4,959	2,332	132,814
Alaska	1		26		49	29					192	181		2				5	146
Hawaii Territory	1		16		48	33		11	2		1,072	1,024		2	3	21	1		524
Panama Canal Zone [12]	16				1	1	([17])	5			[13] 41			20	4	[17] 7	1		[13] 11

Footnotes to Tables on Pages 802 to 805

*Diseases marked with an asterisk (*) are reportable by law or regulation in all the States, including the District of Columbia. Typhoid fever is reportable in all the States; paratyphoid fever in all except 6 States. Syphilis is reportable in all the States and the District of Columbia but is not included in the table. Some States have increased and some have reduced the list of reportable diseases since the latest published compilation of reportable diseases (Pub. Health Rep. **59**: 317-340 (1944). Reprint No. 2544.

[1] Includes cases of kerato- and suppurative conjunctivitis and of pink eye.

[2] In a few States practically all cases contracted outside the United States.

[3] All cases reported as ophthalmia neonatorum since July 1, 1948. Prior reports included some cases reported as "ophthalmia."

[4] Figures corrected by later reports.

[5] Lobar pneumonia only.

[6] New York City only.

[7] Exclusive of cases artificially induced.

[8] Reports of chickenpox not received from Iowa for the months of July, August, September, and October, 1948.

[9] Reported January-June 1948 (inclusive) only.

[10] Includes nonresident cases.

[11] Contracted out-of-State.

[12] Includes the cities of Colon and Panama.

[13] In the Canal Zone only.

[14] Includes cases reported as salmonella infection.

Footnotes to Tables—Continued

[15] Includes septic sore throat.

[16] Included in scarlet fever.

[17] The report of a case of smallpox in the Panama Canal Zone for the first quarter of 1948 (Pub. Health Rep. 63: 953 (1948)) was an error. Also 1 case of typhus fever should have been recorded for the Canal Zone for that quarter.

The following list includes certain rare conditions, diseases of restricted geographical distribution, and those reportable in or reported by only a few States; last year's figures in parentheses (where no figures are given, no cases were reported last year, or the disease was not included in last year's published tabulation).

Actinomycosis: Maine 1, Massachusetts 2 (1), New York 6, Indiana 1, Michigan 3, Minnesota 5 (16), South Dakota 5, Nebraska 1 (1), Kentucky 1, Tennessee 1, Idaho 2, Nevada 3 (1), Hawaii Territory 1 (1).

Botulism: New Jersey 3 (1), Minnesota 1, Tennessee 1 (2), Colorado 5 (1), New Mexico 9 (6), Oregon 3 (2), California 6 (6), Alaska 2.

Cancer: North Dakota 780, Kansas 3,982, South Carolina 1,460, Georgia 222, Florida 1,880, Kentucky 22, Tennessee 2,917, Alabama 3,476, Mississippi 1,545, Arkansas 677, Louisiana 2,130, Montana 926, Idaho 831, New Mexico 643, Utah 271, Nevada 7.

Coccidioidomycosis: Kansas 1, Oklahoma 1, New Mexico 1, Arizona 15 (2), California 66 (54).

Colorado tick fever: Colorado 67 (69).

Dengue: Virginia 1, South Carolina 7 (14), Florida 1, Mississippi 1 (1), Oklahoma 1, Texas 14 (19).

Dermatitis: New Hampshire 48 (15), Missouri 37 (117), Kentucky 150 (mycotic dermatitis), Arkansas 3 (3).

Diarrhea: Rhode Island 5, Connecticut 25, New York 170 (278), New Jersey 3 (41), Pennsylvania 288 (138) includes gastroenteritis, Ohio 1,311 (709) includes enteritis, Indiana 20 (4) includes enteritis, Illinois 54 (92), Michigan 101 (17), Iowa 1, Kansas 48 (116) includes enteritis, Maryland 36 (96), West Virginia 8 includes enteritis, South Carolina 11,656 (12,846), Florida 191 (68), Kentucky 17 (74) includes enteritis, Oklahoma 7 (2), Idaho 177 (2) includes enteritis, Colorado 24 (3) enteritis, New Mexico 219 (120), Utah 1, Nevada 1 enteritis, Washington 31 (83), California 118 (168), Alaska 54 includes enteritis.

