FUNCIONARIOS
DE LA
OFICINA SANITARIA PANAMERICANA
(OFFICERS OF THE PAN AMERICAN SANITARY BUREAU)
1946

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V PAN AMERICAN CONFERENCE OF NATIONAL
DIRECTORS OF HEALTH

April 22-27, 1944

SUMMARY

The V Pan American Conference of National Directors of Health was held in Washington, D. C., April 22-27, 1944, with delegates from all but one of the 20 American Republics in attendance. There were also present invited observers from Canada, Dutch Guiana, Curacao, the British West Indies, and various international institutions. Meetings were held in the Hall of the Americas of the Pan American Union.

Dr. Hugh S. Cumming, Director of the Pan American Sanitary Bureau, was unanimously elected President of the Conference, with Drs. Manuel Martinez Baez (Mexico), Eugenio Suarez (Chile), Cesar Gordillo Zuleta (Peru) and Leopoldo Izquiel Perez (Ecuador) as Vice Presidents and Dr. Aristides A. Moll as Secretary. Committees were appointed on Credentials (chairman, Dr. Jules Thebault, Haiti), Quarantine (Dr. G. L. Dunnahoo, United States), Program for the XII Pan American Sanitary Conference (Dr. A. Castillo Plaza, Venezuela), and Votes and Resolutions (Dr. C. A. Alvarado, Argentina).

The subjects for discussion by the Conference included Improvement of the National and International Notification of Communicable Diseases; Aerial Navigation; Port Sanitation; Quarantine Regulations; Formulation of International Health Certificates; Standardization of Food and Drug Regulations (including Biologic products); Prevention of the International Spread of Zoonoses Transmissible to Man; Relation between Social Security and Public Health; reports of Pan American Committees (Malaria, Typhus, Nutrition, Quarantine, Sanitary Engineering, Vital and Epidemiological Statistics, Model Public Health Code); Relations of the Pan American Sanitary Bureau with Other International Organizations; and the presentation by the delegates of reports on public health conditions in their respective countries since the preceding Conference.

Resolutions were adopted regarding creation of new committees on leprosy, rural hygiene, social security, and sera and vaccines, and of a special sub-committee on quarantine; drafting of a new Pan American Sanitary Code and of a Model Public Health Code; consideration of the relations of social security and public health; exchange of experts; standards for scholarships; study of pinto or carate; teaching of first aid; public health as a profession; appointment of public health attachés; abolition of the so-called health certificates for travelers; issuing of commemorative Pan American Health Day stamps; improved collection of vital statistics data; unification of standards for public health registration and control of foods and drugs; study and prevention of zoonoses; and equitable distribution of quotas of drugs and similar substances.

It was recommended that the general theme for the XII Pan American Sanitary Conference, to be held in Caracas in 1946, should be the Revision of the Pan American Sanitary Code. The remaining subjects included: standardization of food and drug regulations; organization and achievements of health centers or sanitary

1 The Bolivian delegate was unable at the last moment to attend.
2 The complete English text of the resolutions, together with the Committee reports appears in Publication 222 of the Pan American Sanitary Bureau (Final Act of the V Conference).
units; malaria; tuberculosis; zoonoses; health education; venereal disease control; and post-war problems.

As evidenced by the reports and discussions, the most outstanding developments in public health in the hemisphere since the last Conference of Directors of Health (1940) have been: reorganization of national departments or ministries to bring about coordination of national health activities and more efficient cooperation with state, municipal and social security and hospital agencies; extension of health and medical services to interior areas; increased use of full-time personnel; continued emphasis on training of personnel; increased health budgets; extension and improvement of basic sanitary services such as water supply and sewage disposal; attempts to improve vital and epidemiological statistics reporting; a great movement for hospital construction and improvement, including institutions for maternity, leprosy and tuberculosis care; and the undertaking of large-scale malaria control programs. While bubonic plague and yellow fever have been brought under increasingly rigid control and smallpox has been eliminated from many countries, typhus fever and other rickettsiases are becoming more and more important, and such hitherto limited diseases as bartonellosis, Chagas' disease, poliomyelitis, and undulant fever are causing concern.

All of the delegates paid tribute to the benefits of inter-American cooperation, including loan of professional and technical personnel, scholarships, assistance in obtaining scarce materials and drugs, financial aid, and the exchange of ideas and knowledge at regional and inter-American conferences.

Health administration.—Administrative changes included: in Argentina, unification of the health functions of four Ministries under the National Department of Public Health and Social Welfare, which will carry out a national health plan to be drawn up at annual conferences attended by the Provincial directors of health; in Brazil, reorganization of the National Department of Health in April, 1941, with the four-fold function of direct charge of health problems of national importance such as plague, technical and other assistance to state and local authorities in solving other problems, research, and professional and technical education; close contact with states through their employment of federal technicians in various capacities (as directors of health in 13 states), distribution of standards and instructions for state health services; inspection of public health laboratories; and compilation of sanitary indices for the state capitals (using a modification of the form adopted by the IV Pan American Conference of Directors of Health); in Chile, which has well-developed medical-hospital services and a strong central health organization but is weak in local action, reorganization of health activities around health units (unidades sanitarias) which serve for training, to utilize existing resources, and to orient medical care on a preventive basis with the family as a unit of action; and securing of increased cooperation from welfare and social security agencies in preventive work against venereal disease and tuberculosis and in the care of pregnant women and infants; in Colombia, emphasis on learning the health conditions of the entire country, on removing health positions from politics, and concentration on the preventive phases of health work; in the Dominican Republic, placing of health campaigns under a specially trained director and extension of health action to numerous communities formerly lacking medical services, especially along the frontier; in Ecuador, study of reorganization plans to give increased emphasis to epidemiology; in Mexico, fusion of the old Department of Health and Secretariat of Public Welfare into the Secretariat of Health and Welfare, in October 1943; and in Peru, coordination of the work of the Department of Public Health with agencies of other Ministries.

Health centers.—Health centers and units and traveling clinics continue to be important means of bringing health work to the public, as in Brazil, where the
National Department of Health maintains 248 polyvalent health centers and posts and numerous smaller subposts; Chile, which has two of the new coordinating health units and is planning others; Colombia, where a legislative and press campaign has succeeded in reducing the amount of curative work (in contrast to prevention) done by health centers from a previous 75 to 80% of activities, to 10%, and that in the small rural posts where the medical health officer, in the absence of any licensed physician in the region, has to undertake treatment; Costa Rica, which has 33 health units and medical offices, a treatment center, three traveling units and a dispensary-launch and is building other units; the Dominican Republic, with 32 medical dispensaries devoted to treating the most prevalent diseases; Ecuador, where a health center will soon be completed for Quito and others are planned and traveling clinics have been inaugurated in the province of Oriente; El Salvador, with four health centers staffed by full-time personnel, 12 with part-time physicians (concentrating mainly on maternal-infant hygiene and syphilis), 16 rural commissions in towns without private physicians, 5 traveling units, and 14 stations staffed by sanitary inspectors; Honduras, which recently added two local health centers and four traveling units to its facilities; Nicaragua, where buildings for seven new health units are under construction; Panama, which began with a single model health unit in 1932 and now has 10, together with several dispensaries (with professionals from 6 Pan American countries in charge); Paraguay, where it is planned to organize public health work around mixed preventive-curative centers of which five have been built; and Venezuela, where one-third of the population is reached through the 40 health units and medical offices and 75% of the population receives some medical attention through hospitals, clinics, or the 130 rural physicians (some of whom are paid by the Ministry of Health alone or in cooperation with the states, and some by the states alone; the Ministry furnishes them all drugs of public health interest and some for general treatment).

Personnel.—The training, selection, and security of tenure of public health personnel were the subject of two special reports: one from Peru defining and urging recognition of public health as a profession and career, and one describing Mexico's state and regional training units which, in addition to preparing personnel for local health work, aid in the formation and selection of candidates for the school of public health. Other developments reported included Brazil's 12-month public health course for physicians (already completed by the directors of health of four states, and open to both national and foreign students), short, regional public health courses (three planned for 1944), and special courses (beginning with one in leprosy for 1934, these now number 14 for 1944, in health administration and organization, malaria, cancer, leprosy, tuberculosis, plague, sanitary engineering, vital statistics, laboratory technique, mental hygiene, hospital organization and administration, trachoma, venereal disease, and nutrition, with 88 scholarships being offered to state health personnel); Chile's school of public health, established with the cooperation of the University of Chile and the Rockefeller Foundation and opening its first course for physicians June 1944, with training to be extended later to other personnel; Colombia's courses for health inspectors and nurses (personnel are also sent abroad for special training); the one-semester training courses for Dominican Republic health personnel (students are also sent abroad); Cuba's emphasis on training; Ecuador's six month course in tropical medicine, at the University of Guayaquil; El Salvador's courses in preventive medicine and health administration and in sanitary engineering (in 1940 there were only two full-time health officers with special training; by the end of 1943, there were 12 nationals so qualified, and nine additional technicians loaned by international agencies, in the El Salvador health department); the return to active duty of the 10 health officials
sent by Guatemala to the United States for training; Haiti’s plans for a new health center for personnel training (physicians, engineers, and health officers have also been sent abroad); the new hygiene center near Veracruz, Mexico, which is to serve as a training center in tropical medicine for the Mexican School of Public Health and Institute of Tropical Medicine and for students from the rest of the Americas, including Tulane University; in Nicaragua, sending of nine students abroad for training; Panama’s security of tenure, with some health personnel having 30 years of service; Peru’s public health course for personnel engaged in jungle sanitation, planning of similar courses for the coast and sierra, and attempts to improve the financial situation of public health physicians and to create full-time positions; and in Venezuela, the course for medical hygienists opened in 1942, which has already graduated several physicians (32 of the health department’s 319 physicians have now had special training either abroad or in Caracas); courses for other personnel have also been given.

Various suggestions were made in regard to the proposed creation of a Pan American Institute of Public Health Sciences as a part of a Pan American University, including employment of instructors from several countries, transferability of credits among universities of the Americas, and a “traveling medical school” with courses of varying length given at institutions in several countries, some of these being a reflection of ideas expressed at preceding Conferences.

