Public Health Reports

The Challenge to Voluntary Health Agencies

The Nation's voluntary health agencies, convening in the thirtyfirst annual meeting of the National Health Council in New York, April 6, 1951, reexamined their programs in light of ever-growing problems of defense mobilization.

Throughout the discussions by representatives of 36 member agencies of the Council and several hundred others active in public health and related fields ran comments indicating deep concern over two current threats to the health security of the Nation: First, an awareness that in many quarters there exist feelings of apathy as to the seriousness of the civil defense situation and confusion as to what needs to be done; and, second, an alertness to the steadily increasing problems of maintaining what they consider to be "adequate" health services in the face of professional personnel losses and increasing needs for community health services.

Well-informed, inspired, untiring leadership is a prime necessity at all levels of health service was the consensus—a leadership which can promote teamwork, maintain and make the most of professional manpower and health resources, meet the growing mobilization needs, and build an understanding and appreciation of the basic values and practical advantages of good public health services in every community in times of war and peace.

Report to Member Agencies

Presenting the record of the National Health Council's thirty-first year, Dr. Thomas D. Dublin, executive director, held that the Council is peculiarly geared for the tasks ahead in mobilization. The Council has available to it, the report pointed out, a network of channels extending into every community of the Nation—an estimated 20,000 local and State affiliates of member agencies. The report indicated that the Council's mission was one of leadership of this wealth of potential interest. Specificially, it urged Council Through the courtesy of Dr. Thomas D. Dublin, executive director of the Council, this summary has been prepared cooperatively by the staff of the National Health Council and of PUBLIC HEALTH REPORTS. While statements have been drastically edited in the interests of space and time, insofar as possible the speakers' own words have been used in both direct and indirect quotation form.

members to consider how to "inspire their State and local affiliates to participate more actively in community organization for total health protection."

"Most voluntary health agencies are seeking to fit their own resources and programs into already formulated defense programs," Dr. Dublin read from the report. "An increasingly active role in the long-range planning to which an extended crisis may lead should be worked out with defense agencies. Redoubled efforts by our member organizations should be made to work out current problems in unity."

[On this point, Mefford R. Runyon, of the American Cancer Society, later suggested that cooperation by voluntary agencies be worked out on the local level where it can become part of an integrated community plan rather than to try to work out a plan for local affiliates on a national level.]

"A quick solution of the conflicts in which the Nation is now involved will not modify the immediate and long-range goals of the health movement," the report continued. "There is too much to be done before even minimum standards are achieved at home and abroad to justify slackened efforts."

To the possible argument that the Nation should now concentrate on seemingly more immediate tasks, the report indicated that the national health is always an immediate task and an important goal in itself, immediate as well as long range.

Citizen Interest

"Citizen interest in expanded health programs is at an all time high," according to the Council report. "Voluntary agencies are enlisting mounting public support. Lay organizations—parent-teachers associations, service clubs, women's organizations, and farm and labor groups—sponsor health programs. New State and local health councils are springing up. Public and private sources are contributing larger sums to health and welfare. Never was so much health legislation introduced as in the period since World War II.

"Even on the international level there are similar manifestations. Cooperation between nations on health matters, hitherto episodic and in response chiefly to actual or imminent disaster, has been strengthened through the World Health Organization. Postwar governments, responding to public demand, are expanding health programs. A relentless war on disease is part of the Point IV program for raising the economic level of underdeveloped areas," the report noted.

"These signs clearly show that personal and public health are, at long last, achieving the status of a major human goal—comparable to economic security and political freedom. In fact, there is growing realization that they are inseparable. The public demand for expanded health programs is matched by official recognition of the importance of such programs in the struggle for universal democracy and a peaceful world," the report stated.

Leadership and Joint Programs

The time has come, the Council report stated, for member agencies of the National Health Council to consider:

• How they can unite their leadership more firmly, and act more effectively together in the broad fields where they now act individually.

• How they can inspire their State and local affiliates to participate more actively in community organization for total health protection.

• How they can utilize more fully the services available through their Council for the strengthening of the entire health movement.

• How they can establish closer working relations with agencies in the social welfare, economic, and political fields.

"The stage is set," the report continued. "The Council has become representative of the leading organizations in the health field. It provides the necessary mechanism for coordination of the drive for community health organization. It is gaining recognition as a national clearing house for information on health problems. It is being called upon, more and more, to act as a spokesman for the health movement."

The report cited numerous instances of the willingness and ability of member agencies of the Council to work jointly on important projects.

Developing Local Units

The report recalled that 3 years ago the Council was entrusted by its member agencies—and by the 63 national citizens' organizations represented on its National Advisory Committee on Local Health Units—with the task of providing the necessary leadership for one of the Nation's major health programs: that of promoting well-organized health services in every community throughout the Nation.

The Council's role in this program has been primarily that of leader and stimulator. It acts as a clearing house of information, as a counselor and guide. One channel for promoting activity on State and local levels has been the series of regional conferences organized by the Advisory Committee which bring together community leaders, including representatives of member agencies' local affiliates. The fifth and most recent of these conferences was held in New Jersey in January 1951.

Progress also has been made in the promotion of local and State community health planning councils, the report showed. In 1949– 50 the Council conducted a Nation-wide inventory of health councils. The survey revealed the impressive extent of popular interest in cooperative planning for health at every level of community structure. Today, 32 States and 1,190 local health-planning bodies ¹ are in operation. The inventory is being followed by an analysis of structure, operation, support, and accomplishment.

"Community organization for health is one of the most dynamic elements in the national health scene," the report said. "There is a wealth of hidden resources, human and material, in American communities which we have only begun to tap. Community organizations—for health, for welfare, for political, social, and other objectives are springing up rapidly."

Through their State and local affiliates, the report continued, member agencies, too, have a ready-made mechanism for strengthening their ties with community groups. Agencies which encourage their local affiliates to help initiate and participate in citizen health councils are not only assisting communities to realize their full potential but are helping to speed the success of the individual agency programs.

The organization and operation of a United States Citizen Committee for the World Health Organization is one of several new activities currently being explored or developed by the National Health Council. This Committee would be a voluntary nongovernmental body designed to: (a) enlist and maintain in its membership an intelligent and energetic interest in WHO work; (b) build public understanding and support in the United States for WHO; (c) provide a supplementary means for members of the United States delegations to WHO to inform the American public, and a means for United States citizens to express their opinions to the members of the delegations; and (d) undertake specific WHO projects approved by the United States.

Other proposed activities include a study of recruitment and training of health personnel with particular reference to the role of the Council's member agencies in solving increasingly critical shortages, and appraising the relationships of the Council with the national coordinating agencies in the fields of social welfare and adult education.

¹ Listed in Directory of Community Health Planning Councils-1950.

Symposium for Defense²

Lull . . . The Physician and Medical Personnel

Relatively equal distribution of medical care—in the armed services and in the civilian population—was the goal of the Council on National Emergency Medical Services when it was set up 2 years ago by the American Medical Association, Dr. George F. Lull, secretary and general manager of AMA, told the NHC meeting.

In certain types of attack, he said, medical personnel and facilities in the attacked zone will be useless and medical service and care will have to come from the outside—the periphery. Use will be made of medical personnel living outside highly industrialized or strategically important areas, and they must be considered in civil defense planning. The AMA's emergency committee is now a permanent body which feels that it is incumbent on the medical profession to exert a certain amount of leadership in the civil defense programs. The AMA has urged that medical service committees be started in each State and county.

Training of undergraduate and graduate physicians should be coordinated with military and Federal plans for national defense, he said.

McGinnes . . . Red Cross Program

Some of the civil defense responsibilities assumed by the American Red Cross were outlined by Dr. G. Foard McGinnes, vice president for health services of that organization.

The Red Cross, he said, has agreed to the following:

• To aid in preparing a first aid manual and in training civil defense workers.

• To assist in training hundreds of thousands in home care of the sick and injured and as nurses' aides.

• To help in providing food, clothing, and temporary shelter on a mass-scale basis during an immediate emergency period.