Dog bite: Massachusetts 5,936, Illinois 14,983 (13,246) includes all animals, Michigan 9,822 (8,034), Arkansas 639 (594) includes all animals.

Encephalitis, other forms: Maine 1, Rhode Island 2, Connecticut 2, New York 7, Ohio 23, Michigan 87, Nebraska 1, Delaware 1, Maryland 15, Florida 24, Kentucky 1, Idaho 7, Colorado 13, New Mexico 11, Arizona 1, Washington 12, Panama Canal Zone 1.

Erysipelas: New Hampshire 4, Vermont 1, Connecticut 17, Ohio 36, Indiana 12, Illinois 192, Michigan 92, Wisconsin 60, Minnesota 3, North Dakota 11, South Dakota 12, Nebraska 1, Kansas 10, Maryland 21, Florida 52, Kentucky 10, Tennessee 33, Arkansas 22, Louisiana 9, Oklahoma 4, Montana 10, Idaho 20, Colorado 50, New Mexico 3, Utah 2, Nevada 1, Washington 16, Oregon, 30 Alaska 2, Hawaii Territory 12.

Favus: Florida 1, Kentucky 5 (3).

Filariasis: New York 1.

Food poisoning: Maine 12 (3), Connecticut 1, New York 595, New Jersey 115 (20) includes cases reported as food infection, Ohio 13 (23), Indiana 6 (18), Illinois 89 (79) includes cases reported as food infection, Minnesota 301 (124), Kansas 5, West Virginia 2, Florida 13, Louisiana 8 (20), Oklahoma 50 (8), Idaho 13 (6), Colorado 367 (7), New Mexico 27 (29), Washington 73 (481), Oregon 17 (48), California 637 (1,093).

Granuloma inguinale: Missouri 9 (10), West Virginia 1 (2), Florida 773 (271), Kentucky 9, Tennessee 60 (74), Mississippi 190 (395), Louisiana 174 (209), Idaho 3, Arizona 1 (1), Utah 1, Nevada 1, California 5 (7).

Impetigo contagiosa: Vermont 1, Rhode Island 3, New York 91 (71), Ohio 139 (32), Indiana 53 (99), Illinois 35 (36), Michigan 1,425 (1,540), Missouri 54 (55), North Dakota 78 (6), Nebraska 9 (4), Kansas 53 (58), Maryland 4 (10), Kentucky 39 (24), Montana 46 (40), Idaho 69 (80), Wyoming 25 (27), Colorado 77 (66), Nevada 151 (152), Washington 875 (1,044), Alaska 11 (7), Hawaii Territory 59 (61).

Jaundice (including hepatitis and Weil's disease): Maine 11 (32), New Hampshire 2 (4), Rhode Island 1 (1), Connecticut 3, New York 211 (599), Pennsylvania 64 (49), Ohio 2 (7), Indiana 1 (6), Illinois 16 (27), Michigan 17 (13), Minnesota 42 (29), North Dakota 1 (12), Maryland 8 (8), South Carolina 2 (8), Florida 66 (29), Kentucky 72 (5) Tennessee 27 (21), Louisiana 1, Montana 3, Idaho 10 (20), Arizona 6, Nevada 1, Washington 8 (17), Oregon 20 (79), California 107 (166), Hawaii Territory 20 (7), Panama Canal Zone 29.

Kala-azar: Montana 1, reported in April 1948. Contracted outside the United States.

Leprosy. New York 9 (5), Florida 11 (2), Louisiana 7 (7), Texas 10 (16), Arizona 1, California 15 (13), Hawaii Territory 27 (29), Panama Canal Zone 3 (1).

Lymphocytic choriomeningitis: Maine 1, Massachusetts 19 (6), Rhode Island 5, Indiana 1, Minnesota 1 (5), Tennessee 11 (13) includes choriomeningitis undefined.

Lymphogranuloma venereum: New Hampshire 1, Connecticut 2, Missouri 8 (26), Florida 197 (216), Kentucky 4, Tennessee 68 (99), Mississippi 40, Louisiana 129 (105), Arizona 5, Utah 1, Nevada 1, California 11.