Nursing.—Developments in the movement to improve nursing and public health nursing training have included: in Brazil, inauguration of a new school of public health nursing in São Paulo and organization of one in Niterói (hitherto Brazil has had but two public health nursing schools: Ana Neri, in Rio, and Carlos Chagas, in Belo Horizonte) and opening of an 18 month course for nurse-aides in Rio (1942), as well as the assigning of public health nurses to states to organize visiting nurse corps for health centers and hygiene courses for school teachers and other groups; in Costa Rica, efficient functioning of the visiting nurse and social worker systems; in Ecuador, offering by the Government of 10 additional scholarships for the Quito school of nursing (opened under the auspices of the Rockefeller Foundation and the Pan American Sanitary Bureau); in El Salvador, extension of the public health nursing service in January 1943 to 14 additional towns, making a total of 17, and reorganization of the school of nursing of the department of health (which will receive assistance for five years from the Rockefeller Foundation); in Guatemala, assistance to the nursing school by the Pan American Sanitary Bureau, and a 100% improvement in the cultural level of Guatemalan nurses in the last five years; in Haiti, creation of a new school for visiting nurses and reorganization of the hospital nursing school with the cooperation of the Pan American Sanitary Bureau; in Honduras, organization of a school of hospital (3 years) and obstetrical (4 years) nursing, attached to the School of Medicine, Surgery, and Dentistry, which graduated 14 nurses in 1944, and has scholarships for poor students; the founding of a nursing school this year in Nicaragua, opening a new career to Nicaraguan women; in Peru, increase of the nursing schools to six, and reorganization of the school of social workers; and in Venezuela, graduation of more than 60 nurses in four years from the nursing school of the Ministry of Health, which is supported by the Ministry and by scholarships from state governments and private agencies; most of the graduates are now in public health work, and the director of the school received a Rockefeller Foundation scholarship for study at the University of Toronto.

Rural physicians.—Various measures have been taken to relieve the scarcity of physicians in rural areas, including assigning of health department physicians to such areas, as in Brazil, Colombia, El Salvador (employing recent graduates), and Venezuela, and requiring of rural internships by medical school graduates, or
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under the so-called social medicine program as in Haiti (law of June, 1942, prescribing a two-year rural internship for all medical school graduates), Mexico (the University of Mexico has required a rural internship since 1937, and some physicians have already returned voluntarily to the scene of their internship to practice), and Venezuela (law of July 1942 requiring a year’s small-town practice for physicians of less than 5 years practice who wish to obtain public posts in larger towns).

Budgets.—Public health budgets have continued to reflect the growing interest in public health. Countries reporting increases included Argentina (90 million pesos for the first year of the new Department of Health and Welfare), Colombia (budget has doubled in the last two years and a program of matching department and national funds for hospitals, dispensaries, and other projects has been very encouraging), the Dominican Republic (now spending more than a million pesos for health and welfare, exclusive of municipal and private funds, about 55 cents per capita); Ecuador (increased from 582,640 sucre in 1933 to 6,904,500 sucre for 1944, or about 2 sucre per capita, exclusive of welfare, social security, and municipal expenditures); El Salvador (increased from $183,347 in 1942 to $296,500 in 1944, or from 0.10 to 0.18 per capita, in addition to which $500,000 has been contributed by the Inter-American Cooperative Health Service and $242,000 by the municipalities; the health department is concentrating on rural sanitation, malaria, syphilis, maternal and infant hygiene, laboratory service, health education, vital statistics, and public health nursing, in order to get the most out of these funds); Honduras (278,920.00 lempiras for 1944-1945, compared with 155,090.80 for 1943-44; to be increased to 378,760.00 on completion of a sanatorium); Paraguay (1,300,000 guaranis, about 1 guarani 10 centavos per capita, an increase over previous years, but still inadequate); Peru (18,000,000 soles for health work, an increase in the last five years from 5,500,000); Uruguay (a health budget of some 13 million, only a million of which has to be spent on purely public health problems, due to the lack of serious epidemic and endemic diseases); and Venezuela (a health budget of some 56,000,000 bolivars, more than a sixtieth of the national budget; exclusive of private or local health funds).

Other developments in the administrative field have included conferences (Argentina, conferences of directors of health; Colombia, meetings of departmental physicians to plan health campaigns; Venezuela, conventions for rural physicians and health officers, national sanitary conferences, conferences of chiefs of health units, and inter-unit regional meetings held every two months; incorporation of a foreign relations section in the new Argentine Department of Health and Welfare; adoption of a Sanitary Code in Costa Rica and preparation of a new Sanitary Code for the Dominican Republic; reorganization of the National Institute of Hygiene of Cuba; expansion of the National Laboratory of the Dominican Republic to manufacture vaccines and sera; creation of Indian Institutes in Ecuador and Nicaragua to study Indian welfare; opening of the Honduras Institute of Biology; installation of the Institute of Hygiene of Paraguay in new quarters; completion of a new building for the Nicaraguan Health Department; Haiti’s five-year plan for attacking the basic problems of drainage, latrines, and markets; creation and reorganization of various Peruvian services and sanitary surveys of various regions in that country; and amendments to the public health law of Venezuela in 1942, giving it greater scope.

Social security.—The adoption of social security in Costa Rica, Paraguay (1943), and Venezuela (1940) is expected to have considerable influence on public health. However, as pointed out by the Chilean delegate, if preventive medicine is not

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1 An agency of the U. S. Office of the Coordinator of Inter-American Affairs.
made a part of the philosophy of the social security system, the results of the enormous funds spent will not come up to expectations. Chile's social security system, created in 1924 as a consequence of the change after 1914 from an agricultural and mining to an industrial nation, was amended in 1938 by the Preventive Medicine Law, providing for yearly compulsory health examinations to discover and bring under treatment cases of tuberculosis, syphilis, and heart disease. Although social security has brought about a decrease in infant mortality (from 250 down to 180 per 1,000 live births) and in tuberculosis, plus a better knowledge of morbidity and a great increase in hospital beds, the general mortality has not changed greatly in its 20 years of operation. Attempts are now being made to coordinate public health and social security services through special experimental health units or centers.

Of the five major pestilential diseases, cholera is not found in the Western Hemisphere. Smallpox is absent from several countries, including Chile and Paraguay, thanks to vigorous vaccination campaigns (800,000 vaccinations a year in Chile) and is a minor problem in others. In Mexico, however, it is still one of the chief concerns of the health authorities, despite great progress in its control.

Plague developments reported to the Conference included: in Brazil, a tendency to disappear from urban areas and to become localized in rural zones, fortunately without reaching a truly endemic stage as yet, with three plague foci, in the northeast (parts of Piauí, Ceará, Paráiba, Pernambuco, Alagoas, and Bahia), the Federal District and states of Rio de Janeiro and Minas Gerais, and lastly, the São Paulo-Rio Grande do Sul area; 66 cases in 1943 (an increase over 1942 but much lower than in preceding years); federal appropriation of 18 million cruzeiros for plague work in 1943 (compared with 890,000 in 1936); creation of the national plague service in 1941, which had 1,491 employees by the end of 1943, including 39 physicians with special training, is using cyanogas and flame-throwers with great success, pressing rat-proofing as a permanent measure, concentrating on rat destruction in the active or potentially endemic area and in ports and cities which have had plague within 10 years, and is planning a systematic epidemiological study; and adoption in 1943 of the classification of plague cases into "positive," "suspect" and "negative" on the basis of combined clinical, epidemiological and laboratory data; in Chile, plague-free for years, appearance of a case in Santiago in 1941 in a stowaway from Peru, followed by two mild cases in Valparaiso in 1941 and 3 autochthonous cases in Valparaiso in 1942, and after autopsies of 8,000 rats, finding of one infected animal, with no further cases of animal plague; in Ecuador, extinction of plague in the sierra except for Chimborazo Province (4 cases so far in 1944); and in Venezuela, institution of a permanent rodent control campaign (under a director trained in Peru) in the border region of Aragua and Miranda States, which has had outbreaks since 1919 (1928, 1932, 1939, 1940, and in July-August 1943, 19 cases); the recovered cases had been treated with Cibazol). Rats are caught and examined in cities and ports but none have been found infected.

Yellow fever.—During the last 13 years (1931-1943) Brazil has had 1,349 cases of yellow fever (249 urban, 1,110 jungle type, with none in 11 states and the Federal District; 10 cases in 1942 and 6 in 1943; only 2 cases due to Aedes aegypti since 1938 and they were in Sena Madureira, Acre Territory, in 1943). During that period 301,067 liver specimens were collected by viscerotomy from persons dying of illness of less than 10 days duration; there were 1,315 viscerotomy posts in 1943. The specimens are examined in a laboratory maintained by the Rockefeller Foundation, which also prepares vaccines and makes protection tests and entomology studies and until 1940 collaborated with the Brazilian government in all yellow fever control work. In that year the National Yellow Fever Service was organized (made
part of the Department of Health in 1941), which maintains low stegomyia indexes in urban areas and has eliminated the species from seven states and the Federal District (of 16,714 localities inspected in 1943, 92% were free from *Aedes aegypti*). From 1937 to 1943, more than 2,600,000 immunizations were made (about 173,000 in 1943, principally in members of the armed forces located in jungle yellow fever areas and in persons going to Amazonia).

Other developments have included creation of National Yellow Fever Services in Ecuador, Peru, and Venezuela (1930; raised in 1943 to a Division). In Venezuela, in 1928 before Soper had described jungle yellow fever, some cases were found in the State of Bolivar. Protection tests in the area in 1938 and in 1943 revealed high proportions of immunity. Control measures include: formation of a vaccination brigade which has vaccinated half the population of the area, intensified viscerotomy studies resulting in the finding of three positive liver specimens in 1942, and installation of mosquito control services in Ciudad Bolivar in 1943, with reduction of the *stegomyia* index from 29.2 to 2.0.

**Typhus and other Rickettsias.**—In recognition of the growing importance of the typhus group of diseases, a Pan American Committee on Typhus was created in 1943, which now has representatives from all countries in which typhus is a serious problem, and is arousing much interest in finding and reporting these diseases. To date it has undertaken studies of the Cox and Ruiz Castafeda vaccines in Colombia, of DDT in vermin-control; identification of strains of rickettsia in its associated laboratories, and cooperation with various countries in preparation of programs and campaigns.