Dr. McGinnes suggested that the member agencies could assist the Red Cross in carrying out its responsibilities:

• By making their membership aware of the role of the Red Cross in civil defense.

• By publicizing the Red Cross program in their national publications.

• By urging staff members to participate in the various training programs not only for their own survival benefit but also to be able to assist in their communities in the event of attack.

• By establishing agreements on phases of the program which are

² Proceedings available on request from National Health Council, 1790 Broadway, New York City 19, N.Y.

of mutual interest, thereby ensuring maximum effectiveness of all community resources.

Dr. McGinnes declared that working agreements have already been set up with the American Medical Association, the American Hospital Association, the National Infantile Paralysis Foundation, and with a number of other agencies, including the Public Health Service and the Children's Bureau. An agreement with the National Tuberculosis Association is being worked out.

Dr. McGinnes urged voluntary agencies to keep informed of civil defense developments, establish a close relationship with local civil defense authorities, encourage staff members to serve on civil defense committees, and offer civil defense authorities the use of physical resources such as buildings, equipment, and motor transportation.

Kogel . . . New York City Mobilizes

New York City's medical emergency program was established in a minimum of time because of the close association of voluntary health agencies with the Medical Emergency Division of the city's Office of Civilian Defense, Dr. Marcus D. Kogel, director of the division and commissioner of hospitals, said in outlining the steps taken in the Nation's largest metropolis. He stated:

• Major credit will go to the voluntary health and hospital agencies if New York City is successful in perfecting an organization that can cope with disaster of the magnitude which must be expected and planned for.

• The Department of Hospitals, assigned the task of organizing the emergency mobilization, called upon the Department of Health for assistance (just as the latter called on the Department of Hospitals for aid in certain phases of public health emergency measures).

• From the beginning traditional administrative boundaries were eliminated and all available talents and skills united in an integrated effort. Voluntary agencies, in much the same spirit, offered immediate and wholehearted cooperation.

Hospital facilities are the most urgent need in the program, Dr. Kogel asserted. An estimated minimum total of 100,000 seriously injured persons may need hospital care after an enemy attack. The city has a peacetime complement of about 50,000 beds, most of which are occupied. To bridge the gap, Dr. Kogel stated, the following measures are being considered:

• Discharge, after disaster, major fractions of the regular hospital population, particularly the chronically ill, to free beds for the more seriously injured.

• Extend to the maximum the bed complement of each hospital, including the use of improvised facilities.

• Organize out-of-town and periphery facilities for overflow of injured.

Providing definitive care to a minimum of 100,000 seriously injured, over and above the normal sick and accident load of New York City, calls for an army of volunteers, Dr. Kogel declared. In addition, he said, there is the problem of offering emergency care at the scene of the disaster prior to removal to hospitals.

• Voluntary agencies highly skilled in recruitment of volunteers are assisting in enlisting the 800,000 volunteers needed for the program.

• In addition, since ambulances cannot be relied upon to get up to scenes of disaster, 150 litter bearers and staffs for each of 400 first-aid stations must be recruited and trained.

• The feasibility of evacuation of children from areas that might be bombed is being considered by the evacuation service of the city's defense office.

• Despite all that is being done there is still apathy—interest of the public varies with the news from Korea.

McIver . . . Meeting the Nurse Shortage

Three premises are guiding the mobilization of nurses for national security, Pearl McIver, R. N., chairman of the Joint Committee on Nursing in National Security, stated.

• Military needs must be met.

• Civilians may be on the battle front, too, if there is full-scale war, so it is equally important to keep up civilian-defense needs.

• Regulation of personnel, either governmental or voluntary, will be required in the event of total mobilization.

The six national nursing organizations participated in the study of the need for nurses in the several fields of nursing, Miss McIver reported. About 384,000 nurses are needed for the civilian defense program, exclusive of additions for the armed services. There are 316,000 professional registered nurses actively employed now. To meet the shortages, she said the following steps are being considered:

• Returning to duty, when possible, those nurses who have become inactive.

• Training of additional practical nurses and other auxiliary workers.

• Recruitment of student nurses in all categories.

• Encouragement of postgraduate and graduate schools to bridge the shortages of teachers, supervisors, and administrators.

• Improvement of nursing service administration to the point that nurses are engaged only in their skills and others perform the work that does not require nurse's training.

• Improvement of personnel policies.

Mustard . . . Today's Health Measures—Tomorrow's Defense

If large potential war target communities are to survive, there must be assurance of the uninterrupted operation of health measures which, until now, have been taken for granted and which in time of enemy attack become defense measures.

Need to "iterate and reiterate" this fact was urged upon public health leaders by Dr. Harry S. Mustard, chairman of the Committee on the Public Health Defense Program, American Public Health Association. All citizens should be apprised, he said, that modern warfare can completely offset and upset, temporarily at least, the protections which they take for granted and leave them quite vulnerable to the old-fashioned types of epidemic and disaster. The speaker noted that APHA has taken the following steps:³

• Developed, at the request of the National Security Resources Board, rosters of persons trained in the various specialties in the fields of preventive medicine and public health.

• Assigned a committee to consider immediate emergency needs and long-range measures designed to attain and maintain health security for the Nation.

• Called attention to the need for trained personnel in preventive health and public health for strategic areas, and pointed out that despite a shortage of personnel now existing there is absence of a national scheme for recruitment and training.

• Emphasized the need for support and use of public health schools and allied courses in training personnel.

• Urged the building of full-time health departments as a must in health security.

Schwichtenberg . . . Military and Agency Efforts Alined

The functions of the Armed Forces Policy Council, the principal agency of the Department of Defense for developing broad policies, plans, and programs in the medical and health fields for the three military departments were described by Brig. Gen. Albert H. Schwichtenberg, M. D., USAF.

The Council's purpose is to bring about the coordination and efficiency in the employment of medical personnel and facilities in the support of specific military missions. General Schwichtenberg reported close association with voluntary health agencies had been developed in the belief that together the over-all medical policies in the national interest could best be developed.

For example, he cited the arrangement made with the American Red Cross to collect whole blood for the Department of Defense by extension of the former's blood-donor program. The whole blood is shipped for immediate use in the Far East, but some of it is processed

Public health in the defense program. Am. J. Pub. Health. 41: 583-586 (1951).

into dried plasma to be used where whole blood cannot be sent or where none is available.

Scheele . . . Health Structure Key to Defense

Medical manpower, facilities, supplies, and services are as essential to national defense as the output of food, steel, and electric power, according to Surgeon General Leonard A. Scheele of the Public Health Service.

Upon the degree of effectiveness of the Federal-State-local health structure will depend the success of blunting an enemy attack through use of military or sabotage methods of biological warfare, he said. A high degree of effectiveness will prevent the interstate spread of communicable diseases provoked by such an attack. Further, communicable disease control involves a well-organized system of epidemiological intelligence based upon prompt and accurate case reporting, identification of disease agents, and application of control measures.

The Public Health Service is the authorized Federal agency for the Nation-wide collection, coordination, and distribution of vital statistics and disease reports, he said. Investigation, identification of biological agents, and control follow prompt reporting of disease outbreaks. He described some of the PHS research programs directed toward solution of critical medical shortages and related civilian and military problems.

Kiefer . . . We Can Be Attacked

Enemy attack in force, with the new special weapons or any of the older, more familiar ones, could be made on our country at any time with little warning, according to Dr. Norvin C. Kiefer, director of the Health Services and Special Weapons Defense Division, Federal Civil Defense Administration.

The major responsibilities of the Health and Special Weapons Division, Dr. Kiefer explained, include casualty services, emergency public health and sanitation, hospital and first-aid systems, special defense measures to protect people, animals, and crops against atomic, radiological, biological and chemical warfare, the provision of necessary supplies, and a number of supporting and related activities.

