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UNITED STATES GOVERNMENT

Memorandum

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE

TO : Program Chiefs

DATE: July 16, 1968

FROM : Director, NCDC

SUBJECT: Departmental History Project

The President has assigned high priority in the last months of his term to the collection and preparation of materials for the Lyndon B. Johnson Library in Texas which will tell the story of his Administration. The Secretary's office has called on CDC for some detailed contributions on developments during the past 5½ years. Unfortunately, we are under an extremely tight deadline because the former BDPEC did not bring the Center aboard. We learned about the project last week from HSMHA. We're sorry —

It is therefore necessary that you submit materials according to the outline attached by next Tuesday, July 23, to the office of Mr. George Stenhouse (Rm. 253 - Building 1).

Also attached is a portion of a memo of June 21 from the Assistant Secretary for Legislation to Agency administrators giving something of the intent of the Departmental History Project.

An additional attachment is a format for preparation of narrative materials.

You may contact Mr. Stenhouse or his staff for discussion of details (Ext. 3286).

David J. Sencer

David J. Sencer, M.D.
Assistant Surgeon General

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46239

HELP ELIMINATE WASTE HEW COST REDUCTION PROGRAM

THE LYNDON B. JOHNSON YEARS

HISTORY OF

THE NATIONAL COMMUNICABLE DISEASE CENTER

FROM 1963 TO 1968

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Health Services and Mental Health Administration
National Communicable Disease Center
Atlanta, Georgia

DIRECTIVES

Mr. Sims

DEPARTMENTAL HISTORY

(Portion of a MEMO from the Assistant Secretary for Legislation to HSMHA, CPEHS, NIH Administrators)

This is your chance to tell the story as you see it of what has been happening in your area of concern during the Johnson years. Since the history is intended to assist scholars and students in using the Johnson Library, statistics and routine program detail are not necessary except to facilitate understanding of how or why a problem or policy issue was dealt with.

As you describe any significant development during the Johnson years (e.g., programs or organizational changes), try to think in terms of "why" rather than "how" or "what." In other words, try to concentrate on the issues and reasons behind changes rather than the details of the changes themselves. It might be interesting, for example, to discuss conflicting ideas and opinions and how these may have been resolved (e.g., by new programs and/or policies).

What is needed is your frank and objective appraisal of major issues and policies as you watched them evolve.

DEPARTMENTAL HISTORY

WHAT IT IS

The Departmental History is each agency's chance to tell, in narrative form, the story of its own life during the Johnson years. It is intended as a research resource for scholars.

WHAT IT IS NOT

The Departmental History is not intended as

- a public relations document
- a document for publication
- an annual report
- an impersonal statistical study
- a mere chronicle of events
- a succession of extracts from documents

SOME SUGGESTIONS on how to approach this narrative. (NOTE: These are not hard and fast guidelines. You are free to tell the story the way you see it.)

(1) Beginnings

(a) Begin with or include somewhere near the beginning a brief summary of the situation before 1963.

(b) It might be interesting to compare the administrative framework at the beginning and at the end of the Johnson years.

"Framework" could include:

- policies and goals
- purpose or mission
- functions
- programs
- problems and solutions or proposed solutions

(2) Restrictions

You may want to include material on "delicate" issues, information dealing with national security, or information given in confidence. In such cases, restrictions can be placed on the material. When restrictions are used, every effort should be made to organize material in such a way that restricted portions can be easily identified, physically separated and withheld without impeding understanding of the narrative. Separate chapters or appendices would serve this purpose.

(3) Statistics and Details

Try to avoid statistics and routine details. (Unless, of course, they are necessary for or considerably enhance discussion of program issues or agency missions.) Footnotes would serve to refer the reader to sources of such data.

(4) Ideas about what to include regarding policies and programs

(a) The inadequacy of documentation on policy formation and program direction has become one of the major problems confronting the researcher dealing with the recent past. An objective narrative that focuses particularly

on policy formation and program direction, and that both records decisions and traces and explains the process of decision making, will constitute a unique resource for the scholar studying the Johnson Administration. (i.e. Spend more time on "why" than on "how", "what", and "when". Use the latter to enhance the former.)

(b) Descriptions of conflicting views will assist researchers to probe and evaluate the issues involved. Citations to available record materials would be especially helpful.

You may want to pay special attention to conflicting or competing programs within your agency or between 2 or more agencies; or you may want to deal with conflicting points of view on an issue and the process by which these led to formulation of programs or policy.

(c) Federal agencies are known to work under certain constraints. Try to identify and assess constraints within which you have found yourself working.

(5) Documentation

Documents that are added should supplement, not duplicate the narrative papers already on file. They should directly relate and significantly contribute to the narrative.

If you refer to published documents, such as statutes, Congressional hearings and reports, or Executive Orders, you need not include copies. Simple footnotes are sufficient. Actual copies should be confined to unpublished special studies, position papers, memoranda, and the like. It is

not necessary to include any material already sent to the White House or the Bureau of the Budget.