As to distribution: Rocky Mountain spotted fever has been found in two states of Brazil, in two departments of Colombia (Santander, and Tolimà, with a 95% mortality in the epidemic but no cases for more than a year now), and recently in Mexico. Typhus is found in Brazil, Chile (2,074 C, 172 D in the last four years; murine virus has been found in rats in a southern city and later in Valparaíso and Antofagasta rats, confirming the suspicions of the presence of this form), Colombia (murine and louse-borne forms, in the mountains and high plateaus, in 9 departments and 79 municipalities; 1,308 confirmed cases in 1943; has apparently existed since colonial times; studies are being made on vaccines, delousing, the virus, role of fleas, vectors of Rocky Mountain spotted fever, with *Dermacentor nitens, Ornithodoros rudis* and *Argas reflexus* found experimental vectors; reservoirs of murine virus in nature, beside the rat; and preparation of vaccines from autochthonous strains); Ecuador (serological studies show that typhus exists in 12 of 17 provinces and in more than 50 towns, especially in the mountains; it is louse-borne, endemic, with small local outbreaks which do not spread, perhaps because of immunity acquired in childhood or from infected lice or because of the low density of population; there were 13 known cases in 1939; 86 C 28 D in 1940: 173 and 25 in 1941, 268 and 37 in 1942, and 143 and 11 in 1943, most of the deaths being in Quito); El Salvador (an endemic strain has been isolated from the blood of human cases and another strain from rats); Guatemala (the chief health problem of the mountains; it is 98% epidemic typhus and 2% murine; station wagons are used to reach all parts of the typhus region and suspicious blood specimens are sent to the Army Medical School in the U. S. for checking; 5,000 persons were vaccinated with Cox vaccine and only 5 have come down with typhus and that in a mild form; in March and April 1944 there was a severe epidemic in the insane asylum in Guatemala, 1,500 feet altitude, which caused 250 C 80 D in the institution and spread to the city, where it is now under control); Mexico (where, in addition to routine control

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4 The complete English text of the report of the Typhus Committee appears in Pub. 222 of the Pan American Sanitary Bureau.
work, a Committee has been formed to cooperate with the Pan American Sanitary Bureau and has found several varieties of typhus, which is endemic in the tropical zones, very mild and even ambulant in form, and house-borne in the mountains; other studies include those on vectors and reservoirs, other epidemiological factors such as crowding, preventive measures, research, especially on chemical composition of the rickettsia, and vaccine tests; and in Venezuela (where public health laboratories began in 1940 to make routine Proteus X 19 agglutination tests of all blood specimens sent in, resulting in the finding of 199 cases of murine typhus with 8 deaths).

Malaria.—The second report of the Pan American Committee on Malaria showed a great increase in malaria work from 1941 to 1943. Only four countries failed to report; of these, one has no malaria (Uruguay), and another, (the United States), was not asked to report, because of the war, though it may be noted that 1943 was the year of lowest malaria incidence in that country. Developments reported by the Committee included: national divisions of malaria in 10 countries; employment of trained malariologists in 15 countries, in numbers from 1 to 43; and of entomologists (13 in nine countries) and sanitary engineers (15 countries); malaria budgets more than doubled for the countries reporting (from $1,930,400 in 1941 to $4,314,600), with the biggest increases in Brazil (6 times), El Salvador (3 times), Chile and Peru (doubled); however, those of Costa Rica and Haiti were decreased; cooperation of state and local governments in six countries (Argentina, Brazil, Colombia, El Salvador, Panama, and Venezuela), but only in small degree (the importance of this cooperation was reiterated by the Committee); completion of malaria recognition surveys in seven countries (Argentina, Costa Rica, Cuba, El Salvador, Haiti, Guatemala, Venezuela), progress on such surveys in five (Brazil, Dominican Republic, Mexico, Panama, and Peru), and their initiation in Ecuador and Paraguay; training of auxiliary personnel in Brazil, Chile, the Dominican Republic, Ecuador, Guatemala, Mexico, Panama, Peru, and Venezuela; courses in malariology for physicians in Argentina, Brazil, Chile, Peru and Venezuela; sending of personnel abroad for training by Argentina, Colombia, Costa Rica, Cuba, Haiti, Paraguay, Peru and Venezuela, (to the United States, Venezuela, Brazil, and several Central and South American cities); receipt of foreign aid in malaria control by Colombia, the Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Panama, and Venezuela, and expression by others of interest in receiving such aid (including direct economic aid for control projects, malaria laboratory supplies and medicines, scholarships, a technical mission, and for studies and projects). Most of the countries reported distributing malaria drugs and using Paris green and liquid larvicides in malaria control. Three types of drainage were in use: earth ditches, sub-soil drainage, and concrete-lined ditches. Facing with prefabricated concrete is very popular in the West Indies and Central America but not much used in South America.

Results of surveys show Anopheles albimanus to be the chief vector in Colombia, Costa Rica, Cuba, the Dominican Republic, Ecuador, El Salvador, Guatemala, Mexico, Haiti, and Venezuela; albitarsis is significant in Brazil; darlingi is considered the most dangerous vector in the Americas although not identified outside of Brazil, Guatemala, Venezuela, and British Honduras and British Guiana. Other important species are tarsimaculatus in Brazil, bellator in Brazil and Trinidad and its related species, cruzi in Brazil; both these breed in epiphytic plants; pseudopunctipennis in Argentina, Mexico, Honduras, Guatemala, and Peru. Two species of Anopheles have been changed from the partially described to the known

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8 The complete text of the report appears in Spanish in Pub. 221 of the Bureau, and the recommendations in English in Pub. 222.
category and six new species have been accepted as well as two subspecies; the Committee now lists
69 approved species of Anopheles with 10 subspecies, including 7 for Argentina; Bolivia 3; Brazil 43; Canada 3; Chile 2; Colombia 25; Costa Rica 15; Cuba 5; Dominican Republic 2; Ecuador 7; El Salvador 8; Guatemala 15; Haiti 3; Honduras 8; British Honduras 9; Mexico 21; Nicaragua 4; Panama and Canal Zone 18; Paraguay 4; Peru 5; United States 15; and Venezuela 31.

The Committee recommended use of full-time personnel; use of the training facilities of Brazil and Venezuela by other countries; use of the Committee's associated laboratories for classification of malaria parasites as well as mosquitoes; increased epidemiological surveys to further fix malaria boundaries; and adoption of certain amendments to the classified list of causes of death.

A special report was given on the successful use of intermittent-discharge siphons in controlling breeding of A. pseudopunctipennis, chief Argentine vector, and on the excellent results of winter larva control work in malaria foci, including the complete eradication of the mosquito from isolated foci. Other developments reported were, in Argentina, appointing of a committee to test native plants for efficacy against malaria; and in Brazil, Federal direction of malaria work in 18 states and the Federal District (a special public health service maintained by the United States and Brazilian governments operates in the Amazon basin and Rio Doce valley, and Sao Paulo has its own service); intensified work since 1938 including sanitation of the Baixada Fluminense; eradication (in cooperation with the Rockefeller Foundation) of the deadly African invader Anopheles gambiae, and projects in 13 states, especially around their capitals; employment by December 1943 of 4,427 persons in field work, including 47 physicians; organization of a new campaign on an epidemiological basis, with combating of the vector, determination of the exact vectors responsible and their habits (darlingi and albitarsis are important in 11 States and the Federal District; tarsimaculatus in 10 states and the F.D.; and kerteszias in two states; tarsimaculatus and albitarsis adapt to both fresh and salt water); appropriation of $1,450,000 for the malaria service in 1943; and, in accordance with a recommendation of the Malaria Committee, adoption of a requirement that all anti-malaria drugs based on quinine must contain at least 25 centigrams quinine per unit and (because of the scarcity) that quinine may not be incorporated into other remedies than those for malaria.

Additional accomplishments were reported by Chile (reduction of malaria in its only focus, the Department of Arica, to 10 cases in 1942); Colombia (control projects; the disease causes at least 5,000 deaths a year and more than a million cases, with an economic loss of about 36 million pesos; it is a special problem in the rice region of Santa Marta, where the rate has risen from 10% to 95%); almost completed construction of a permanent project in Costa Rica; in Cuba, a low level of infection in the eastern zone; in the Dominican Republic, which has 50,000 to 60,000 cases a year, treatment of malaria in the public health dispensaries and creation of a Division of Malaria in 1941 which has almost completed work in the San Cristobal zone, has made studies of the rest of the country and will undertake a four year control program with the aid of the Inter-American Cooperative Health Service; in Ecuador, sanitation of the Chillos and neighboring valleys and filling-in of the lowlands around Guayaquil; and in El Salvador, completion of malaria and anopheles surveys and of permanent projects in two cities, protecting 30,000 persons, and advanced work on two more projects, together with large-scale trials of baked clay paving sections.

See Pub. 221.

See Pub. 222 for English text of recommendations.

Malaria is the chief health problem along the Guatemalan coast; it is important in Haiti, which has created a malaria control service, undertaken several drainage projects, and made a malaria survey; it is the chief health problem of Honduras and probably of Mexico, where a survey has been made of the whole country, showing the distribution of 24 species of Anopheles; both temporary and permanent projects are being carried out, and the cinchona plantations will, it is hoped, supply Mexican needs within two or three years (it is hoped to begin producing quinine alkaloids this year in a Mexican plant). Other developments have included the completion of drainage projects and surveys in Nicaragua (in September 1942 the splenic index was 61.2% in one region and by November 1943 it had dropped to 35.8 and in some areas it has dropped from 80% to 10%); in Panama, dropping of malaria to second place as the result of work beginning in 1926 with the cooperation of the Rockefeller Foundation and establishment of a Section on Sanitary Engineering and Malarialogy; drainage projects were intensified in 1942 with the aid of the Office of Inter-American Affairs and permanent projects have been completed in 22 towns; the index of infection dropped from 47.1% in 1933 to 2.85% in 1943; in Paraguay, a few small projects, plus treatment; malaria is second in importance there; in Peru, intensified work in the coastal valleys, establishment of a theoretical and practical course in malariology; creation of a laboratory and insectarium, a quinine factory, and a copper arsenite factory (producing 1200 kilos monthly; the product has been shown to be a satisfactory replacement for Paris green in agricultural as well as public health use); and in Venezuela, an increase in malaria appropriations from 10% of the health budget to almost a fifth (more than 3,800,000 bolivars), not including $930,000 appropriated by the Inter-American Cooperative Health Service; moving of the Malaria Division headquarters in 1942 to Maracay; covering of a large part of the malarial area by regional control brigades staffed by an engineer, physician, and auxiliary personnel; malaria control projects under way in 16 important towns and plans completed for nine more, some of them with state assistance; addition of three new species in the last four years to the known Venezuelan Anopheles, making a total of 32; and distribution of quinine (4 tons in 1943).

Leprosy.—Developments in the leprosy control campaigns include in Brazil, taking of a census (there were 37,000 known cases of which 19,258 were isolated in leprosaria by December 1943), construction of regional leprosy colonies and preventoria (the Federal Government has spent $8,025,000 since 1932 on construction, and since 1935 built 15 new leprosaria and improved 14 others, and now has 24 preventorium-schools for healthy children of lepers), and cultivation of chaulmoogra and other plants; in Cuba, great attention to the problem; in Ecuador, allotment of funds for a new leprosarium in Zaruma; in Mexico, near completion of the latest leprosy census, and plans for closer cooperation of the leprosarium and dispensaries as a result of the fusion of the health and welfare services; in Paraguay, completion of a preventorium (it has a colony type leprosarium and is planning others); creation of a National Leprosy Service in Peru, and in Venezuela, planning of a colony for lepers (it has 2 leprosaria with 1400 beds, and several centers for ambulatory treatment).