The Federal Civil Defense Administration is not creating new organizations to deal with these problems. Under its supervision and leadership, however, it is utilizing the services of existing agencies, Dr. Kiefer noted. He also insisted that this is an official program that must be controlled by government authorities and official agencies. The effectiveness of the Nation-wide program depends, however, on the cooperation of many millions of private citizens, he said. The effectiveness of the Health and Special Weapons Defense Program depends on the utmost cooperation of all professional and technical health personnel, individually or through their professional organizations.

Tips From England

In keeping with the civilian defense theme, Robert H. Parry, M. D., D. P. H., discussed his World War II experiences as health officer of Bristol, England, which was subjected to 500 air raids.

He advised that a sound foundation for civil defense be established on the "old lines" with incorporation into that of any special knowledge concerning defense against the atom bomb.

"We realized very soon that the primary objective of the enemy is not to kill civilians. But if the enemy can cause an enormous amount of destruction and cause civilians to be a nuisance then he has achieved something to upset the war machine in any country. That was one of our great lessons," Dr. Parry said.

Praising the usefulness of voluntary organizations in civilian defense, he said, "They reached many people that official organizations could not reach. We depended too much on planning from the top so we came down a little bit. We started organizing from the individual through the home. The importance of organizing the home and of organizing every individual to play his part cannot be overestimated." He also emphasized:

• Futility of talking about evacuation or anything of that kind. You can't do that in a bombed city. A bombed city is in the front line and every person has to pull his weight.

• The teaching of first-aid techniques to individuals, so that they can recognize how much damage has been done when confronted with an injured person and, by their assistance, reduce the number of calls upon official agencies.

"We believe quite firmly in dispersal," Dr. Parry said. "As public health officers we always favored dispersal. We did not believe that people could stay healthy collected in large groups, in British weather, and under circumstances of war. We thought it best to disperse people; but we were up against the fire fighters. They thought that for people to remain dispersed and in their homes was very dangerous. The lesson of the war, however, was that there wasn't nearly so much fire danger as there was danger from collecting people together in large groups.

"From a public health view," he continued, "we disliked community shelters for other reasons as well. They were difficult to keep dry; they were cold, and they effected a concentration of large numbers of people. We have concluded, therefore, that the best place during attack is the home and that, with some strengthening, it is by far the safest place for the family." He advised these home-front steps:

• Place a bag of clothes in a convenient place and have a second one put in a different place so that no call need be made upon agencies for clothing in case of an emergency.

• Conduct a house-to-house survey to list available rooms.

"One of the most demoralizing aspects in time of air raid is the sight of one thousand to three thousand people waiting to be taken into a public shelter because their homes have been destroyed. This can be avoided by effective surveys and mutual arrangements," Dr. Parry elaborated.

Fear Saps Confidence

The growing complexities of civilization require more of intellectually trained men and women than ever before, declared Dr. Detlev W. Bronk, president of Johns Hopkins University, who talked on conservation of human resources. Among his statements were these:

• I do not see how we can escape a recognition of differences in ability, but I would hasten to add that I believe almost all men and women, except the mentally ill, are capable of doing some thing superlatively well if given the freedom to develop latent potentialities and given assistance in helping them find that which they can do superlatively well not only for their own satisfaction but also in the interests of the Nation.

• Natural resources, including human resources, are a proper responsibility of national government. Government does not necessarily assume this full responsibility unless free individual citizens do not fulfill their direct responsibilities.

Deploring the fear, hysteria, dissension and uncertainty manifested today, he said: "It is unthinkable that fear should sap the confidence and courage which are the greatest of our human resources—resources which have given faith to many in the past, faith in the vigor and rightness of American ideals. The preservation of that faith through mutual enterprise and effort, the freeing of men and women from the fear of disease and suffering, the freeing of men from uncertainty of economic limitations—the freeing of men from the specter of fear is the greatest contribution one can make to our national resources."

Nutrition in the Health Conference of the Preschool Child

By Philip C., JEANS, M. D.*

The objective of a health conference is to promote optimum physical, mental, and emotional health. Attainment of such a goal requires inquiry into many facets of the child's life. Physical examination alone is not enough. A history is essential. A child may appear to be normal physically when actually he may have one or more nutritional deficiencies, or he may be maladjusted in one way or another. A history may point out the need for immunizations; it may bring out emotional, social, or environmental factors that need attention; it may show that the diet is inadequate.

All these things, if at fault, usually cannot be corrected during the limited time at the disposal of the physician, even when the children are scheduled at intervals. The taking of the history allows opportunity for individual discussion with the mother. The conference program should be educational for the mother. She should be taught or persuaded to take her child to her physician for the correction of any faults found.

The chief objective of the health conference is prevention of disease, closely seconded by cure or alleviation of existing disease or defects. Improvement in nutrition is one of the best weapons in fighting and preventing disease. The incidence of certain chronic diseases appears higher in poorly nourished groups. In such groups disease is of longer duration and convalescence is slower than in children of better nourished groups. Improved nutrition is an aid in preventing rheumatic fever and certain other diseases and decreasing recurrence of these diseases.

Nutrition of the preschool child in some respects may be considered more important than that of some other age groups, yet children in this group tend to be neglected. Usually the infant receives excellent nutritional attention. After a child is old enough to feed himself, parental interest is likely to decrease. Appetite decreases with the slowing of growth and the child is permitted to eat what he will. Although a large amount of energy is needed for growth during the first year, relatively little is needed subsequently. The child reaches school age during a period in which relatively little energy is given to growth in length. During this period, however, he is growing physically in other ways. As much as 75 percent of the weight gain is represented by muscle, and an abundance of protein is necessary for

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this type of growth. Protein foods are expensive and therefore are more likely to be left out of the diet. The result is failure of good muscle development. Most 2-year-olds stand erect with good posture. Few 4-year-olds have good posture. Studies of muscle content of the body as judged by creatinine excretion have shown that a large percentage of 3- and 4-year-olds have less skeletal muscle than control groups of children fed ample protein. Children in the well-fed group had excellent posture and were energetic and active. The children fed less well were the reverse. Low protein intakes also are associated with low hemoglobin values.

Often the behavior of children reflects their nutritional state. In general, well-fed children have energy to spare, are very active, and seem to want to investigate everything. Poorly fed children tend to be physically quiet and apparently uninterested in what is going on. Grades in school tend to parallel the nutritional state. In making nutrition surveys, Bessey has used many clinical tests, but he found of value also the behavior of the children. He has stated (1), "When we saw groups of children lined up for chemical tests on successive half days (so we had close comparison), we were able to tell which groups were well-nourished and which poorly nourished, by their reactions."

Height-weight measurements are useful, especially if they are far from the mean. However, normal weight for height may not mean good nutrition. In a study of orphanage children, the children were normal in weight for height at the beginning of the study. They were fed a good diet for 3 months. During this time they gained very little weight, but their skeletal muscle increased from 20 to 25 percent. Loss in fat and water balanced gain in muscle. After 3 months the children were stronger and far more active and had better hemoglobin values.

Although there are several good dietary sources of protein, dependence should be placed on milk to a great extent. Milk is an excellent food nutritionally; it not only supplies a high grade of protein but a number of other essentials in substantial quantity. A quart of milk daily supplies most of the protein needs of the young child. Without milk a satisfactory protein intake is not possible with a customary diet.

Milk is also the best food source of calcium. A child in the preschool years requires at least 1 pint of milk daily to supply his calcium needs in addition to the calcium in the remainder of his diet.

At a child health conference the examiner is concerned with the rate of growth, whether or not the child is of average or expected weight or height. While the rate of growth may have a genetic background, usually nutritional factors are much more important. Thus, concern with growth rate means concern with diet and nutrition.

During the preschool years many of the teeth are in the process of development and a good diet is necessary for good tooth structure. It has been shown both in animals and in man that resistance to dental caries can be built into teeth during their development and maturation (2, 3). Also, at any age, including the preschool years, a good diet is a great aid in preventing tooth decay, one of the scourges of the human race.