Mononucleosis: Connecticut 76, Ohio 2, Michigan 126, Minnesota 228, Maryland 31, South Carolina 5, Kentucky 12, Tennessee 29, Oklahoma 1, Montana 1, Idaho 24, Oregon 7.

Psittacosis: New York 1 (1), New Jersey 1, Pennsylvania 1, Michigan 4 (7), Alabama 1, Washington 1, California 12 (9).

Puerperal septicemia: New York 4 (2), Ohio 3, Florida 2 (2), Tennessee 3 (3), Mississippi 5 (8), Arkansas 5, Louisiana 2 (11), New Mexico 1 (4).

"Q" fever: Nebraska 1, Arizona 1.

Rabies in animals: Maine 1, Rhode Island 2, New York 540 (649), Pennsylvania 75, Ohio 637 (761), Indiana 805 (72), Illinois 122 (257), Michigan 308 (313), Wisconsin 4, Minnesota 5 (1), Iowa 35, Missouri 1, Kansas 19 (52), Delaware 1, Virginia 156, West Virginia 2 (8), South Carolina 209 (183), Georgia 240, Florida 332 (436), Kentucky 334, Alabama 370, (473), Arkansas 84 (93), Louisiana 50 (17), Oklahoma 131, Texas 1,271 (1,071), Colorado 2 (13), New Mexico 2 (6), Arizona 47 (50), Utah 1 (7), California 280 (292).

Rat bite fever: Ohio 1.

Relapsing fever: Texas 79 (62), Nevada 1 (8), California 5 (24), Panama Canal Zone 9 (1).

Rickettsialpox: New York City 155.

Ringworm of the scalp: Connecticut 92, Pennsylvania 95 (1,628), Ohio 111 (79), Indiana 146, Illinois 2,728 (2,543), Michigan 1,555 (1,639), Minnesota 53 (51), Iowa 18 (761), Missouri 95 (16), Kansas 81 (18), Maryland 4 (4), West Virginia 21, Georgia, 54, Kentucky 54 (48), Arkansas 1, Montana 9 (4), Idaho 50 (66), New Mexico 6, Utah 42 (218), Nevada 6 (6), Washington 674 (874), Oregon 4.

Scabies: Rhode Island 17 (13), Pennsylvania 347 (529), Ohio 105 (84), Indiana 22 (3), Michigan 1,092 (1,092), Missouri 45 (87), North Dakota 34 (16), Kansas 40 (113), Maryland 3, Kentucky 120 (45), Montana 84 (104), Idaho 128 (210), Wyoming 26 (21), Nevada 17 (36), Alaska 26 (4).

Schistosomiasis: New York City 35.

Silicosis: New Hampshire 7 (1), Pennsylvania 1, Kansas 2 (2), Arkansas 5 (3), Idaho 8 (2), Colorado 5, New Mexico 20 (11), Utah 3.

Yaws: Panama Canal Zone 15.

Yellow fever: Panama Canal Zone 5 fatal confirmed cases at a point outside the Canal Zone, about 22 miles from Panama City.

INCIDENCE 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

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UNITED STATES

REPORTS FROM STATES FOR WEEK ENDED JUNE 4, 1949

The incidence of poliomyelitis declined during the week for the country as a whole. A total of 139 cases was reported, as compared with 155 last week, 149 for the corresponding week last year, and a 5-year (1944–48) median of 71. The largest decrease was reported in Texas (72 last week to 37). Of 8 other States reporting currently more than 3 cases each, all except California (with a decline of 18 to 15) showed increases, the largest as follows (last week's figures in parentheses): Oklahoma 19 (7), South Dakota 7 (1), Tennessee 6 (0), Massachusetts 7 (2). A total of 835 cases has been reported since March 19 (average date of seasonal low incidence), as compared with 878 for the corresponding period last year and a 5-year median of 414.

The incidence of measles, 17,967 cases for the week, while lower than last week (19,834) and below the figures for the corresponding weeks of 1946 (26,347) and 1948 (23,883), is slightly above the 5-year median (16,130).