Other tropical and parasitic diseases.—Intestinal parasites are the chief scourge of many countries, among them Colombia (about 80 to 90% of the population); Dominican Republic (the parasites are treated in the various dispensaries), Ecuador, El Salvador, Honduras, Nicaragua (her public health service grew out of the Rockefeller Foundation's hookworm control campaign in 1926), Panama (where a control program was begun by the Rockefeller Foundation in 1914; studies over many years have shown that treatment alone is of fleeting value; treatment plus some sanitation has a delaying effect on reinfection; and treatment in a san-
tated area really reduces the infestation); Paraguay, where they are the chief health problem; and Venezuela, which has a system of letting contracts for latrines, which has reduced the price, and where a new drug, ethylene and chenopodium tetrachloride, is proving of value. Control campaigns in most countries are tied up with sanitary engineering activities or made part of the sanitary engineering department. Other parasites were discussed in connection with Zoonoses.

Yaws control campaigns have been undertaken or intensified in Brazil (cooperative state-national campaign), Colombia (Pacific coast), the Dominican Republic (treated in the medical dispensaries), Ecuador, Haiti (the Sanitary Mission of the Office of Inter-American Affairs treated 77,680 cases in one year), and Venezuela (three yaws commissions, in the central, western, and eastern regions). 

Onchocerciasis is a problem in certain areas of Mexico and Guatemala, and a joint campaign has been undertaken following an international United States-Mexico-Guatemala conference called by the Pan American Sanitary Bureau in January 1942, which is making surveys, and sanitation and treatment studies. Bartonellosis was at first mistaken in Colombia for typhoid or malaria; it is fortunately localized only in the Dept. of Nariño on the Ecuadorian frontier and in part of Sur del Cauca. In one year it claimed more than 6,000 lives, but is now decreasing, and of the 20 cases averaged a month, 18 are of the verruga and only 2 of the febrile form. So far a little soil sanitation, improved housing, and improved nutrition have been achieved, but little has been discovered regarding the mode of transmission; although the vector is assumed to be a phlebotomus, as in Peru, no bartonella have yet been found in the specimens dissected in Colombia. Diphtheria is a serious problem in Uruguay, being present in a very malignant form.

Cooperative state-national campaigns are being waged against schistosomiasis in Brazil, and against trachoma. Chagas' disease has been found in Paraguay, but it is not known whether it has been there a long time or is now invading the country; it is present in Uruguay though not in serious degree or fatal form; Talice has published a monograph on 250 cases. Leishmaniasis is found in some jungle areas of Paraguay. Its serology and that of Chagas' disease and yaws are being studied in Venezuela.

As in the case of intestinal parasitoses, typhoid and the dysenteries are largely combated through improved sanitation. Developments include: a joint federal-state campaign in Brazil; compulsory typhoid vaccination in Cuba; in Chile, where studies since 1940 show enteritis, especially typhoid, to be endemic, prevalently urban, with maximum incidence in children and adolescents, a campaign has been organized based on vaccination (200,000 a year), environmental sanitation, and food control; in El Salvador, studies of shigellosis and salmonellosis, apparently more important than amebiasis; in Nicaragua, amebiasis is an important problem; in Paraguay, a decrease in typhoid, vaccination against it being compulsory; and in Uruguay, an alarming increase in typhoid fever despite the high level of sanitation; surveys have revealed that many houses are not connected to existing water and sewerage services, and that in some cities such services are not available in suburban areas; in Venezuela, studies of salmonellas.

Tuberculosis.—Tuberculosis is one of the chief health problems in the Americas; for instance, in seven Brazilian state capitals the mortality rate is more than 300 per 100,000; it has varied from 220 to 250 for the last 40 years in Chile and is considered to be in the massive epidemic stage; however, in Uruguay it has dropped from 226 to 120. Roentgen-photography ("abreuography") surveys are being made in nearly all countries to detect early cases and bring them under treatment, as in Brazil (group tests are compulsory in seven states; surveys in 1943 of 155,206 persons revealed 4% positive; the national tuberculosis service, which aids the
states, has 6 stationary and 5 traveling abreugraphy units), Chile, El Salvador (recently obtained a traveling roentgen-photography unit), Guatemala (examination of 8,000 supposedly healthy persons in three towns by a traveling unit revealed 2.6% positive), Mexico (using the abreugraph), Nicaragua (has acquired a complete traveling X-ray unit and three fourths of the population can now be reached via the Pan American Highway), Panama (has a traveling X-ray unit), Uruguay (87,000 abreugraphs have been made of groups in shops, schools, and so forth), and Venezuela (systematic surveys of Caracas school children were begun in 1940; in 1941, on the basis of 100,000 tests, it was concluded that in the urban area early infection is the rule, with 20% positives in the group 0-4, and 50% to 14 years, 75 to 100% in later life; and in the semi-rural area and Indian groups, figures are much lower except in the petroleum zone).

The tuberculosis bed picture is improving, as reported in Brazil (the Federal District gained 1,500 beds in 1935-1940; four sanatoria have been completed, 5 nearly finished, and 4 more well under way in the states, since 1937; since 1943 wings are being added to general hospitals, with construction under way in five states; state or private agencies are aiding the drive in nine states); in Chile (which is planning 1,000 new tuberculosis beds), Costa Rica (plans for a new large hospital), the Dominican Republic (has three dispensaries, and in 1943 finished the first hospital-sanatorium, with 100 beds; new wards are being added), Ecuador (a new sanatorium nearly completed), Haiti (the national anti-tuberculosis league, organized in 1942, is about to begin work in a new 100 bed sanatorium); Honduras (planning a hospital and dispensaries), Mexico (recently inaugurated surgical building for the Huipulco sanatorium, will soon inaugurate the Huipulco hospital unit, and is well along on hospitals for the Gulf and Pacific zones), Nicaragua (uses traveling clinics and increases the number of tuberculosis beds in general hospitals), Panama (has begun work on a 500 bed hospital and will have two 100 bed sanatoria in the interior, as well as two preventoria, one at the seashore and one in the mountains), Paraguay (soon to complete a 150 bed sanatorium), Peru (completed 9 dispensaries and building 3 more; constructing 3 large regional tuberculosis hospitals and of wards for general departmental hospitals; has four preventoria), Uruguay (has increased its tuberculosis beds by 700 in two years, to a total of more than 2,000, approximately one bed per each tuberculosis death), and Venezuela (has dispensaries in the chief cities; created 4 new diagnostic centers in 1941; the Simon Bolivar sanatorium and training unit has been turned over to the Tuberculosis division; a tuberculosis society organized in 1943 is building a 300 bed sanatorium in Zulia with the aid of the Welfare Board; the total tuberculosis beds number more than 1,200).

Other measures include: special training courses in Brazil, Cuba, and Venezuela, open to foreign students; transformation of the Dominican Republic's National Tuberculosis League into the National Tuberculosis Council and creation of tuberculosis seals, the use of which is compulsory during tuberculosis month (April); and the tuberculosis congress held in Maracaibo, Venezuela, in 1943 with delegates from other countries present.

The building of low-cost, hygienic housing is regarded as an important tuberculosis control measure in Ecuador (such housing is built both by the government and by the social security fund), Chile (future construction of worker's housing, together with sanitation of existing units has been centralized in the Housing Board; an urgent measure has been reconstruction of dwellings in provinces affected by the recent earthquake); Panama (the housing problem has been aggravated by the influx of workers from the Interior to Canal defense projects); and Peru (more units are being built, to replace the old dwellings dating from the colonial era).
Venereal disease.—The war-time development of new treatment methods (such as the sulfanilamides) has assisted in the control of venereal disease, a serious problem in all countries. Among the activities reported were: in Brazil, a joint Federal-state control campaign begun in 1942, with states furnishing health centers, dispensaries, and nurses, and the Federal government furnishing technical advice, medicines, and material for laboratory diagnosis; the Army and Navy health services also cooperate; in Chile, where the venereal disease rate is still very high although declining slightly since 1941 (approximate rates of infection, 1,400 to 1,500 per 100,000; syphilis, 400 to 500), merging of efforts of welfare and social security agencies under the direction of the health department, organization of local campaigns on an epidemiological basis, as in Concepción and Valparaiso, with encouraging results (the venereal disease rate was halved from 1940 to 1943 in Valparaiso and syphilis dropped from 1,288 to 490 new cases per year); systematic contact investigation, plus massive treatments for syphilis and use of the sulfas, have contributed to a decrease in Santiago and other cities (massive syphilis treatment is now given in 8 hospitals, with a total of about 5,000 cases thus treated; the mortality, at first high, is now 0.5% of the treated cases, and 90% have remained non-infectious or were re-infected); arsenicals are furnished through the Bacteriological Institute of Chile; in Cuba, establishment of the Chediak Institute in the Ministry of Defense to make tests of soldiers and the home defense corps; it can make 700 Chediak (syphilis) tests per day and could well be used by civilian groups; in El Salvador, major emphasis on syphilis and maternal-infant hygiene in the health centers, use of the 26 week treatment rather than the 70 week, and of arsenoxides more than neoarsphenamine; in Mexico, the highly successful cooperative campaign along the United States frontier, and establishment of a dispensary in Mexico City which serves as a training center; in Paraguay, large-scale use of massive treatments; in Peru, treatment in 47 venereal disease dispensaries; in the Dominican Republic, treatment in two special dispensaries in the capital, and in the provincial health centers (there are 14 C per 1,000 annually of syphilis), and plans for adoption of more modern social hygiene methods; adoption of a pre-nuptial health certificate in November 1942; and in Venezuela, a law of September 1941, making treatment compulsory and also maintenance of venereal disease beds in hospitals and health department supervision of venereal disease dispensaries; establishment of a dispensary-training unit with various annexes including a cardiology department; intensified follow-up, plus personnel training, and public education, resulting in completion of syphilis treatment to the non-infectious point by more cases (803 in 1942 and 2,219 in 1943) and adequate treatment of pregnant women (360 in 1942 and 1,002 in 1943); special training of all auxiliary personnel staffing the 49 venereal disease dispensaries; treatment of venereal disease in the 68 rural medical offices; existence of a 150 bed hospital-reformatory for prostitutes; holding in February 1943 of the first Venezuelan Meeting on Venereology and Dermatology.