Improvement in nutritional health is not accomplished solely by advice as to what to eat. Entering into the picture are knowledge of a good diet, price and availability of food, and motivation, all of which must be considered by the family. Experience has shown that a sound dietary regimen to be tried and maintained by a family must be built around family dietary habits. A strange dietary pattern will be rejected, but a few simple additions to the foods in common daily use may be accepted without question.

A child's ability to utilize a good diet depends on many factors other than ingestion of the food. A child who is unhappy, whose sleep is insufficient, who is overfatigued from physical or mental stress has decreased amounts of digestive juices and utilizes food poorly. А nutritional paradox is that poor nutrition itself lowers the efficiency of the gastrointestinal tract, so that even a good diet may not be well absorbed until a considerable period has elapsed after the change in Studies of children have shown that the highest retention regimen. of calcium occurred in the group best fed for years previous to the study. Groups whose height and weight were "normal" but whose nutritional status was poor did not attain the level of retention of the "good" group until the fifth month of improved dietary regimen. The teeth of the two groups also reflected the long term nutritional The longer the nutritional status remains suboptimal, the status. longer the period necessary for rehabilitation. Parents and nutritionists must learn that nutritional improvement may be slow and that visible signs of improved status may not appear for several months after the change of regimen.

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Preparation of Antisera for Detection of the Somatic Antigens of Salmonella Cultures

By P. R Edwards*

In 1941, Peluffo demonstrated that ethyl alcohol not only did not destroy the agglutinability of V form bacteria in Vi antiserum or the agglutinogenic properties of Vi antigen, but actually preserved these qualities (4). Since that time, the writer has consistently used bacteria treated with absolute alcohol and dried in vacuo to prepare diag-The Ballerup type, formerly known as nostic Vi antiserum (1). Salmonella ballerup (3), is employed since the resulting antiserum can be used without absorption of O and H agglutinins for the detection of Vi antigen in Salmonella typhi. There are several advantages in the use of alcohol-treated bacteria. The bacteria to be used for injection can be prepared in sufficient amount to last throughout the period of immunization so that it is not necessary repeatedly to isolate V forms for injection. The treated bacteria are relatively nontoxic. They can be administered in large quantity, and sera of high titer are obtained. The partial inactivation of flagellar antigens by alcohol results in a relatively low H titer which is absorbed easily when pure Vi antiserum is desired.

Recently, Roschka (5) described the use of alcohol-acetone treated bacteria in the preparation of O antisera for Salmonella typing. By this method, he was able to obtain sera of high titer which were eminently suitable for the determination of O antigens. Since the results reported were much better than those usually obtained by the injection of heated broth cultures, a number of rabbits were injected with antigens prepared by a method similar to that of Roschka. The bacteria were grown on infusion agar plates and removed by washing with After heating at 100° C. for 2 hours, the organisms were saline. sedimented by centrifugation, the saline decanted, and the growth from six agar plates was suspended in 50 ml. of absolute alcohol. After 24 hours at 37° C., the bacteria were again sedimented, and the alcohol was decanted and replaced by an equal volume. After an additional 24 hours at 37° C., the bacteria were again centrifuged and the alcohol replaced with acetone. The cells were taken through two changes of acetone and dried at 37° C. They were then ground to a powder and stored at room temperature.

The dried cells were suspended in sterile saline immediately before injection. At the first injection, 0.5 ml. of a suspension equal in

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density to a 24-hour broth culture was given intravenously. Three succeeding injections were given at 4-day intervals, and the volume of each injection was double that of the preceding one. As the volume was increased, the density of the suspensions also was increased until 200 mg. of dried bacteria were given each animal at the final injection. As noted by Roschka, the rabbits withstood the injections well. Of 48 animals so treated, only 1 died during the course of immunization. This animal succumbed to a *Pasteurella* infection which was endemic in the animal quarters. The rabbits were bled 6 days following the last injection.

Six rabbits each were injected with Salmonella paratyphi A, S. typhi-murium, S. thompson, S. virginia, S. gallinarum, S. anatum, S. newington, and S. senftenberg to produce the grouping sera used most frequently in Salmonella typing. The titers of the individual sera, given in the table, are expressed as ++ end points, that is, the highest dilution in which approximately 50 percent of the cells were agglutinated. Alcohol-treated antigens were used in the tests. Had living antigens been employed, the titers would have been approximately double those recorded. Not only were the sera uniformly acceptable in titer, but they were sufficiently specific to be used without absorption in grouping tests.

Included in the table are the titers of diagnostic sera prepared in the usual manner with boiled broth cultures. Each diagnostic serum consisted of the pooled sera of six rabbits. It should be emphasized, however, that not all the rabbits injected yielded sera of satisfactory titer. Many rabbits were injected and discarded after trial bleeding. While only 6 rabbits were injected to produce the diagnostic sera for groups A and D, 16 were injected for group B serum, 19 for group C_1 , 14 for group C_2 , 14 for group E_1 , 14 for group E_2 , and 9 for group E_3 . Thus, 98 rabbits were injected to obtain 48 with suitable titers

It is obvious that, in this series, rabbits injected with alcoholacetone treated antigens gave a much more uniform agglutinin response than did those injected with heated broth cultures. These

| D 11 // 37 | | Sera for O groups | | | | | | | | | |
|----------------------------|---|---|--|---|---|--|--|---|--|--|--|
| Rabbit No. | A | В | Ci | C, | D | E1 | E1 | E: | | | |
| 1 2 3 4 5 6 | 1, 600 3, 200 6, 400 3, 200 1, 600 800 | 800 800 800 1,600 1,600 (¹) | 3, 200 3, 200 6, 400 3, 200 3, 200 1, 600 | 12, 800 6, 400 6, 400 6, 400 6, 400 6, 400 6, 400 | 6, 400 12, 800 25, 600 25, 600 12, 800 12, 800 | 6, 400 6, 400 6, 400 25, 600 12, 800 6, 400 | 6, 400 6, 400 3, 200 6, 400 6, 400 3, 200 | 1, 600 1, 600 6, 400 6, 400 6, 400 12, 800 | | | |
| Diagnostic | 3, 200 | 800 | 6, 400 | 3, 200 | 1, 600 | 6, 400 | 6, 400 | 6, 400 | | | |

Homologous titers of sera

¹ Died during immunization.

results confirm those obtained by Roschka and are most encouraging since the production of O grouping sera for Salmonella typing previously has been a very uncertain procedure. In passing, it may be said that alcohol and alcohol-acetone treated cultures of Klebsiella have been used for the production of anticapsular sera without marked In general, these sera were less satisfactory than those success. obtained by the method of Kauffmann (2) in which very young broth cultures were formalinized and used as antigens.

Summary

Rabbits were injected with Salmonella cultures which were heated and subsequently treated with alcohol and acetone by a modification of the method of Roschka. Uniformly high agglutinin titers were obtained, and the sera were eminently suitable for the O grouping of Salmonella cultures.

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(Incidence of Disease r

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

UNITED STATES, Reports From States for Week Ended June 9, 1951

Poliomyelitis cases increased from 116 last week to 171 for the current week. For the week ended June 10, 1950, 207 cases were reported. States which reported 5 or more cases for the current week, with last week's figures shown in parentheses, were: Texas with 34 cases (22); Oklahoma 31 (2); California 19 (25); New York 15 (4); Illinois 10 (3); North Carolina 5 (4); Alabama 5 (5); and Michigan 5 (3). Of the 15 cases reported in New York State, 8 were in New York City.

A total of 18 cases of Rocky Mountain spotted fever was reported for the current week: 10 were in the South Atlantic States, 4 in Wyoming, and 3 in New Jersey.

One case of smallpox was reported in Alabama.

Epidemiological Reports

Infectious Hepatitis

Dr. G. A. Spendlove, Utah Director of Public Health, stated in a follow-up report that 27 cases of infectious hepatitis have occurred in a city of 9,000 in Salt Lake County since the latter part of January 1951. The infection has smouldered in a square-mile section of the city where housing is poor and septic tank or pit privies are the prevailing type of sewage disposal. It was found that some septic tank effluent reaches the surface and, in some instances, drains into irrigation ditches. Residents of the area recall that a similar disease occurred there in 1942 and 1943. Of the 27 cases this year, 25 developed in 5- to 9-year-old children attending one grammar school, with 7 concentrated in the third grade. Adult cases have occurred in previous years.