Of 19 cases of Rocky Mountain spotted fever reported currently (5-year median 23), 5 occurred in Virginia, 4 in Maryland, 2 each in North Carolina and Tennessee, 1 in Montana, and 1 each in 5 Middle Atlantic and East Central States. The total to date is 123. The largest number for a corresponding period of the past 5 years, 88, was reported in 1946 and in 1948.

Of 32 cases of tularemia (last week 20, 5-year median 20), the largest numbers occurred in Arkansas (11), Texas (8), and Georgia (3). The total to date is 530, 5-year median 392.

Of 52 cases of typhoid fever (5-year median 79), only Texas (with 9 cases) reported more than 3 cases.

During the week 1 case of psittacosis was reported in Michigan (Detroit).

Deaths recorded during the week in 94 large cities in the United States totaled 8,731, as compared with 9,008 last week, 8,606 and 9,192, respectively, in the corresponding weeks of 1948 and 1947, and a 3-year (1946–48) median of 9,192. The cumulative figure is 211,044, as compared with 215,021 for the same period last year. Infant deaths totaled 611, last week 661, 3-year median 661. The cumulative figure is 14,342, same period last year 15,098.

Telegraphic case reports from State health officers for week ended June 4, 1949

(Leaders indicate that no cases were reported)

Division and State	Diphtheria	Encephalitis, infectious	Influenza	Measles	Meningitis, meningococcal	Pneumonia	Poliomyelitis	Rocky Mt. spotted fever	Scarlet fever	Smallpox	Tularemia	Typhoid and paratyphoid fever [e]	Whooping cough	Rabies in animals
NEW ENGLAND														
Maine	...	...	...	335	...	10	1	...	16	...	...	1	16	...
New Hampshire	...	...	...	32	...	...	...	...	2	...	...	...	2	...
Vermont	...	...	...	39	...	...	...	...	1	...	...	...	3	...
Massachusetts	13	1	...	367	1	...	7	...	124	...	...	...	69	...
Rhode Island	...	...	...	46	...	3	...	...	7	...	...	...	3	...
Connecticut	4	...	2	634	...	14	...	...	14	...	1	...	9	...
MIDDLE ATLANTIC														
New York	2	5	([c])	1,483	7	161	5	1	[d] 110	...	...	3	114	3
New Jersey	4	...	2	1,214	1	19	2	1	49	...	...	2	47	1
Pennsylvania	6	1	([c])	1,789	4	...	1	1	133	...	...	1	101	11
EAST NORTH CENTRAL														
Ohio	7	...	3	1,698	3	59	1	...	140	...	...	2	67	9
Indiana	8	1	...	221	1	5	1	...	27	...	...	1	24	...
Illinois	2	3	2	287	3	61	...	1	52	...	1	1	53	1
Michigan [a]	2	...	...	373	1	33	1	...	139	...	...	1	30	...
Wisconsin	...	1	6	2,032	3	2	...	...	44	([2])	...	1	27	...
WEST NORTH CENTRAL														
Minnesota	1	...	...	100	2	5	4	...	24	...	...	...	1	...
Iowa	...	...	...	106	...	...	2	...	4	...	...	...	...	2
Missouri	2	...	...	91	3	16	1	...	14	...	...	3	7	...
North Dakota	...	...	2	31	...	...	...	...	3	...	...	1	1	([2])
South Dakota	...	...	...	76	...	...	7	...	3	([2])	...	...	2	...
Nebraska	...	...	4	135	1	4	3	...	7	...	...	...	3	...
Kansas	1	...	...	154	...	17	1	...	4	...	...	...	2	...
SOUTH ATLANTIC														
Delaware	...	...	...	26	1	...	1	...	3	...	...	...	2	...
Maryland [a]	2	...	...	55	...	21	...	[1] 4	[d] 12	...	...	1	2	...
District of Columbia	...	...	...	58	1	6	1	...	2	...	...	...	...	...
Virginia	1	...	81	694	...	37	...	5	11	...	1	3	50	1
West Virginia	...	...	2	33	...	1	...	...	3	...	...	...	14	...
North Carolina	4	...	...	799	1	...	...	2	8	...	...	...	25	...
South Carolina	6	2	214	595	2	74	([2])	...	1	...	...	...	51	4
Georgia	1	...	30	144	2	175	1	...	3	...	3	3	13	8
Florida	4	...	1	202	...	27	2	...	10	...	2	3	3	2