Poliomyelitis.—Poliomyelitis outbreaks have been reported in several countries in recent years, including Cuba (summer 1943), El Salvador (64 C in four or five localities in 1943), Honduras (5 sporadic C in the capital and one in Cojutepeque), Nicaragua (43 cases at the end of 1943), Paraguay (a small epidemic in 1943, 87 C 4 D; there have been no other known epidemics and only a very few isolated cases in Paraguayan history), Uruguay (an epidemic originating in Buenos Aires in November–December 1942 and causing some 800 cases there, reached Uruguay in 1943, with 100 C, mostly along the coast; the low incidence may have been due to immunity resulting from an outbreak of more than 100 C in 1941) and Venezuela (Caracas, 127 paralytic C, 18 D, from an outbreak at the end of 1940 and first
part of 1941). Dr. Claveaux of Uruguay described his experiences in using tetanus toxin to stimulate the cells of the anterior cornu of the medulla and thus the peripheral neuromotor system. It is applied in the paralytic stage, after the acute period has passed, and results have encouraged further study. One problem is regulation of the dose so as not to produce an immunity to tetanus which will prevent the toxin’s action.

**Spinal meningitis.**—Chile had its first epidemic of cerebrospinal meningitis beginning at the end of August 1941 and causing 8,995 C, 1,535 D by December 31, 1943. In the most affected localities the case rate was 1,093 per 100,000 in 1942, and at the peak in the winter of 1942 400 C a week were being hospitalized in Santiago. Efforts were directed at early diagnosis and treatment. The Pan American Sanitary Bureau aided in obtaining sulfadiazine. In large cities whole hospitals were turned over to the health department, and sulfadiazine was given at the least suspicion of meningitis; the mortality, 17.1% for Chile and 16% for Santiago, was lower than in most countries which have been afflicted.

**Zoonoses.**—Further study of the means of preventing the international spread of animal diseases transmissible to man was recommended to the XII Sanitary Conference. The most important problems appeared to be rabies, anthrax, brucellosis, tuberculosis, and to a lesser degree foot-and-mouth disease (because of livestock losses), psittacosis, trichinosis, and hydatidosis. A report by Macchiavello indicated that Ecuadorian investigations suggest that toxoplasmosis (very extensive in animals, including squirrels, guinea pigs and doves) may be an important cause of fetal mortality and ocular disturbances in humans. Recently a high percentage of toxoplasmosis has been found in the United States in rats during typhus examinations.

International measures already being taken against zoonoses include the study by Pan American Sanitary Bureau technicians along the route of the Pan American Highway (surveys completed in Mexico and Guatemala and extended to El Salvador), and assistance to various countries in improving market and slaughterhouse sanitation and in rabies control. National developments in respect to various diseases included:

- **Rabies,** endemic in animals in Chile though luckily few human cases; chief zoonosis in Colombia and unfortunately spreading into neighboring countries (Colombia will furnish other countries vaccine free upon request; it has been tested by an expert from the United States and declared of good quality; over 500 persons are bitten by dogs yearly and while the mortality in treated cases is low, there are still 20 or 30 rabies deaths a year; preventive vaccination of dogs has not been satisfactory); infection of three Ecuadorian provinces following importation from Colombia (a special agency has been created to combat it); in Honduras, a few cases; present in Mexico; in Panama, the last case was in 1909; two were recently imported from Central America; dog and cat quarantine has been extended to 6 months; only 2 human cases in Peru since 1938 and 38 in dogs out of 247 suspected; in the United States, a serious problem even in the District of Colombia; in Uruguay, no human case in 15 years and none last year in dogs (the rabies institute makes vaccine and examinations, and destroys stray dogs, sometimes 2,000 a month).

- **Anthrax.**—Chile, many human cases; experiments with compulsory vaccination of animals and requiring of certificates for transporting them; in Honduras, a few animal cases, combated by incineration and vaccination and no human cases; in Panama, a few cattle with anthrax were imported recently from Nicaragua and put in quarantine; no further cases; in Peru, widespread on the coast; vaccination and burning of carcasses compulsory; hides must be certified for export; no occupational human cases but some due to gross contamination from dead animals.
Uruguay, about 40 to 50 human deaths yearly and more cases, but most recover with treatment.

**Bovine tuberculosis.**—Present in Ecuador; in Honduras, very little; in Panama, rare since 75 cows of a dairy were destroyed some years ago; none at present in 400 milk cows in Panama City; in Peru, the most serious zoonosis, with cattle tests from 35% to 95% positive in different areas; in Uruguay, about 16% of tuberculosis is of animal origin but it is decreasing due to milk pasteurization and condemnation of infected cattle (for this purpose a revolving fund for reimbursement of owners permits killing of about 20% of the tuberculous cattle per year); and in Venezuela, very low in rural areas but high around Caracas.

**Brucellosis.**—Not found in Ecuador or Honduras; in Mexico, a problem, certificates are now being required for imported cattle and national regulations were adopted; uncommon in Panama; in Peru, 627 human C to date of *B. melitensis* (from goats), and some from *B. abortus*, which is on the increase in man and in animals; in Uruguay, a special study center dedicated to brucellosis and inclusion of the latter as an occupational disease, but not over 200 C have been reported in man.

**Trichinosis.**—In Ecuador, only one case found among thousands of slaughtered pigs in Guayaquil; not known in Honduras and Panama; in Peru, found in animals; in Uruguay, an outbreak of 40 C occurred near Montevideo about two years ago.

**Hydatidosis.**—In Ecuador, none in slaughtered animals, and only 1 human case, of unknown origin; in Uruguay, a special Institute of Hydatidosis, under a distinguished surgeon, was founded about 6 years ago to study the condition, which is seldom fatal but causes many operations with a costly hospital stay; all towns where it exists must have slaughterhouses where viscera are protected from dogs until sterilized; are trying to break the chain between the dog (adult stage) and the animal (cystic stage).

**Foot and mouth disease.**—Important in several countries not for human cases but for destruction of already inadequate numbers of livestock, as in Chile (large scale vaccination is being tried), Ecuador, Peru, and Uruguay (last summer and previous year lost about 20% of livestock in severe epidemics).

An unusual epidemic of hog cholera recently destroyed nearly all young pigs in Chile.

In Peru, a National Veterinary Board was created in 1944 with a special section to study problems of the zoonoses communicable to man; a study has been made of hospital cases to get an idea of the situation. Zoonoses present in addition to those mentioned include actinomycosis, brucellosis *suis*, equine meningoencephalitis, and leptospirosis; there is no glanders, psittacosis, or tularemia. In Uruguay, attempts are being made by the Ministry of Health to work more closely with the autonomous Institute of Veterinary Biologic Research. Problems and suggested solutions in dealing with the international spread of zoonoses were outlined by the Brazilian delegate.

**Nutrition.**—The report of the Pan American Committee on Nutrition stressed the inter-relation of economics and nutrition, including problems of one-crop cultivation, transportation, conservation, and distribution, and urged the further study of supplements for grain proteins, chemical tests for malnutrition, surveys of dietary deficiencies, and continued emphasis on education, especially of young women, children, and employers.

Studies of native foods in Brazil, Mexico, and Peru have shown certain products to be very high in food, mineral and vitamin values; similar studies are being made in the Dominican Republic. The importance of determining national standards

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*See Pub. 222 for English text of report.*
of adequate nutrition rather than relying on foreign data; of utilizing national resources in meeting deficiencies, and also, of selecting plants for low toxicity as well as for high food value, was emphasized. National nutrition committees to coordinate the efforts of various agencies have been created in Brazil, Canada, Chile, Mexico, Peru, and Venezuela; in Venezuela the Ministry of Health has representatives on the Food Committee of the Ministry of Agriculture and on the Import and Price Control Boards. Food cultivation, distribution, storage, and price control are given special study in Brazil, Chile (considering placing production and distribution under a single agency), Colombia, Peru (creating a Ministry of Agriculture and Alimentation to handle price control and food distribution), and Venezuela (partly as a result of findings in dietary surveys). Dietary surveys have been made in Brazil, Chile (half the population has a diet deficient in calories, fats, and protective foods; protein is supplied by grain and legumes and but minimum amounts of meat and milk), Colombia (diet inadequate; milk high in price; meat, which must be imported, prohibitive in cost; fish eaten only along the coast), Costa Rica, Mexico, and Venezuela.

School lunches have been started in Costa Rica and the Dominican Republic, and continued in Chile, Mexico, Peru, and Venezuela. The Institute of Nutrition of Mexico, working with the Kellogg Foundation and the Pan American Sanitary Bureau, has developed a school lunch which will furnish ½ of the daily food requirements at cost of about 10 centavos per capita per day, without using milk and meat, and a practical test in a crowded section of Mexico City is to be made with the new diet. Popular restaurants have been expanded and new ones created in Mexico, Peru and Venezuela.

Other activities included the organization of the department and Institute of Nutrition in Peru, and of a nutrition section in the Ministry of Health of Venezuela in July, 1942; organization of a nutrition center in Costa Rica; of an Agricultural Experiment Station to study food cultivation in the Dominican Republic; increased control over milk supplies in Brazil, Chile (pasteurization extended to six more cities; sanitation of 65% of dairies after inspection; training courses for dairy personnel), the Dominican Republic (three pasteurization plants now in operation), Uruguay (99% of Montevideo milk is pasteurized), and Venezuela; improved meat handling in Chile, the Dominican Republic (products are now accepted abroad), and Venezuela.

Other points touched on were: plans under consideration in Mexico to try to develop a corn variety higher in riboflavin and niacin, so as to correct diet deficiencies by using this staple food; and also studies to find a good supplementary source of protein; Costa Rican attempts to find a soy bean which will thrive better than present varieties in that climate, and interest in a new rice processing method which preserves more of the vitamin; in Brazil, a special program under the direction of a technician trained in the United States, to work out a food supply program for the Amazon region based on local resources; increased control over milk supplies in Brazil, Chile (pasteurization extended to six more cities; sanitation of 65% of dairies after inspection; training courses for dairy personnel), the Dominican Republic (three pasteurization plants now in operation), Uruguay (99% of Montevideo milk is pasteurized), and Venezuela; improved meat handling in Chile, the Dominican Republic (products are now accepted abroad), and Venezuela.

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and beverage control law in Venezuela adopted in 1941 (under which more than 4,500 products have been examined, about 70% being rejected).