Copies of documents included in the Supplement should be footnoted in the appropriate places in the narrative.

FORMAT
DEPARTMENTAL HISTORY

Persons preparing narrative history materials are asked to follow this guide.

Programs of NCDC

Each Program will submit its material as a unit consisting of (1) the narrative materials and (2) the documents, if any, that are to accompany it.

Paper, Margins, Headings, Paging

The narrative material is to be typed double space on white bond paper, size 8x10½. Leave one inch margins at top, bottom, and on each side.

Number the pages consecutively (beginning with page 2) in the center, one inch from the bottom, as in this memo.

Headings, both center and side headings, should be used as frequently as good judgment dictates to improve usefulness to the reader in finding material in particular subject matter areas through use of the table of contents. Center headings should be used on the first page to identify the agency, using all caps. Additional center headings should be used for major sections of the nine point outline (or adaptation thereof adopted by the Program).

Center headings should be all caps and be underscored. Side headings should have initial caps and underscoring.

Table of Contents

Each agency will prepare a table of contents covering its narrative history. The table of contents will list by title and page number each center and side heading. The table of contents will also list and refer to by title and number each document which is to accompany the narrative.

Copies

An original and 11 xerox copies of all narrative material, assembled in complete sets, will be transmitted to Mr. George Stenhouse, Rm. 253, Building 1, 1600 Clifton Road, N.E. Two sets of supporting documents will be transmitted. One of these will be assembled with the original copy of the narrative and the other with one of the xerox copies.

Supplementary Papers

Supplementary papers are signed narrative statements submitted by persons,

either present or former employees, in their own names as separate pieces not to be incorporated into the Program history. Supplementary papers, if any, will be listed in a separate table of contents together with a list of accompanying documents. Two copies of the supplementary paper and of each supporting document will be submitted.

List of Contributors

Each Program will append to its submission a list of contributors indicating the portion of the history contributed by each person listed.

OUTLINE

(To be used only as general guide)

I. Organizational Changes

A. Structure of Program on November 22, 1963
B. Organizational changes since that time
C. If Program was created since 1963, provide appropriate information on initial structure and changes.

II. Personnel and Staff Changes

A. Employment on November 22, 1963
B. Present employment
C. Top officials

III. Program Changes

IV. Operating Methods

A. Grants
   1. Research and training
   2. Formula and other
B. Direct operations
C. Relations with States
D. Headquarters and field

V. Interagency Relations

A. Other Federal agencies
B. International agencies
C. Federal-State-local partnership

VI. Legislative Relations

A. Studies, investigations
B. Financial support

VII. External Relations

A. Public advisory committees
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HISTORIES OF CENTER'S PROGRAMS...(Attached separately)

Aedes aegypti Eradication*

Ecological Investigations

Epidemiology

Foreign Quarantine

Immunization

Laboratory

Malaria Eradication

Training

Tuberculosis

Venereal Disease

*This Program was moved to Consumer Protection and Environmental Health Services, Environmental Control Administration, in July 1968. It is being included here for later inclusion in that Administration's history.

THE NATIONAL COMMUNICABLE DISEASE CENTER

ORGANIZATIONAL CHANGES

Brief Summary of the Situation before 1963

The history of the agency now known as the National Communicable Disease Center (NCDC) goes back to 1942 when the Public Health Service (PHS) activated an organization called Malaria Control in War Areas (MCWA) to control malaria around army camps and defense installations. The southeast was a good location for training troups, but malaria was present in the area. Consequently, Atlanta, Georgia, in the heart of the southeast, was chosen as the site for MCWA.

During World War II, MCWA took on the task of controlling typhus, another disease problem in the southeast. By the end of World War II, malaria was coming under control, but returning servicemen were bringing back exotic diseases and the PHS had no centralized facility for communicable disease control.

A far-sighted officer of the PHS, the late Dr. Joseph Mountin, then chief of the Bureau of State Services, proposed dealing with the problem through a "Center concept." He advocated locating activities which served the States in Centers outside Washington so that the Centers could function in a more decentralized way. Based on this concept, the Center was activated in July 1946, and the staff of the MCWA was the nucleus of the Center's staff.

From 1946 to about 1950 the Center moved from the strictly vector-borne disease control programs in MCWA to broader programs related to communicable disease control in general. Primary activities included

continued efforts to eradicate malaria and control typhus; studies of fly-borne diarrhea, the relationship of flies to poliomyelitis, and arthropod-borne encephalitis; and technical development and training in insect and rodent control.

Plague control activities were transferred to CDC in October 1947; at the same time, the program was broadened with the development of a substantial laboratory organization with facilities for methodology research, reference diagnosis, and training in a variety of communicable diseases; with the creation of an extensive training program supported by an audio-visual activity; with the development of an effective epidemiological service; and with the realignment of technological activities to more communicable diseases.