EAST SOUTH CENTRAL														
Kentucky	6			80	1	14		1	4			2	3	6
Tennessee	3		19	227	2	53	6	2	9			1	34	
Alabama	4		19	223	2	45	1					1	6	4
Mississippi [a]	5		11	52	3	23	3		3				9	
WEST SOUTH CENTRAL														
Arkansas	1		1	189	2	30	2		2		11	1	18	3
Louisiana	1			12	1	5	1		1		2	3		
Oklahoma			7	218	1	13	19		9		1	2	3	1
Texas	18		466	833	4	228	37		9		8	9	108	27
MOUNTAIN														
Montana				282				1	3				1	
Idaho			1	67		1	1		[d] 8				3	
Wyoming				10		2			2				1	
Colorado			4	296		18	1		5			2		
New Mexico	1			17		1	4		4				1	
Arizona	1		21	89		14			5				7	
Utah [a]				86		1	3		4		1		17	
Nevada														
PACIFIC														
Washington	2		23	356			3		26		1		12	
Oregon	2		1	140		14	1		6			3	20	
California	3	3	1	941	3	12	15		[d] 64			1	62	1
Total	117	17	923	17,967	56	1,224	139	19	1,134		32	52	1,046	
Median, 1944–48	165	9	824	16,130	108		71	23	2,458	7	20	79	2,079	
Year to date, 22 weeks	3,331	217	71,644	519,301	1,782	46,107	[2] 1,757	[1] 123	53,497	[2] 42	530	995	22,476	
Median, 1944–48	5,557	193	185,879	443,446	3,608		956	82	75,274	218	392	1,180	44,864	
Seasonal low week ends	(27th) July 10		(30th) July 31	(35th) Sept. 4	(37th) Sept. 18		(11th) Mar. 19		(32nd) Aug. 14	(35th) Sept. 4		(11th) Mar. 19	(39th) Oct. 2	
Since seasonal low week	8,445		107,914	571,694	2,626		[2] 834		76,195	[2] 52		535	32,509	
Median, 1943–48 [b]	13,123		329,915	478,392	5,112		414		113,845	301		697	76,130	

[a] Period ended earlier than Saturday.
[b] The median of the 5 preceding corresponding periods; for poliomyelitis and typhoid fever the corresponding periods are 1944–45 to 1948–49, inclusive.
[c] New York City and Philadelphia only, respectively.
[d] Including cases reported as streptococcal infection and septic sore throat.
[e] Including paratyphoid fever; reported separately, as follows: New York 1; Virginia 1; Georgia 1; Florida 2; Colorado 1; Oregon 1.
[1] Delayed report, Rocky Mountain spotted fever, Maryland, 1 case, April onset.
[2] Deductions—Poliomyelitis, South Carolina, week ended May 14, 1 case. Smallpox—Diagnoses changed in certain States, weeks ended, as follows: Year 1949, South Dakota 2 cases, March 12; Wisconsin 1 case, May 21. Year 1948, Mississippi 2 cases, September 18 and October 16; Tennessee, 1 case, November 6; Oklahoma, 1 case, November 27; South Dakota 1 case, January 1, 1949.

Psittacosis. Michigan 1.
Alaska: Influenza 14; scarlet fever 1.
Hawaii Territory: Measles 89.

TERRITORIES AND POSSESSIONS

Puerto Rico

Notifiable diseases—4 weeks ended May 28, 1949.—During the 4 weeks ended May 28, 1949, cases of certain notifiable diseases were reported in Puerto Rico as follows:

Disease	Cases	Disease	Cases
Chickenpox	123	Syphilis	106
Diphtheria	18	Tetanus	7
Gonorrhea	94	Tuberculosis (all forms)	375
Influenza	35	Typhoid fever	11
Malaria	24	Typhus fever (murine)	3
Measles	33	Whooping cough	361

PLAGUE INFECTION IN SAN JUAN COUNTY, NEW MEXICO, AND SEVIER COUNTY, UTAH

Under date of June 1, plague infection was reported proved in a pool of 24 fleas from 20 grasshopper mice, *Onychomys leucogaster*, trapped, on May 17, 20 to 23 miles southeast of Bloomfield, San Juan County, N. Mex., along U. S. Highway 44, and in a pool of 298 fleas from 78 ground squirrels, *Citellus armatus*, shot May 12 in Fish Lake National Forest 33 miles southeast of Richfield on Fish Lake Road, Sevier County, Utah.