Food and Drug Control.—The most outstanding point brought out in the discussion on foods and drugs was the need for some sort of international agreement and policy on the international distribution of these products, so that those not considered acceptable for sale within a country can no longer be exported to or accepted in other countries. The need for international standards rests in part on the inability of some countries to test every imported product (at least without charging a prohibitive fee for the inspection). Such standardization of controls has been urged by previous Pan American Sanitary Conferences (VII and X). Uniform standards and methods benefit producers (they are no longer confronted with conflicting regional requirements), consumers (a better technical control of quality and safety is assured), and the supervising agencies (their standards will be of a proven dependability and standard materials will be available for testing). Tribute was paid to the work of the Health Organization of the League of Nations in standardization of biologics, and the need for continuing and modernizing this work was stressed. Food control standards were likewise urged, including preparation of a Pan American model food code, and attention by all countries to the resolutions adopted by the Hot Springs Food and Agriculture Conference.

Other points raised were the need for control over misleading advertising of drugs and over sensational magazine articles about new remedies which arouse in layman great hopes which cannot be realized because the remedy is still in the experimental stage and cannot be obtained even by physicians, except for research; undesirability of agreements whereby a producing country agrees to sell all of its supply of a scarce product, such as quinine, to a manufacturing country, without attention to its own needs; desirability of making drugs duty-free if not manufactured in a country, and tax-free if they are manufactured there; the problems of the licensing of worthless although harmless drugs and remedies (some of which still appear in the pharmacopoeias) and of the patenting of remedies consisting of standard drugs or easily prepared formulas, thus increasing the cost (although it was observed that such patenting is a safeguard if the preparation is made by a reliable firm, in areas where the lack of qualified pharmacists makes the filling of prescriptions a matter of doubtful accuracy); post-war problems of the new national drug industries (including narcotics) encouraged by governments because of the short international supply; and suggested drafting of international standards for vaccination doses and methods.

Several countries expressed the desire for larger quotas for Latin America of such products as penicillin and the sulfas. The Pan American Sanitary Bureau reported that those quotas were already larger than for any countries except those engaged in actual combat, and that requests from Latin America to meet special emergencies had always been acceded to.

One step towards standardization has been the adoption by some countries of the Spanish edition of the U. S. Pharmacopoeia (translated by the Pan American Sanitary Bureau) as the official pharmacopoeia, and the bringing of the national pharmacopoeias of other countries (as in Brazil) into harmony with it.

The serious problem of the lack of control by the United States over drug exports was stressed by the Surgeon General of that country, as well as by various Latin American delegates. It was explained that the only Federal control was over foods and drugs moving in inter-state commerce and that exports, except biologics and "new drugs," are exempt from such control; they are subject only to isolated state or local action (as in New York City, where the Mayor prevented shipment of large quantities of adulterated or misbranded drugs). Worthless drugs are not
covered by interstate controls unless false claims are made on their labels. The educational work done by such bodies as the Council on Pharmacy and Chemistry of the American Medical Association is a valuable help, but does not solve the problem.

As to measures in other countries, there were reported: in Brazil (where the huge drug industry shows technical capacity but requires rigorous supervision to reduce the manufacture of useless products), a survey of the manufacturing firms of the whole country to determine their qualifications, equipment, and safeguards, after which their continued operation may or may not be permitted; fixing of production and licensing standards (with a reduction in the number of specialties being licensed from about 83 per month to 16); prohibition of the patenting of certain easy combinations of drugs; proposed setting up of a central laboratory for drug and biology analysis, to be supported partly by a tax on drugs; modernization of the Brazilian pharmacopoeia by supplements prepared by a special committee; and control of narcotics through the executive branch with the advice of a national commission on which all the Ministries are represented and cooperating with state commissions (standards have been set up for the cultivation and extraction of narcotics in Brazil and a successful campaign was waged against marijuana cultivation); in Chile, excellent results using the United States standards for biology control; in Colombia, authority to reject products for importation if not approved for domestic use by the authorities of the country of origin; in Costa Rica, opening of a pharmacy to sell drugs at low cost and creation of a food and drug control section in the health department; in Ecuador, attempts to avoid duplication of effort by national control of the large scale manufacture of foods and of food imports and municipal control of their sale, under minimum standards set by the Department of Health; in Mexico, control by a single authority of both drug product and advertising (some neighboring countries accept products on the basis of the Mexican examination and license); in Peru, creation of a permanent commission for control of drugs and pharmaceutical specialties, a pharmacy inspection board, a pharmacy advisory council, and a new school of pharmacy; in Uruguay, proposed adoption of the U. S. Pharmacopoeia (to replace the French Codex of 1936, in view of the greater supply of U. S. drugs); specialties must present a description and formula to the Ministry of Health and are then analyzed, but control by exporting countries is desirable because some products, such as organic ones, are very difficult to test, except for toxicity, and their only guarantee is the reputation of the manufacturer; other products have had to be rejected because harmful when used as directed; advertising must avoid false and misleading statements; some U. S. regulations for food control are used but international standards are desirable; in Venezuela, control by the division of pharmacy and medicine of all types of pharmaceutical supplies and narcotics (consumption of the latter has been reduced 50% in the last four years); publication in 1942 of the Venezuelan Pharmacopoeia; amendment in 1943 of the pharmacy regulations to reorganize the classification board for specialties; and undertaking of a campaign against adulterated drugs.

Vital statistics and disease reporting.—It was recognized that improvement in the international reporting of epidemiological and vital statistics rests upon improvement in local and national fields. Deficiencies are due to several causes, including divided responsibility of statistical agencies (in some countries, such as Ecuador, there are three sources: the central statistical office, which may or may not give much importance to health data; the civil register, usually kept by untrained personnel; and hospital and welfare society reports; the health department compiles its figures from these sources, often conflicting, and from reports of
diseases of compulsory notification); lack of medical care in many regions; difficulty of disease diagnosis in carrier, ambulant, incubating and convalescent cases; and finally, indifference, negligence, or mistaken concepts of secrecy obligations on the part of private physicians.

Vital statistics sections and methods are being reorganized in several countries (often with the aid of personnel trained through the assistance of the Pan American Sanitary Bureau and the U. S. Census Bureau). Solutions of the problem suggested, especially by the representatives from Chile, Brazil, and Mexico, included: improvement of health department data through accurate registration, plus death verification services and viscerotomy (already being successfully tried in Brazil); opening of additional health offices; more public health laboratory work; organization of a corps of diagnostic physicians; complete epidemiology services; public health nurses and sanitary inspectors for case-following and case finding through routine home visits in the case of absence from school or from work; periodic medical examinations; vigilance over pharmaceutical registers and those of private laboratories; close cooperation with social security physicians.

Deficiencies in medical reporting may be remedied by: better distribution of physicians, including requirement of the rural internship, and securing of cooperation of private physicians through: convincing them of the need and value of public health work and disease reporting; closer contact including attendance by health officers at medical meetings, creation of hygiene committees, personal visits, circulars, and letters; full-time employment of health officers so that they will not be suspected of seeking clients; assistance to reporting physicians through good, free laboratory diagnostic services, free supply of drugs and biologies, services of public health nurses and social workers for indigent cases; postal and telegraph franks for case reporting and for sending of specimens for diagnosis; declaration by medical academies and societies of disease reporting as an ethical duty; teaching in medical schools of the preventive viewpoint; and perhaps even payment of a small fee for cases reported and awarding of certificates of cooperation.

Even very good cooperation in reporting will not account for all cases, as already noted, due to difficulties in diagnosis of subnormal and atypical cases. Health departments must also search for disease, through taking of splenic and parasitic indexes for malaria; tuberculin tests and roentgen-photography of population groups, for tuberculosis; systematic feces examinations for intestinal parasitoses; mouse protection tests and viscerotomy for yellow fever; and allergy tests for typhus.

A need for greater uniformity in statistical forms was expressed; there should be a uniform period covered by the data (it now varies in different countries from a week to 10 or 15 days, making compilation of monthly and annual figures difficult and comparisons impossible); uniform blanks to be filled in; and even uniform processes for national notification. The use of a code for international reporting of epidemics, to avoid sensational rumors, was suggested, and also dropping of the term "denounce" (denuncia) to designate reporting of disease. Direct exchange of reports between local health authorities of contiguous territories under certain circumstances, and adding of other diseases to those now required by the Pan American Sanitary Code to be reported, were other measures discussed.

The system of notification by the Pan American Sanitary Bureau was explained: weekly reports are sent directly to national health authorities, and when requested, to port authorities; immediate cabled notice is given of epidemics. At present the Bureau receives epidemiological reports directly by air mail from 32 countries and indirectly by telegraph and through the Health Organization of the League of Nations, the International Office of Public Health of Paris, and the Ministry of Health of England, from 50 non-American countries; these figures do not include additional countries on which the U. S. Public Health Service keeps the Bureau
informed as to serious epidemic outbreaks (through data from diplomatic sources). The Weekly and Monthly reports of the Bureau are sent by air mail to some 35 countries and by cablegram to the League of Nations Health Organization. In the case of rumors, attempts at verification are made either by direct contact with the country or through the Traveling Representatives or a member of the Directing Council. Requests for information are answered immediately. Monthly reports are also published, as well as summaries and articles in the Bulletin. A suggested improvement was to have weekly radio broadcasts by the Bureau (this has been long considered by the latter).

Considerable improvement in international reporting has already been brought about by the Pan American Committee on Vital and Epidemiological Statistics, which now has representatives in 17 American Republics who send to the Pan American Sanitary Bureau by the quickest suitable route data on the incidence and mortality from communicable diseases and on biostatistics in general, on the basis of which the monthly, air-mail biostatistical and epidemiological report is prepared. It is believed that this process permits distribution of such information at least three months earlier than by previous methods.

Other activities of the Committee include the translation of such works as the Manual for Coding Causes of Illness, with the assistance of various Latin American statistical representatives.