Dr. John Emmett, Public Health Service Communicable Disease Center, following an investigation of jaundice in Montrose, Colo., found that infectious hepatitis rather than leptospirosis, as previously suggested, was present in endemic form. About 48 cases could be verified, one-half of which were in children under 15 years of age. The incubation period appeared to be about 3 to 4 weeks. Epidemiological evidence pointed to spread by direct, intimate contact. One case of serum hepatitis was discovered in the investigation. This illness followed 77 and 84 days, respectively, two infusions of plasma given as a part of the treatment of an illness diagnosed as undulant fever.

Serum Hepatitis

Dr. E. W. Colby, Portland, Maine, Health Director, reports the death of 3 of the 14 persons ill with serum hepatitis following the use of thrombin of human origin. More complete information on 12 cases showed that the incubation periods varied from 64 to 154 days. Cases began to appear a few weeks after changing from bovine thrombin to thrombin of human origin. Some of the patients also received blood transfusions during their hospitalization, while others received no blood or plasma. Sterilization of instruments, including syringes and needles, was eliminated as a factor, since the cases occurred on only one of the surgical services where thrombin was used exclusively.

Disease of Unknown Etiology

Dr. LeG. B. Byington, Office of Midwestern CDC Services, has reported that six specimens of blood or spinal fluid from persons living in the Red River Valley of North Dakota who had a "bizarre" disease were examined with negative results. This outbreak previously reported is still under investigation.

Influenza

Dr. J. A. Pons, Puerto Rico Commissioner of Health, has reported that the epidemic of influenza which began on the Island about 2 months ago is now waning rapidly. For the 3 weeks ended May 26, June 2 and 9, 7,098, 10,276 and 4,007 cases, respectively, were notified. The disease has remained mild. Type A-prime influenza virus was isolated from throat washings.

Possible Poisoning by Insecticide

Dr. G. A. Spendlove has reported illnesses in Millard County, Utah, which followed the use of parathion used for control of insects. A considerable area of the county is affected. The Communicable Disease Center, Atlanta, Ga., is conducting an investigation at the request of the State Director of Health.

Salmonella Food Infection Outbreak

Dr. R. R. Cross, Illinois Director of Health, has reported an extensive but mild outbreak of gastroenteritis in Chicago on May 29. Of the 680 persons exposed to infection, 340 became ill. Salmonella montevideo was isolated from a specimen of food examined.

Comparative Data for Cases of Specified Reportable Diseases: United States

| Disease | Total for week ended— | | 5-year me- dian | Sea- sonal | Cumu total seasor we | llative since nal low æk | 5-year me- dian | Cumu tota cale yea | 5-year me- dian | | |
|----------------------------|--------------------------|---------------------|-----------------------|---------------|-------------------------------|-----------------------------------|-------------------------------|-----------------------------|-----------------------|-------------|--|
| | June 9, 1951 | June 10, 1950 | 1946- 50 | week | 1950 51 | 1949- 50 | 1943-40 through 1949-50 | 1951 | 1950 | 1940- 50 | |
| Anthrax (062) | 2 | 1 | 1 | (1) | (1) | (1) | (1) | 38 | 19 | - 24 | |
| Diphtheria (055) | 53 | 69 | 138 | 27th | 4,727 | 7,157 | 10, 570 | 1,820 | 2, 886 | 4, 212 | |
| Encephalitis, acute infec- | | 10 | | ~ | | | ~ | | | | |
| LIOUS (082) | 20 | 12 | 8 | (1) | (1) | 147 500 | 147 500 | 112 055 | 295 | 201 | |
| Monelog (085) | 10 400 | 14 0772 | 408 | 3010 | 128, 197 | 147, 502 | 147, 002 | 113,000 | 130, 9/8 | 120, 724 | |
| Maningitis maningogoogal | 10, 492 | 14, 2/3 | 10, 813 | 30111 | 430, 400 | 200, 099 | 505, 970 | 401, 759 | 204, 010 | 409, 024 | |
| (057 0) | 74 | 75 | 60 | 27th | 2 997 | 2 072 | 2 014 | 2 266 | 2 050 | 1 049 | |
| Pneumonia (490-493) | 863 | 1 513 | സ് | (1) | 0, 221 | (1) | (1) | 4 40 128 | 52 945 | (3) | |
| Poliomvelitis, acute (080) | 171 | 207 | 207 | 114h | 1036 | 1 087 | 1 087 | \$ 9 140 | 2 218 | 1 445 | |
| Rocky Mountain spotted | | 201 | 201 | 11411 | - 200 | 1,007 | 1,001 | - 2, 110 | a, 210 | 1, 110 | |
| fever (104) | 18 | 23 | 23 | (1) | a l | (1) | a) | 80 | 99 | 105 | |
| Scarlet fever (050) | 1.279 | 946 | 1, 530 | 324 | 7 64.036 | 52, 909 | 76.624 | 7 48 345 | 36, 470 | 54.080 | |
| Smallpox (084) | 1 | 1 | .,1 | 35th | 14 | 43 | 66 | 6 | 23 | 45 | |
| Tularemia (059) | 15 | 12 | 28 | (1) | (1) | (1) | (1) | 314 | 446 | 446 | |
| Typhoid and paratyphoid | | | | | | | | | | | |
| fever (040, 041) * | 54 | 65 | 79 | 11th | 517 | 669 | 679 | 952 | 1,179 | 1, 179 | |
| Whooping cough (056) | 1,566 | 3, 150 | 1,886 | 39th | 9 56,949 | 83,036 | 77,605 | \$ 35,347 | 61, 500 | 46, 339 | |
| | | | | | | | . 1 | | | | |

[Numbers after diseases are International List numbers, 1948 revision]

¹ Not computed.

 Poetuction: North Carolina, week ended May 19, 1 case.
 Data not available.
 Additions, week ended June 2: Florida 16 cases; Utah 3.
 Additions: Arkansas, weeks ended February 3, April 14, and May 19, 1 case each; Mississippi, week ended May 26, 1 case.

⁶ Including cases reported as streptococcal sore throat.

⁷ Addition: Alabama, week ended June 2, 9 cases.

Including cases reported as salmonellosis.
Addition: West Virginia, week ended June 2, 43 cases.

June 29, 1951

Reported Cases of Selected Communicable Diseases: United States, Week Ended June 9, 1951