DEATHS DURING WEEK ENDED MAY 28, 1949

[From the Weekly Mortality Index, issued by the National Office of Vital Statistics]

	Week ended May 28, 1949	Corresponding week, 1948
Data for 94 large cities of the United States:		
Total deaths	9,008	9,013
Median for 3 prior years	8,324	
Total deaths, first 21 weeks of year	202,313	206,415
Deaths under 1 year of age	661	675
Median for 3 prior years	675	
Deaths under 1 year of age, first 21 weeks of year	13,731	14,437
Data from industrial insurance companies:		
Policies in force	70,393,900	71,072,486
Number of death claims	13,287	12,697
Death claims per 1,000 policies in force, annual rate	9.8	9.3
Death claims per 1,000 policies, first 21 weeks of year, annual rate	9.7	10.2

FOREIGN REPORTS

CANADA

Provinces—Notifiable diseases—Week ended May 14, 1949.—During the week ended May 14, 1949, cases of certain notifiable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Chickenpox		27	3	239	546	31	49	46	115	1,056
Diphtheria				1						1
Dysentery, bacillary							1	1		2
Encephalitis, infectious					1					1
German measles		6		317	64	25	122	40	7	581
Influenza		17			4	2	1			24
Measles		50	4	268	278	193	207	349	351	1,700
Meningitis, meningococcal					1					1
Mumps		17		50	323	16	3	8	48	465
Poliomyelitis		1								1
Scarlet fever		3	1	62	63	2		15	11	157
Tuberculosis (all forms)		14	8	66	28	29	8	13	62	228
Typhoid and paratyphoid fever			3	4						7
Undulant fever					1			1		2
Venereal diseases:										
Gonorrhea	1	7	12	124	61	27	13	28	65	338
Syphilis	2	6	3	77	40	7	6	9	7	157
Whooping cough		1		63	22		1			87

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

From consular reports, international health organizations, medical officers of the Public Health Service, and other sources. The reports contained in the following tables must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

CHOLERA

(Cases)

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

Place	January-March 1949	April 1949	May 1949—week ended—			
			7	14	21	28
ASIA						
Burma	20	6	7	1	56	1
Bassein	4	6	7		56	
Moulmein				1		1
India	27,968	10,889	[1] 1,523	[1] 871	184	40
Allahabad	1	3	1			
Bombay	[2] 1					
Calcutta	[3] 1,791	[3] 1,453	[3] 238	[3] 212	[3] 173	
Cawnpore	11	15	4	5	6	4
Cuddalore	2					
Lucknow		9	5	4		
Madras	9	15	2	10	3	18
Negapatam	19	6	1			
Raj Samand					1	9
Tuticorin	14					
India (French):						
Karikal	55					
Pondicherry	100					

See footnotes at end of table.

CHOLERA—Continued

Place	January-March 1949	April 1949	May 1949—week ended—			
			7	14	21	28
ASIA—continued						
Indochina (French):						
Annam	50	3				
Cambodia	11	21		2		
Cochinchina	1	2			1	
Pakistan	10,640	2,470	24	11		1
Chittagong	42	12	3	5		1
Dacca		43	21			
Lahore	5			6		
Siam				6	2	
Bangkok				6	2	

[1] Preliminary figures. [2] Imported. [3] Includes imported cases.