Developments in the national field included: in Brazil, in addition to the new death verification service, publication of a monthly bulletin giving vital statistics, cases of communicable disease in the state capitals, and hospital statistics (in 1937 data was received from 70 municipalities; in 1943, from 1,314, and 88 have been selected to furnish more detailed reports), and plans for 1944 to obtain more exact knowledge of the number of live births; in Chile, increase in medical certification of deaths from 27% in 1938 to 68% in 1940; a drop in the general death rate from 21 in 1940 to 19.1 in 1943; in infant mortality from 184.7 to 144.3; the birth rate continues high, averaging 38.5 in 1940–43; chief causes of death are bronchopneumonia, tuberculosis, diseases of first infancy, heart disease, and pneumonia; in Cuba, compulsory disease notification; in Colombia, which has 8,000,000 inhabitants and 911 municipalities, only 211 municipalities have health offices, so that statistics are only approximate; in Ecuador, adoption of new statistical regulations advised by the Pan American Sanitary Bureau; the birth rate is 40.3, death rate 21.4, respiratory affections including tuberculosis and pneumonia, 723.9, diarrhe- enteritis, 228.9, malaria 175.9, whooping cough, 109, measles 59.5, dysenteries 43.8, and typhoid fevers, 15.6; in Mexico, standardization of reporting so that instead of haphazard weekly reports from health offices, local offices now report by telegraph every Saturday to the State health office, which compiles and forwards the data on Tuesday to Mexico City, usually by air mail; in Peru, taking of the new census so as to furnish demographic data; in Uruguay, a new low general death rate, 9.33 in 1941 and 1942; infant mortality, drop from 90 in 1938 to 82 in 1942; in tuberculosis, from 226 in 1938 to 120 in 1942; but a rise in typhoid from 6 in 1941 to 25.1 in 1942, after a decline for 50 years; creation of a traveling epidemiology service to improve diagnostic facilities in the interior; in Venezuela, studies for the past five years showing that 23.9% of deaths are from causes influenced by preventive medicine, such as malaria, tuberculosis, and the diarrheas; 16.3% from causes more difficult to influence; and 59.8% from unknown cause (assuming that some of these last are in the preventable category, one may estimate that 59.3% of deaths are due to preventable causes; the health department spends 28.7% of its income.

20 See Pub. 222 for English text of the Committee report.

General death rates and birth rates are per 1,000 population; infant death rates per 1,000 live births; disease rates per 100,000 population.
combating these); establishment of a minimum zone of vital statistics information (106 towns, 520,000 inhabitants), from which weekly telephone reports are received from department chiefs or heads of health centers on cases, deaths, and immunizations performed, and of a group of towns within this zone, with more complete sanitary services, from which fuller information is obtained (28 towns, 980,000 inhabitants); adoption of the new international nosologic nomenclature on Jan. 1, 1940; outlining of definite registration areas in some state capitals and adoption of a resolution (April 1940) making birth registration within three days compulsory in Caracas; the measure is being extended to seven other cities.

Sanitary engineering.—Interest in this field was reflected in the creation at the X Pan American Sanitary Conference of the Committee on Sanitary Engineering, composed of representatives from the departments of health and of public works in Latin America, from North America, and from the Pan American Sanitary Bureau. Engineering activities of the Bureau, as described in the Committee report, have included: increase of the Bureau engineers to eight, plus an entomologist; sanitary surveys in Guatemala, Mexico, and Panama along the highway route; onchocerciasis studies in Guatemala; malaria control surveys in Ecuador, Guatemala, Mexico, Panama, Peru; assistance in development of the Peruvian malaria service and of a copper arsenite factory; aid to various cities in securing chlorine and to Peru in construction of a chlorine manufacturing plant; advice on water supply and sewage disposal in Chile, Costa Rica, Ecuador, Guatemala, Mexico, Panama, and Peru; on milk sanitation in Ecuador and Nicaragua; on garbage and rubbish collection and disposal in Ecuador and Peru; aid in plague campaigns; educational tours in the United States for Latin American sanitary engineers; lectures at a hospital meeting in Mexico; a malaria short course in Peru; and airplane sanitation studies.

Future objectives of the Committee include: drawing attention to the sanitary engineering features of the international transportation of disease; preparation of minimum sanitary engineering criteria; preparation of minimum specifications for sanitary engineering products and equipment; and improving of the exchange of sanitary engineering information and personnel.

National developments reported included: in Brazil, plans for a joint Federal-state water supply and sewage disposal improvement campaign (one or two capitals have 90% of houses connected to water supplies; six have less than a third; Porto Alegre has the highest percentage of houses connected to sewers; some capitals have none); regular examination of water supplies of all state capitals, with initiation of chlorination in some which did not have it; in Chile, imposition of a special tax, to provide water supplies for all cities of more than 1,000 population; control by 10 regional laboratories of the chlorinated supplies of 115 towns; construction of new sewer systems, to serve 334,000 people (50% of the population and 92% of the urban population have drinking water services; 32% of the population and less than 80% of urban dwellers have satisfactory sewage disposal); plans for installing sanitary privies in rural areas; control of irrigation (30,000 hectares near Santiago had to be removed from garden cultivation); in Colombia, successful operation of the Fomento Municipal system by which the national government pays 60% of the cost of aqueducts and sewers, 50% of that of hospitals, and 50% of that of slaughterhouses and municipalities the rest, which has permitted completion to date of 281 projects costing 15 million pesos; 304 are under study and 266 more will be added this year; in Costa Rica, completion of the sewer system of one city; modernization of the water supply system of San José; plans for a new slaughterhouse and market in San José; in the Dominican Republic, control over municipal slaughterhouses in four cities and construction of model markets in several.
supply and sewage disposal improvement in 6 more towns; and in Ecuador, negotiations under way for new water plants for Guayaquil and Quito; in El Salvador, completion of the sewer system and purifying plant for the third largest city and 45% of the system for the fourth largest, together with extensions in four other cities and partial construction in six others; improvement of water supplies, studies for deep or surface water sources in 36 towns, investigation of stream pollution, building of slaughterhouses and markets in five towns, rural sanitation plans using a rotating fund, treatment of San Salvador refuse by the sanitary fill system and use of small incinerators of the Uruguayan type for three towns (local governments contribute from 10 to 90% of the cost of all these projects); courses in sanitary engineering.

Still other developments were: in Haiti, building of two model markets, and malaria drainage projects; in Honduras, modernization of Tegucigalpa, which now has chlorinated water, an efficient sewer system, and paved streets; in Mexico, continued water supply improvement; in Panama, construction of aqueducts and sewers for small towns, begun in 1934 with aid of the Rockefeller Foundation engineers (now have 14 aqueducts in rural towns and two more under construction; 8 sewer systems and two more under construction); turning of control of water supply systems of Panama and Colon to the Panamanian government; in Peru, creation of a department of sanitary engineering; in Uruguay, proposed establishment of a limited time before connections are made to water and sewer services and extension of the terms of payment, to bring about a higher percentage of households connected to them (there are 114 water services and 20 sewage disposal systems; every city of over 2,000 has such services but not all houses are connected); installation of 20 water services in the last year; and in Venezuela: creation of a division of sanitary engineering in July, 1940, which gives technical aid, draws up standards, inspects construction, and conducts the hookworm control campaign (actual construction of projects is under the National Institute of Public Sanitary Works); beginning of sanitary fill garbage disposal in Caracas; making of latrine parts in a central plant; adoption of a public works plan for 1941-1946, calling for expenditure of 156 million bolivars, of which 43% (362,000,000 bolivars) will be used for water systems and sewers (71 towns will have good water systems by 1946, and 111 good sewer systems—a fourth of the population); 26 sewers and 8 aqueducts have been completed; 9 sewers and 6 aqueducts are under construction; a contract was recently let for a new water system for Caracas.

A special report was given on the so-called "Uruguayan type incinerator," which, as the Uruguayan delegate explained, was a modification of the rail incinerator described by Dr. Hanson in the Bulletin of the Pan American Sanitary Bureau; additional modifications have since been made.

Health education—Developments reported in this important field included: in Brazil, a health education service with a library of more than 1,230 publications, a film library, and hygiene museum; sending of publications to more than 4,500 physicians and 900 institutions; distribution of posters, press releases and other standard material, and cooperation with state agencies; in El Salvador, creation of a health education service in 1943 which will have two full-time specialists now in training at Berkeley; publication in Honduras of the Boletín Sanitario; in Mexico, reorganization of the health education department; a daily attendance of about 1500 persons at the Hygiene museum; in Nicaragua, healthy infant and child contests; in Peru, greater cooperation by the public in health work as the result of health education; in Venezuela, creation of a health education section in 1942, using posters, school magazines, films (among them the recently completed Nuevas Generaciones Venezolanas—New Generations of Venezuela); and organization of the School Health Legion, with various privileges including lower theater prices, for membership in which vaccination against smallpox, diphtheria, and typhoid fever is compulsory.
Child and Maternal Welfare.—An encouraging fact brought out in the reports was the reduction in infant mortality, for instance in Chile (from 250 down to 180 per 1,000 live births), Nicaragua (from more than 500 in 1926 to 15 in 1944), Uruguay, and Venezuela (from 113 in 1940 to 70 in 1943 in Caracas as a whole and from 137 in 1941 to 52 in 1943 in the area served by the Institute of Puericulture and to 20 among children registered at the Institute). New divisions or entities have been created, such as the National Board of Maternal and Infant Welfare of the Dominican Republic, the National Maternal-Infant Welfare Service and the Children’s Code committee in Peru, and new branches of the Children’s Council in Venezuela. In Chile child welfare has been made independent of the health department, but on the other hand, increasing aid for pregnant women and infants has been assured by the department from social security agencies. New institutions include clinics and health centers, as in Costa Rica and Venezuela (in the latter, 8 new maternal-child centers in four years, as well as a kindergarten, premature center, and lactarium in the Institute of Puericulture) and maternity hospitals and beds: in Costa Rica, attention by the health department to ½ of the births; in the Dominican Republic, 11 maternity hospitals with 240 beds, in which 4,834 births took place in 1943, an 83% increase over 1942, in Paraguay, and Venezuela (maternity beds increased from 846 in 1940 to 1146 in 1943).

Other developments included: education of midwives, in El Salvador and Venezuela; continued and expanded milk distribution in the Dominican Republic (16 stations in 12 towns), Nicaragua, and Venezuela (37 stations in 1940, 46 in 1943); cooperation by municipalities in child welfare projects in Venezuela; increased attention to school hygiene in Costa Rica (where ½ of the school children were reached), Nicaragua (clinics and healthy child contests), and Venezuela (clinics, including 14 in Caracas, 3 vacation colonies, 8 services in the interior, reaching ¾ of the school population); healthy infant contests in Nicaragua for children registered at health centers; plans for greater emphasis on preventive work in Ecuador where activities are now mostly assistance; adherence by Venezuela in 1943 to the Inter-American Institute of Child Welfare; and congresses, such as those in Peru and Venezuela.

Hospitals.—Hospital beds have been added in many countries, including Brazil, Nicaragua (8 new hospitals of 80 to 200 beds built since 1942), Paraguay (hospitals and maternity hospitals built in various areas), Peru (nine new hospitals with 7,000 beds), and Venezuela (has 139 hospitals with 10,700 beds of all types; for the chronic, crippled, aged and orphans, has 76 institutions with 5,000 beds; a new hospital is being completed and plans are ready for a 1000 bed Clinical Hospital in Caracas). Brazil has made a survey of the hospital facilities throughout the country, covering 1,230 institutions; only about 20 remain to be inspected. Improved distribution of hospital and medical services is sought; it was found that 404 (25%) of the 1,673 Brazilian municipalities have no physician; the goal of one physician per 2,000 persons is reached only in São Paulo and Rio Grande do Sul, and even in the latter State 10% of the municipalities have no physician. The hospital division has designed a model hospital capable of expansion to 300 beds. Courses in hospital administration are given.