| Area | Diph- theria (055) | Encepha litis, in- fectious (082) | Influenza (480-483) | Measles (085) | Menin- gitis, menin- gococcal (057.0) | Pneu- monia (490–493) | Polio- myelitis (080) |
|------------------------------|--------------------------|--|------------------------|-------------------|---|-----------------------------|-----------------------------|
| United States | 53 | 25 | 449 | 18,492 | 74 | 863 | 171 |
| New England | 5 | 2 | | 1,238 | - | 6 | 1 |
| Maine New Hampshire | 1 | | | 19 42 | | | |
| Vermont Massachusetts | 4 | 2 | | 69 696 | | | |
| Rhode Island | | • • • • • • • • • • • • • • • • • • • | | 25 387 | | 2 4 | 1 |
| Middle Atlantic | 3 | 10 | 3 | 4.258 | 14 | 146 | 18 |
| New York | Ĭ | 7 | 11 | 1,652 | 4 | 34 | 15 |
| Pennsylvania | 2 | · | | 1, 187 | 7 | 42 | |
| East North Central | 2 | 5 | 16 | 3,051 | 12 | 105 | 19 |
| Indiana | | 1 | 9 | 81 | | | |
| Michigan | | 2 | 7 | 548 | 4 | 38 67 | 5 |
| Wisconsin | 2 | 2 | | 1,090 | 1 | | |
| Minnesota | 2 | 1 | 6 2 | 906 113 | 8 | 139 | 82 |
| Iowa. Missouri | | | 3 | 204 155 | 6 | 3 1 | 3 |
| North Dakota South Dakota | | 1 | | 98 28 | 1 | 111 | |
| Nebraska Kansas | | | 1 | 12 296 | 1 | 3 | i |
| South Atlantic | 14 | 1 | 164 | 1.853 | 10 | 101 | 15 |
| Delaware Marvland | | | | 37 354 | 2 | 24 | |
| District of Columbia | 3 | | 155 | 46 704 | | 16 41 | 1 |
| West Virginia | 1 | | | 274 | 2 | | 1 |
| South Carolina | | | 6 | 34 | 1 | | 3 |
| Georgia. Florida | 4 1 | 1 | 3 | 146 103 | 2 | | 4 |
| East South Central | 4 | 1 | 6 | 63 5 | 4 | 45 | 9 |
| Tennessee | 1 | | | 88 | 1 | | 1 |
| Alabama Mississippi | $\frac{1}{2}$ | 1 | 6 | 154 21 | 2 | 21 21 | 5 3 |
| West South Central | 14 | | 101 | 1, 601 | 9 | 220 | 73 |
| Louisiana | 4 | | 50 2 | 162 54 | 1 | 17 37 | 17 |
| Oklahoma Texas | 2 8 | | 49 | 171 1, 214 | $\begin{bmatrix} 1\\7 \end{bmatrix}$ | 25 141 | 31 34 |
| Mountain | 2 | 1 | 111 | 770 | 6 | 59 | 7 |
| Montana Idaho | 1 | | 5 | 69 94 | | | |
| Wyoming Colorado | | | 1 | 91 77 | 3 | 3 20 | $\frac{1}{2}$ |
| New Mexico | | | 1 | 88 258 | 2 | 21 15 | 4 |
| Utah Nevada | 1 | | | 93 | | | |
| Pacific | •• | | 19 | 4 194 | 11 | 51 | 21 |
| Washington | i | •••••• | 8 | 399 | | | ۱ ۳ ۵ |
| California | 1 5 | 4 | 19 | 400 3, 321 | 3 8 | 44 | 19 |
| Alaska | | | | | | | |
| 11 a wall | | | | 31 | - | | |

[Numbers under diseases are International List numbers, 1948 revision]

¹ New York City only. Anthraz: New Jersey and Pennsylvania, 1 case each.

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Reported Cases of Selected Communicable Diseases: United States, Week Ended June 9, 1951—Continued

| Area | Rocky Moun- tain spotted fever (104) | Scarlet fever | Small- pox (084) | Tulare- mia (059) | Typhoid and para- typhoid fever 1 (040, 041) | Whoop- ing cough (056) | Rabies in animals |
|-----------------------|---|------------------|------------------------|-------------------------|---|---------------------------------|-------------------------|
| United States | 18 | 1.279 | 1 | | 54 | 1.566 | 149 |
| N N N | | | | | | | |
| New England | - | - 118 | | | - 2 | 51 | |
| Maine New Hompshim | - | - 14 | | | - | - 14 | |
| Vermont | - | - | | | | - 0 | |
| Massachusetts | | . 76 | | | 2 | 23 | |
| Rhode Island | | - 4 | | | | | |
| Connecticut | . | - 18 | | | | . 11 | |
| Middle Atlentic | | | | | 19 | 1 140 | |
| New York | | \$ 225 | | | - 2 | 47 | 7 |
| New Jersey | 3 | 43 | | | 2 | 56 | |
| Pennsylvania | | - 64 | | | - 9 | 40 | 16 |
| Fast North Control | | | | | - | | |
| Obio | | - 332 | | - 1 | 5 | 165 | 3 |
| Indiana | | 110 | | - | - 2 | 10 | 2 |
| Illinois | | 43 | | 1 | 2 | 26 | 1 |
| Michigan | | . 199 | | | | . 55 | |
| Wisconsin | | . 22 | | | . 1 | 30 | |
| West North Control | 1 | | | | | 67 | 40 |
| Minnesota. | | 14 | | | 1 î | | 5 |
| Iowa | | 5 | | | | 16 | 17 |
| Missouri | | . 14 | | | | 11 | 17 |
| North Dakota | | 2 | | | | 6 | |
| Nobreske | | 1 2 | | | · | | |
| Kansas | | 3 | | | | 34 | 1 |
| South Atlantic | 10 | 72 | | 7 | 14 | 166 | 16 |
| Delaware | 1 | 2 | | | | | |
| Maryland | 3 | 16 | | | . 1 | 6 | |
| Virginia | | | | | | 40 | |
| West Virginia | | 5 | | | | 10 | l i |
| North Carolina | 3 | 23 | | 1 | | 48 | |
| South Carolina | | 3 | | | 3 | 17 | 4 |
| Florida | | 21 | | 6 | - 0 | 30 | 5 |
| r lon lua | | - 1 | | | 1 | 10 | |
| East South Central | 1 | 20 | 1 | 1 | 3 | 285 | 27 |
| Kentucky | | 6 | | | | 189 | 15 |
| Tennessee | | 9 | | | | 32 | 9 |
| Mississinni | 1 | 23 | 1 | 11 | | 13 | 2 |
| | - | Ů | | · · | - | | - |
| West South Central | | 36 | | 2 | 8 | 473 | 37 |
| Arkansas. | | 2 | | | | 44 | 5 |
| Oklahoma | | 6 | | | 1 | 41 | 7 |
| Texas | | 20 | | 2 | 3 | 384 | 25 |
| | | | | | | | |
| Mountain | 4 | 30 | | 3 | 5 | 103 | 1 |
| Montana | | 5 | | 2 | 1 | 10 | |
| W voming | 4 | 1 | | | 1 | 9 | |
| Colorado | | 5 | | | | 19 | 1 |
| New Mexico | | ······ | | | 2 | 10 | |
| AIIZOD8 | | | | | 1 | 49 | |
| Nevada | | • 14 | | I | | 0 | |
| | | | | | | | |
| Pacific | | 238 | | 1 | . 3 | 113 | 2 |
| washington | | 22 | | | · · · · · · · · · · · · · · · · · · · | 18 | |
| California | | 2 100 | | 1 | 1 9 | 13 | 2 |
| Cumor #10 | | - 109 | | | | | |
| Alaska | | | | | | | |
| Hawaii | | 2 | | | | | |
| 1 | 1 | | | | I I | | |

[Numbers under diseases are International List numbers, 1948 revision]

¹ Including cases reported as salmonellosis.

* Including cases reported as streptococcal sore throat.

FOREIGN REPORTS

CANADA

Reported Cases of Certain Diseases-Week Ended May 19, 1951

| Disease | Total | New- found- land | Prince Ed-1 ward Island | Nova Scotia | New Bruns- wick | Que- bec | On- tario | Mani- toba | Sas- katch- ewan | Al- berta | Brit- ish Co- lum- bia |
|---|-----------|------------------------|----------------------------------|----------------|-----------------------|-------------|--------------|---------------|------------------------|--------------|------------------------------------|
| Brucellosis. Chickenpox | 2 940 | | | 24 | 1 | 2 170 | 433 | | 6 | 57 | 221 |
| Diphtheria. Dysentery, bacillary Encephalitis, infec- | 8 | | | | | 4 | 3 | | | | i |
| German measles | 411 | | | 10 | 1 | 25 | 213 | 8 | 24 | 39 | 100 |
| Measles Meningitis, meningo- | 1, 430 | 2 | | 89 | 4 | 266 | 421 | 177 | 31 | 262 | 178 |
| coccal Mumps Poliomvelitie | 669 2 | | | 12 | 1 | 237 | 1 219 | 27 | 1 54 | | 2 75 |
| Scarlet fever | 394 | 3 | | 1 | , 3 | 129 | 37 | 47 | 14 | 42 | 118 |
| forms) Typhoid and paraty- | 195 | 14 | | 8 | 11 | 71 | 8 | 19 | 10 | 11 | 43 |
| phoid fever Venereal diseases: | 14 | 3 | | | | 8 | | | | | 3 |
| Gonorrhea Syphilis | 238 99 | 6 7 | | 10 5 | 13 3 | 62 36 | 51 23 | 18 4 | 12 9 | 23 4 | 43 8 |
| Secondary | 5 | | | | | 4 | 0 | | | ۱ | 1 |
| Whooping cough | 87 146 | ····· | | ə | 3 1 | 31 26 | 18 53 | 4 | 9 5 | 28 | 29 |
| | | | | | | | | • | | | |

FINLAND

Reported Cases of Certain Diseases—April 1951

| Disease | Cases | Disease | Cases |
|---|------------------------------|--|---------------------|
| Diphtheria. Meningitis, meningococcal Paratyphoid fever. Poliomyelitis. Scarlet fever | 39 7 27 5 1, 925 | Typhoid fever Venereal diseases: Gonorrhea. Syphilis Other forms | 7 418 22 3 |

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

The following tables are not complete or final for the list of countries included or for the figures given. Since many of the figures are from weekly reports, the accumulated totals are for approximate dates.