PLAGUE

(Cases)

Place	January-March 1949	April 1949	May 7	May 14	May 21	May 28
AFRICA						
Basutoland	12					
Belgian Congo	4	2				
Stanleyville Province	4	2				
British East Africa:						
Kenya	1					
Tanganyika	15					
Madagascar	48	12		[1] 2		
Tananarive	2					
Rhodesia, Northern	2					
Union of South Africa	26					
ASIA						
Burma	[2] 329	[2] 6			5	
Mandalay	1					
Moulmein		4			4	
Rangoon	[3] 2	[3] 2			[3] 1	
China:						
Chekiang Province	5	2				
Wenchow	5	2				
Fukien Province	20					
Kiangsi Province	9					
India	19,202	3,992	[4] 23	[4] 20	[4] 37	
Indochina (French)	30	[6] 31	1	[5] 1		
Annam		7	1	[5] 1		
Cambodia	17	3				
Cochinchina	7	[6] 21				
Laos	3					
Java	2	3				
Siam	136	12				
EUROPE						
Portugal: Azores	3					
SOUTH AMERICA						
Peru:						
Lambayeque Department	7					
Piura Department	3					
Venezuela:						
Aragua State		1				
OCEANIA						
Hawaii Territory: Plague infected rats						

[1] May 1-10, 1949.
[2] Includes imported cases.
[3] Imported.
[4] Reports from Calcutta and Cawnpore only.
[5] Pneumonic plague.
[6] Includes cases of pneumonic plague.
[7] Plague infection has been reported in Hawaii Territory as follows: On March 12, 1949, in a mass inoculation of 2 pools of tissue from 10 rats (8 and2), taken on Maui Island; on March 16, 1949, in mass inoculation of 3 pools of 29 fleas (7, 12, and 10), from rats trapped on the Island of Hawaii.

SMALLPOX

(Cases)

(P=present)

Place	January-March 1949	April 1949	May 1949—week ended—			
			7	14	21	28
AFRICA						
Algeria	87	11		[1] 5		
Angola	118					
Belgian Congo	[2] 543	[2] 199				
British East Africa:						
Kenya	9	4				
Nyasaland	542	146	11	39		
Tanganyika	122					
Uganda	30	2				
Cameroon (French)	13	6		[1] 5		
Dahomey	152	34		[1] 10	[3] 6	
Egypt		2				
Ethiopia	1					
French Equatorial Africa	4	2		[1] 8		
French Guinea	1					
French West Africa: Haute Volta	43	14		[1] 2		
Gambia	5	35				
Ivory Coast	86	83		[1] 1		
Morocco	6	1		[1] 1		
Mozambique	53	3				
Nigeria	1,149	435				
Niger Territory	119	133		[1] 49		
Portuguese Guinea	1					
Rhodesia:						
Northern	4					
Southern	135					
Senegal	14	1				
Sierra Leone	76	4				
Sudan (Anglo-Egyptian)	28	1	8	14		
Sudan (French)	82	54				
Togo (French)	46	11		[1] 5	[3] 1	
Union of South Africa	124	P	P			
ASIA						
Afghanistan	15					
Arabia	30	[4] 4				
Bahrein Islands	[4] 37	9				
Burma	760	[5] 55	[5] 12	[5] 15	[5] 12	[5] 6
China	[4] 651	[4] 96	[4] 11	[4] 17		
India	22,083	13,607	1,233	724		
India (French)	1					
India (Portuguese)	124	23				
Indochina (French)	1,950	166	17	25	3	2
Iran	156	18	1	1		
Iraq	245	18	7	5	[4] 8	27
Israel	2					
Japan	16	23	8			
Java	1,993	1,174	[6] 150	[6] 246	[6] 297	[6] 240
Korea	544					
Lebanon	112	9	1	5		
Malay States (Federated)	42	1				
Pakistan	1,880	302				
Philippine Islands:						
Mindoro Island	2					
Tablas Island		2				
Portuguese Timor	4					
Siam	37					
Straits Settlements: **Singapore**	[4] 2					
Sumatra	[4] 36	13		8	7	4
Syria	221	41	1	23	19	19
Transjordan	91	51	8	7	4	4
Turkey. (See Turkey in Europe.)						
EUROPE						
Great Britain:						
England and Wales		[7] 11	1	2		1
Italy	2					
Portugal: **Lisbon**	3					
Spain		1				
Turkey	83	4		1		
NORTH AMERICA						
Cuba: **Habana**	2					
Guatemala	1					
Mexico	7	7				

See footnotes at end of table.