Quarantine.—Quarantine regulations and problems were taken up by a special committee sitting at the same time as the Conference, and considering especially amendments proposed by UNRRA (United Nations Relief and Rehabilitation Administration) to the Sanitary Convention for Aerial Navigation. The final revisions of the Pan American Committee were incorporated into the UNRRA provisions. Other matters discussed were the elimination of health certificates for travelers, with the recommendation that only those issued by a health authority be accepted, and that they be issued gratis; and the broad question of revision of the Pan American Sanitary Code. A special sub-committee will present recommendations on the Code to the XII Sanitary Conference in Caracas. This Com-
mittee will also undertake the preparation of a model public health code for presentation to the Conference.

Pan American Sanitary Bureau.—Unanimous approval of the work of the present Pan American Committees was voiced, and it was decided that in addition to permanent committees supported by the Bureau, special committees may be created at the request of interested governments, with the expenses of the representatives to be paid by their governments. Committees were suggested for Leprosy, Social Security, Rural Hygiene, and Sera and Vaccines. The status of the Bureau as the official inter-American health agency was reaffirmed.

International aid.—Various countries expressed their appreciation of the assistance received from international organizations and from agencies of other countries. In addition to the technical assistance of the Pan American Sanitary Bureau in all phases of public health, through its Traveling Representatives, Sanitary Engineers, Nurses, Directing Council and Committee members, and other experts, and its Bulletin and central (Washington) and branch offices (Lima and Guatemala City), the projects specifically mentioned included in part: in Brazil, Rockefeller Foundation assistance in yellow fever research and control and *gambiae* mosquito eradication and United States aid in sanitation of the Amazon region; in Chile, help from the Rockefeller Foundation in organizing the school of public health and from the Inter-American Cooperative Health Service in various construction work; in Colombia, a million pesos from the Inter-American Cooperative Health Service to be used in nutrition, malaria control, port sanitation, and the nursing school; in the Dominican Republic, a four-year health project with special attention to malaria, to receive CIAHS aid; cooperation from Cuba in training tuberculosis specialists; and from a U. S. Children’s Bureau advisor in maternal and child welfare; in Ecuador, Rockefeller Foundation assistance to the nursing school, CIAHS aid to the National Institute of Health and in the sanitation of the Guayaquil lowlands; a United States mission for preventive and curative medical services in El Oro; in El Salvador, a five-year cooperative program with the Rockefeller Foundation for the nursing school, U. S. Census Bureau assistance in vital statistics training, CIAHS help in malaria control; in Guatemala, CIAHS and U. S. Army Medical School cooperation in typhus control and research; in Haiti; CIAHS assistance in drainage, construction of quarantine station, health centers, and markets, yaws control, and scholarships; Rockefeller Foundation aid in malaria control; U. S. Census Bureau aid in statistics in Honduras, CIAHS assistance since 1942 in construction of health centers and a tuberculosis hospital, and in maternal and child welfare projects, malaria control, water supply, sewage disposal, and garbage disposal; in Mexico, a fund-matching five-year program with the CIAHS, to be used for water supplies, drainage, health centers, and the Veracruz tropical health center; Kellogg Foundation assistance in nutrition studies; and a cooperative United States-Mexico venereal disease control program along the border; in Nicaragua, Rockefeller Foundation aid in the first parasitoses campaigns; CIAHS assistance in constructions; in Panama, Rockefeller Foundation aid in malaria and hookworm control and in improvement of water supplies and sewage disposal; CIAHS assistance in malaria projects; in Paraguay, Rockefeller Foundation and CIAHS assistance in hospitals, health centers, leprosaria; and services of experts from the International Labour Office and the Chilean Social Security Board in Social Security organization; in Peru, CIAHS assistance in jungle sanitation projects; in Uruguay, discussions are taking place with the CIAHS; in Venezuela, Rockefeller Foundation scholarships and CIAHS assistance in malaria control.

This summary affords, of course, only a partial glimpse of the wealth of information contained in the various reports and discussions. A number of interesting papers were also presented for inclusion in the Appendix of the Transactions, on such varied subjects as social security, public health in Surinam, health education, vital statistics, typhus, and quarantine, among others.
PUBLICACIONES DISPONIBLES DE LA OFICINA SANITARIA PANAMERICANA

AVAILABLE PUBLICATIONS OF THE PAN AMERICAN SANITARY BUREAU

Actas de la Tercera Conferencia Sanitaria Internacional de las Repúblicas Americanas. Español.
Actas de la Cuarta Conferencia Sanitaria Internacional de las Repúblicas Americanas. Inglés y español.
Actas de la Quinta Conferencia Sanitaria Internacional de las Repúblicas Americanas. Inglés y español.
Actas de la Sexta Conferencia Sanitaria Internacional de las Repúblicas Americanas. Español.
Actas de la Séptima Conferencia Sanitaria Panamericana. Inglés y español.
Actas de la Octava Conferencia Sanitaria Panamericana. Español.
No. 1—Prevención de la Enfermedades Transmisibles. 90 páginas.
No. 3—Higiene Pre-natal. 7 páginas.
No. 5—Ordenanza Modelo para Leche. 11 páginas.
No. 7—Organización del Servicio de Sanidad Pública de los Estados Unidos. 23 páginas.
No. 9—La Profilaxia del Bocio Endémico. 16 páginas.
No. 18—Colección de Atención e Identificación de las Pulgas Murinas. 11 páginas.
No. 23—Menin gonitis Cerebroespinal Epidémica (Meningocócica). 4 páginas.
No. 26—Titrados: Su Causa y Profilaxia. 4 páginas.
No. 30—Tratamiento del Paludismo. 4 páginas.
No. 37—El Interrogatorio en el Diagnóstico Precoz de la Tuberculosis Pulmonar. 2 páginas.
No. 43—Código Sanitario Panamericano. 23 páginas.
No. 45—La Declaración Obligatoria del Embarazo. 16 páginas.
No. 46—La Difteria en el Trópico. 15 páginas.
No. 47—Los Censos en Sanidad y en Epidemiología. 13 páginas.
No. 48—Higiene Comunal para el Pre-escolar. 5 páginas.
No. 49—El Diagnóstico de la Fiebre Amarilla. 14 páginas.
No. 50—Acta Final, II Conferencia Panamericana de Directores Nacionales de Sanidad. 16 páginas.
No. 51—Milk. 8 páginas.
No. 55—La Higiene Mental. 11 páginas.
No. 56—Vacunación Antidiftérica. 8 páginas.
No. 57—Control de las Enfermedades TransmISIBLEs. 70 páginas.
No. 58—El Tratamiento del Paludismo. 24 páginas.
No. 59—Las Repúblicas Americanas ante las Convenciones Internacionales de Sanidad. 5 páginas.
No. 60—La Lucha Antivenérea. 27 páginas.
No. 61—Tratamiento del Paludismo. 24 páginas.
No. 62—El Saneamiento del Suelo. 17 páginas.
No. 63—Report of the Director of the Pan American Sanitary Bureau to the Ninth Pan American Sanitary Conference. 8 páginas.
No. 64—Tratamiento de la Fiebre Amarilla. 4 páginas.
No. 65—Pautas de Organización Sanitaria. 12 páginas.
No. 66—Servicio de Peste. 6 páginas.
No. 67—Actas de la Tercera Conferencia Panamericana de Directores Nacionales de Sanidad. 396 páginas.
No. 68—La Lucha Antiversánica. 4 páginas.
No. 69—Tratamiento de la Leprosidad. 14 páginas.
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No. 77—La Lucha Antiversánica. 4 páginas.
No. 78—Actas de la Cuarta Conferencia Panamericana de Directores Nacionales de Sanidad. 396 páginas.
No. 206—Plan Práctico para el Tratamiento de las Micosis Superficiales. 8 páginas.
No. 208—Técnicas de Inmunización en Estados Unidos: Ejército, Servicio de Sanidad Pública. 8 páginas.
No. 209—Prevención y Tratamiento del Oidísmo. 8 páginas.
No. 211—Terminología Panamericana del Paludismo. 54 páginas.
No. 212—Inter-American Conference of Professors of Hygiene. 148 páginas.
No. 213—Manual de Higiene Industrial. 481 páginas.
No. 215—Control de las Enfermedades Trasmisibles. 160 páginas.
No. 216—Técnicas de las Encuestas de Alimentación. 86 páginas.
No. 217—Organización de los Servicios de Bioestadísticas de Chile, Estados Unidos y México. 31 páginas.
No. 218—Proceedings of the First Inter-American Conference on Health Education. 41 páginas.
No. 219—Health Precautions for Visitors to the Tropics. 7 pages.
No. 221—V Conferencia Panamericana de Directores Nacionales de Sanidad (Acta Final). 42 páginas.
No. 222—V Pan American Conference of National Directors of Health (Final Act). 29 páginas.
No. 223—Medical and Public Health Journals of Latin America. 43 páginas.
No. 224—Schools of Medicine and Allied Sciences in Latin America. 12 pages.
No. 225—Plague in the Americas. 234 páginas.
No. 226—Diagnóstico, Tratamiento y Recolección de Muestras en la Peste Bubónica. 9 páginas.
No. 227—Primera Reunión Interamericana del Tifo. 25 páginas.
No. 228—V Pan American Conference of National Directors of Health (Summary). 24 pages.
THE PAN AMERICAN SANITARY BUREAU is an independent international public health organization. It was created by the Second International American Conference (1901–1902), organized by the First Pan American Sanitary Conference (1902), and reorganized by the sixth (1920). It is governed by a Directing Council elected, together with the Director, at each Pan American Sanitary Conference. The Bureau is supported by annual quotas contributed pro rata by all the American Republics. It is interested primarily in the prevention of the international spread of communicable diseases, and also in the maintenance and improvement of the health of the people of the 21 American Republics. Under the provisions of the Pan American Sanitary Code (1924), it has become the center of coordination and information in the field of public health, in the American Republics. It also acts as a consulting body at the request of national health authorities, carries on epidemiological and scientific studies, and publishes a monthly Bulletin, as well as other educational material. Pan American Health Day is celebrated annually on December 2 in all American Republics. Address all correspondence to the Director of the Pan American Sanitary Bureau, Washington, D. C.