CHOLERA

(Cases)

| | Janu- arv- | April | May 1951—week ended— | | | | | |
|---------------------|---------------|----------|----------------------|----------|----------|----------|--|--|
| Place | March 1951 | 1951 | 5 | 12 | 19 | 26 | | |
| ASIA Burma | 603 7 | 442 | 117 | 96 | 73 | 1 28 | | |
| Bassein Mergui | 89 | 139 | 65 17 | 35 47 | 13 31 | 7 | | |
| Moulmein Rangeon | 87 11 | 81 11 | 3 7 | 4 2 | 20 | 20 21 | | |

See footnotes at end of table.

June 29, 1951

CHOLERA—Continued

| | Janu- | April | May 1951—week ended— | | | | | |
|--|---------------|-----------|----------------------|-------|-------|---------------------|--|--|
| Place | March 1951 | 1951 | 5 | 12 | 19 | 26 | | |
| ASIA—continued India | 29, 208 | 6, 744 | 1 1, 305 | 1 958 | 1 541 | 1 302 | | |
| Bombay Calcutta | 1, 193 | 2 895 | 337 | 281 | 253 | 286 | | |
| Cuddalore Lucknow | 7 | | | 2 | 1 | | | |
| Madras Nagpur | 118 67 | 20 1 | 9 | | | | | |
| Negapatam Tiruchirappali Tuticaria | 100 | | | | 2 | 3 | | |
| India (French): Karikal | 36 | | | | | | | |
| Pondicherry | 138 | 6 | | | | ••. | | |
| Cambodia | 35 8 | * 2 11 | 2 | *2 | 1 | ³ 2 1 | | |
| Cantho Haiphong | 3 | 2 | | | | | | |
| Soc Trang Pakistan | 2 5, 100 | 4, 167 | 826 | 1 376 | 1 153 | 17 | | |
| Dacca | 11 32 | 15 | | 4 | | · | | |
| 1'nalland | | | | | | | | |

¹ Preliminary. ² Includes imported cases.

³ Suspected.

PLAGUE

(Cases)

| | 1 | 1 | | 1 | | |
|------------------------|----------|--------|------|------|------|-----|
| AFRICA | | | | | | ι. |
| Belgian Congo | 10 | 1 | | | | 1 |
| Stanlevville Province | 10 | 1 | | | | 1 |
| British East Africa. | | | | | | |
| Tongonwiko | 1 19 | 20 | | | | |
| Madagagaa | 100 | 18 | | \$ 3 | \$1 | |
| Inian of Courth Africa | 105 | 8 | | - | - | |
| Union of South Africa. | 1 | | | | | |
| Orange Free State | 1 | U U | | | | |
| A ST A | | | | | | |
| Duamo | 105 | 15 | 5 | 3 | 2 | |
| Durina | 150 | 41 | | , v | | |
| Kangoon | | • • • | | | | |
| Татоу | 2 | | | 5.06 | 5.40 | 5 4 |
| India | 4, 503 | 1, 170 | • /5 | * 90 | 49 | |
| Allahabad | 4 36 | 4 73 | 46 | • 3 | • • | •• |
| Bombay | 1 | | | | | |
| Calcutta | 2 | 14 | 4 | | | |
| Cawnpore | 2 | 6 | | | | |
| Lucknow | 12 | 3 | | | | |
| Negnar | 10 | 1 | | | | |
| Indochine | | - | | | | |
| Combadia | 6 | 1 1 | | | | |
| Damboula | 6 | l î | | | | |
| | 10 | 07 | 10 | 19 | 2 | 2 |
| viet Nam | 10 | 21 | 14 | 16 | ភី | |
| Phanthiet | 13 | 11 | 2 | 9 | 4 | |
| Phu Kok Island | | 9 | 1 7 | 3 | | |
| Indonesia: | | | | | | |
| Java | 4 | 1 | | | | |
| Bandoeng | | 1 | | | | |
| Diakarta | 41 | | | | | |
| Jogia karta | 2 | | | | | |
| Semarang | 41 | | | | | |
| Moduro | · - | 12 | | | | |
| Timbong | | 12 | | | | |
| Theiland | 7 | 1 | | | | |
| 1 118118110 | | | | | | |
| SOUTH AMERICA | | 1 | | | | |
| Ecuador | 12 | 2 | 1 | | | |
| Chimborg 70 Province | 8 | - | 1 | | | |
| Loio Drovingo | A | 2 | | | | |
| Luja 1 10 v 11100 | - | 1 2 | | | 1 | 1 |
| | | | | | | |

¹ Includes suspected cases. ² May 1-10, 1951. ³ May 11-20, 1951. ⁴ Imported. ⁴ Preliminary figure.

SMALLPOX

(Caser)

| | Janu- | April | May 1951-week ended- | | | | | |
|--|---------------------------|-----------|----------------------|-----------------------------------|---------------|-----------|--|--|
| Piace | March 1951 | 1951 | 5 | 12 | 19 | 26 | | |
| AFEICA | | | | | | | | |
| Algeria Bechuanaland Belgian_Congo | 30 119 661 | 252 | 54 | 60 | 82 | | | |
| British East Africa: Kenya | 1 | | | | | | | |
| N yasaladu Tangan yika Uganda | 117 | 20 1 | 1 | | | | | |
| Cameroon (British) | 64 | 19 | | 1 32 | | | | |
| Egypt | 5 | | | | | | | |
| French Equatorial Africa | 45 | 43 | | | *1 | | | |
| French West Africa | 1, 145 290 | 830 50 | | ¹ 72 15 | 3 109 3 14 | | | |
| Utilines | 102 | 80 | | 12 | \$ 24 | | | |
| Mauritania. | | 6 | | | | | | |
| Niger Territory | 220 | 518 | | 1 15 | * 17 | | | |
| Sudan Upper Volta | 357 165 | 140 35 | | ¹ 44 ¹ 6 | 2 47 3 7 | | | |
| Gambia | 1 | 90 | | | | | | |
| Morocco (French) | 6 | | | | | | | |
| Mozambique | 83 | 5 | 1 | | | | | |
| Nigeria Rhodesia: Southern | 3, 348 237 | 1,016 | | | | | | |
| Sierra Leone | 22 | | | | | | | |
| Sudan (Anglo-Egyptian) | 16 | 2 | | 1.5 | | | | |
| Togo (French) | 30 | 1 | | • 5 | | | | |
| Union of South Africa | 349 | | | 1 | | | | |
| ASSA Afghanistan | 163 | 70 | | | | | | |
| Arabia | 2 | | | | | | | |
| Aden | 1 | | | | | | | |
| Burma | 478 | 78 | 9 | 6 | 4 | | | |
| Ceylon | 10 | 1 | 2 | 2 | 26 | 3 | | |
| China | 118 395 | 49 700 | 4 5 905 | 4 3 584 | 4 2 325 | 4 175 | | |
| India (French) India (Portuguese) | 118, 385 1, 750 102 | 335 13 | - 0, 340 68 | 53 | 26 | | | |
| Indochina: Cambodia Viet Norm | 75 171 | | 103 | 1 | 1 183 | 97 | | |
| Indonesia: Borneo | 847 | 186 | | | | | | |
| Java | 106 | 25 | 2 | 1 | 5 | 6 | | |
| Iran. Irag | 209 | 19 | | 3 | 5 | 5 | | |
| Japan | 23 | | | | | | | |
| Korea Pakistan | 195 20, 039 | 7, 338 | 1, 480 | 326 | 200 | 15 | | |
| Thailand | 32 | 1 | | | | | | |
| Turkey | 32 | 120 | | | | | | |
| BUROPE | | | | | | | | |
| Great Britain: | 12 | | | | | | | |
| Portugal | 13 | | | | | | | |
| Netherlands | | 19 | 31 | 19 | 2 | | | |
| SOUTH AMERICA | - | | | | | | | |
| British Guiana | 3 11 | | | | | | | |
| Colombia | 20 | 5 | | | | | | |
| Ecuador | 82 | 16 | | | | - | | |
| Veneznela | 20 | | | | | | | |
| | 10 | | | | | | | |