SMALLPOX—Continued

Place	January-March 1949	April 1949	May 1949—week ended— 7	14	21	28
SOUTH AMERICA						
Argentina		[2] [8] 54				
Brazil	[2] 55	[2] 6			[9] 1	
Colombia	556	20				
Ecuador	[2] 348	[2] 59				
Paraguay	[9] 1					
Peru	387	298				
Venezuela	[2] 522	[2] 9		[9] 28		

[1] May 1-10, 1949.
[2] Includes alastrim.
[3] May 11-20, 1949.
[4] Includes imported cases.
[5] In Moulmein and Rangoon only.
[6] In Batavia only.
[7] Imported.
[8] January 1-April 30, 1949.
[9] Alastrim.

TYPHUS FEVER*

(Cases)

(P=present)

Place	January-March 1949	April 1949	May 1949—week ended— 7	14	21	28
AFRICA						
Algeria	27	12		[1] 3		
Basutoland	5					
Belgian Congo	[2] 31	[2] 10				
Egypt	65	87				
Eritrea	22	9				
Ethiopia	115					
Libya	65	33	2			
Madagascar: **Tananarive**	[2] 3					
Morocco	8	1				
Tunisia	20	32				
Union of South Africa	[3] 42	P	P			
ASIA						
Afghanistan	1, 191					
Arabia: **Aden**	[4] 1	1				
Ceylon: **Colombo**	[2] 2					
China	3	2				
India	111	[4] 1	[4] 1			
India (Portuguese)	5	2				
Indochina (French)	1	2	1	2		
Iran	62	48	1			
Iraq	13	8	3	1	1	
Japan	[5] 60	15				
Korea	125					
Lebanon	[2] 1					
Pakistan	320	180	9	11	19	
Palestine	100					
Philippine Islands: **Manila**	1					
Straits Settlements: **Singapore**	[6] 1					
Syria		2	2	6	5	
Transjordan	11	31	6	1	1	
Turkey. (See Turkey in Europe.)						
EUROPE						
Belgium	1					
Bulgaria	71	94	31			
Czechoslovakia	2	6	1			
France	2					
Great Britain: Island of Malta [2]	1	2				
Greece	[3] 21	[2] 1	[2] 2	[2] 2		
Hungary	12	3		1	1	
Italy	27					
Sicily	13					
Poland	150	29				
Portugal: **Lisbon**	2	2				
Rumania	297					
Spain	1		1			
Turkey	70	21	1	1	8	2
Yugoslavia	82	19		1	10	

See footnotes at end of table.

TYPHUS FEVER—Continued

Place	January-March 1949	April 1949	May 1949—week ended—			
			7	14	21	28
NORTH AMERICA						
Costa Rica [2]	8	5				
Cuba [2]	1	1				
Guatemala	7					
Jamaica [2]	5	1				
Mexico [3]	46	11	6			
Puerto Rico [2]	5	2			1	2
SOUTH AMERICA						
Bolivia	8					
Brazil	2					
Chile	43	31	9			
Colombia	574	34				
Curacao [2]	3	1				
Ecuador [3]	84	23	1	2		
Peru	5	2				
Venezuela [2]	8	7			1	2
OCEANIA						
Australia [2]	33	17	1			
Hawaii Territory [2]	3					

[1] May 1-10, 1949.
[2] Murine type.
[3] Includes murine type.
[4] Imported.
[5] Corrected figure.
[6] Type unspecified.

YELLOW FEVER

(C—cases; D—deaths)

AFRICA						
Belgian Congo:						
Stanleyville Province D	5					
Gold Coast:						
Komenda [1] D			[2] 1			
Nigeria:						
Lagos C	[3] 2					
NORTH AMERICA						
Panama:						
Pacora C	[4] 8					
SOUTH AMERICA						
Brazil:						
Amazonas State D	1					
Para State D	1	[5] 1				

[1] Between Sekondi and Cape Coast.
[2] Reported May 2, 1949.
[3] Cases admitted to Lagos Hospital from ship that arrived from two other ports in Nigeria—Warri and Burutu.
[4] Reported January 15, 1949. Date of occurrence November 11-December 30, 1948. Five cases, all fatal, confirmed; 3 suspected cases.
[5] Reported April 6, 1949, at Acara.

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