¹ May 1-10, 1951. ³ May 11-20, 1951. ³ Imported. ⁴ Preliminary figure.

TYPHUS FEVER*

(Cases)

| | Janu- arv- | April | May 1951—week ended— | | | | |
|--|----------------------|--------------------|----------------------|------------|-------|----------------|--|
| Place | March 1951 | 1951 | 5 | 12 | 19 | 26 | |
| Africa Algeria | 10 1 | 29 | | 11 | | | |
| Beigian Congo British East Africa: Kenya Somaliland | 9 1 | | | | | | |
| Uganda | 1 51 | 1 9 | 2 | | 1 | ; | |
| Eritrea Ethiopia Gold Coast | 6 238 2 | 3 49 | | | 3 | 1 | |
| Libya: Cyrenaica Tripolitania | 1 2 2 | 5 | 1 1 | 2 | | 1 | |
| Morocco (Spanish) Nigeria | 10 1 | 1 10 | | 12 | | | |
| Union of South Africa ASIA | 23 | | | | | ••••• | |
| Afghanistan Ceylon India | 159 1 32 25 | 130 10 3 | 4 | 8 | 2 | ī | |
| India (Portuguese) Indochina: Viet Nam Iran | 16 162 14 | 9 33 | 6 6 | 4 | 6 | 4 | |
| Iraq Israel Japan | 2 6 27 | | | | | | |
| Pakistan Syria Transjordan Turkey | 7 1 35 60 | 4 4 16 | 2 2 | 1 3 | 5 | 2 7 | |
| EUROPE Great Britain: | | | | | | | |
| Island of Malta Portugal Sicily Yugoslavia | 3 5 178 | | | | | | |
| NORTH AMERICA Costa Rica | 25 | | | | | | |
| Guatemala. El Salvador | 14 12 12 | 24 11 | - | 21 | *1 | | |
| Puerto Rico | | i | | | | | |
| Chile Colombia Ecuador | 41 26 3 235 | 21 6 3 77 | 7 | 4 | | | |
| Paraguay Venezuela | | | | | | | |

*Reports from some areas are probably murine type, while others include both murine and louse-borne types. ¹ May 1-10, 1951. ² Murine. ³ Includes murine type.

YELLOW FEVER

(C-cases; D-deaths)

| AFRICA | | | 1 | | | |
|-------------------|-----|------|------|---|--------|------|
| Gold Coast | . C | 18 | 1 11 | 4 | 34 | |
| A comp | Č | 4 | 2 | 1 | | |
| A deigo | Č | 2 | 2 | 5 | | |
| Aueso | č | - | | ĩ | | |
| Frieshi | ĨČ | | 2 | ī | | |
| Ciamo Teopo | ĒČ | 12 | | - | | |
| Sierra Leone | Č | 1 2 | | | | |
| Komadugu District | Č | 1 22 | | | | |
| FIGGEOWIL | -0 | | | | | |

See footnotes at end of table.

| Place | Janu- ary- March 1951 | April 1951 | May 1951—week ended— | | | |
|--------------------------------|--------------------------------|---------------|----------------------|----|----|------------|
| | | | 5 | 12 | 19 | 26 |
| NORTH AMERICA | | | | | | |
| PanamaC | | 1 | | | | |
| Bocas Del Toro ProvinceC | | 1 | | | | |
| SOUTH AMERICA | | | | | | |
| BrazilD | 3 400 | | | | | |
| Goiaz StateD | ³ 400 | | | | | |
| AnapoliD | 41 | | | | | |
| GoianiaD | 42 | | | | | |
| GoiazD | 45 | | | | | |
| InhumasD | 41 | | | | | |
| JaraquaD | 46 | | | | | |
| MineirosD | 42 | | | | | |
| NiquelandiaD | 43 | | | | | |
| PirenopolisD | 41 | | | | | |
| PorangatuD | 41 | | | | | |
| Rio VerdeD | 42 | | | | | |
| UruacuD | 42 | | | | | |
| Matto Grosso StateD | 2 | | | | | - - |
| ColombiaD | 13 | | | | | |
| Boyaca Department. | 1 | | | | | |
| Otanche | 1 | | | | | |
| Caqueta CommissaryD | 2 | | | | | |
| Montanita | 1 | | | | | |
| Meta Territory | 1 | | | | | |
| North Santander Department | 3 | | | | | |
| La Vega | 3 | | | | | |
| Santander Denartment | ő | | | | | |
| Campohermoso | ĭ | | | | | |
| Guamales | ī | | | | | |
| Manalako | î | | | | | |
| Tamba Redondo | i | | | | | |
| Vanaces | î | | | | | |
| Fonedor | 8 6Î | | | | | |
| Femeraldes Province | 1 | | | | | |
| | . 1 | | | | | |
| Owininda | ÷ 1 | | | | | |
| Santa Domingo de Los Colorados | 1 50 | | | | | |
| Son Morrisl | | | | | | |
| | 1 | | | | | |
| Tunin Department | 4 | | | | | |
| Son Martin Department | | | | | | |
| San Marin DepartmentD | 1 | | | | | |
| | | | | | | |

YELLOW FEVER—Continued

¹ Includes suspected cases. ² Suspected. ³ The number of deaths Dec. 1-Feb. 20, 1951, was estimated to be 400 and the number of cases was estimated to be 2,000. ⁴ Confirmed deaths. ³ Corrected figure.

Sylvatic Plague in Lincoln County, Wash.

Dr. V. B. Link, Western CDC Laboratory of the Public Health Service reports that specimen 51 WB-11, consisting of 11 fleas, *Megabothris clantoni clantoni*, from 8 sage brush voles, *Lagurus curtatus*, were found to be plague positive. These voles were trapped 5 miles south of Wilbur on State Highway 4B on May 10, 1951.

Examination for Medical Officers

A competitive examination for the appointment of medical officers in the Regular Commissioned Corps of the Public Health Service will be held in various cities throughout the country on September 4, 5, and 6, 1951. The examination will include professional written tests, an oral interview, and a physical examination. Completed applications must be in the Washington office by August 6, 1951.

Appointments will be made in the grades of assistant surgeon and senior assistant surgeon, equivalent to Navy ranks of lieutenant (j. g.) and lieutenant, respectively. Entrance pay for officers with dependents is \$5,686 in the assistant grade and \$6,546 in the senior assistant grade. These salaries include the \$1,200 annual additional pay received by medical officers as well as subsistence and rental allowance.

Assistant surgeon applicants must have at least 7 years of post high school educational training and professional experience; the senior assistant, 10 years. Applicants who will complete their internships by June 1952 may take the examination.

For application forms and additional information write to: Surgeon General, Public Health Service, Federal Security Agency, Washington, D. C., attention: Division of Commissioned Officers, Desk A.