From 1950 on, the current operational pattern of NCDC took shape. Major activities are applied research, training, technical assistance and consultation, demonstration, and epidemic aid. The Center supplements and supports the activities of State departments of health by providing services that these departments are unable to maintain on an everyday basis and by helping them develop increasingly effective programs to prevent, detect, diagnose, and control infectious diseases. These services include helping to quell disease outbreaks, developing practical ways to diagnose and control diseases, preparing training materials, providing consultation on and demonstrations of effective ways to cope with disease problems, and furnishing laboratory diagnosis in difficult situations.

The NCDC is responsible for Federal activities carried out against all communicable diseases. Essentially, NCDC serves as the means by which new

knowledge is converted into forms of use in public health practice. These forms, in turn, are transmitted to State and local health agencies and practicing physicians for direct application.

As CDC developed its domestic program, it applied its services to the international health front and activities in this area continued to expand.

In 1957, the Venereal Disease Program became a part of CDC, and the Tuberculosis Program joined the Center in 1960.

Structure of Program on November 22, 1963

On November 22, 1963, the Center was in the Bureau of State Services (Community Health). The Center consisted of seven branches: the Medical Audiovisual Branch, Epidemiology Branch, Laboratory Branch, Technology Branch, Training Branch, Tuberculosis Branch, and Venereal Disease Branch.

Organizational Changes since that Time

As part of the reorganization and strengthening of health activity in the Department of Health, Education, and Welfare (DHEW), the Center, on January 1, 1967, became part of the newly created Bureau of Disease Prevention and Environmental Control. The Bureau brought together Public Health Service programs which seek to: eliminate or reduce environmental hazards, reduce the incidence of accidental injury and death, prevent or reduce the incidence of communicable disease, and prevent the occurrence of or reduce the effects of chronic diseases. At about the same time, the word "national" was added to the Center's name, and in 1967, NCDC branches were officially designated "programs."

Of the ~~remaining six~~ seven branches that existed on November 22, 1963, ~~four~~ five remain: Epidemiology Program, Laboratory Program, Training Program,

Tuberculosis Program, and the Venereal Disease Program. The activities of the Technology Branch were distributed among several other programs in 1966.

On July 1, 1967, the Center's Medical Audiovisual Branch was separated from NCDC and became the National Medical Audiovisual Facility.

Several new programs have been added since November 22, 1963: the Malaria Eradication Program in June 1966; the Smallpox Eradication Program in January 1966; and the Ecological Investigations Program, the Foreign Quarantine Program, and the Immunization Program in January 1967. (The dates shown mark official designation as programs. Some of the programs existed as "activities" prior to such designation.)

The Aedes aegypti Eradication Program, which became an NCDC Program in January 1964, was moved to Consumer Protection and Environmental Health Services, Environmental Control Administration, in July 1968.

The Pesticides Program, added in August 1966, was moved to the Food and Drug Administration in July 1968.

Thus, the programs presently in NCDC are: Ecological Investigations Program, Epidemiology Program, Foreign Quarantine Program, Immunization Program, Laboratory Program, Malaria Eradication Program, Smallpox Eradication Program, Training Program, Tuberculosis Program, and Venereal Disease Program.

In the spring of 1968, as another step in the reorganization of health activities in the DHEW, NCDC became a part of the newly created Health Services and Mental Health Administration.

PERSONNEL AND STAFF CHANGES

Employment on November 22, 1963

Employment at NCDC totaled 2,270 on November 22, 1963.

Present Employment

On June 30, 1968--less than five years from the earlier date--employment had reached 4,520, nearly double the November 22, 1963, figure. Slightly more than a third of NCDC's employees work in facilities in Atlanta; others are stationed in all 50 States and 41 foreign countries.

Top Officials

On November 22, 1963, Dr. James L. Goddard was Chief of NCDC and Dr. David J. Sencer was Assistant Chief. On February 7, 1966, Dr. Sencer became Chief. (Dr. Goddard had left NCDC and later became the top official of the Food and Drug Administration.)

Dr. John R. Bagby, Jr., who was promoted to the position of Assistant Chief on October 19, 1964, is ~~a Scientist-Director and~~ Deputy Director of the Center. Dr. H. Bruce Dull, ~~who~~ a Medical Scientist, became Assistant Director on June 13, 1966, ~~is Medical Director, Assistant Director~~.

The Chiefs of three of the Programs that existed on November 22, 1963, and that still exist are the same. They are: Dr. Alexander D. Langmuir, Chief of Epidemiology Program; Dr. U. Pentti Kokko, Chief of Laboratory Program, and Dr. William J. Brown, Chief of the Venereal Disease Program.

The remaining two programs that have existed over the entire period have new Chiefs. Dr. Donald S. Martin, who was Chief of the Training Program on November 22, 1963, retired July 1, 1968. Dr. John H. Ackerman is now acting Chief of the Program. Dr. Edward T. Blomquist was Chief of

the Tuberculosis Program on November 22, 1963. He served until January 1965, when Dr. Carroll E. Palmer succeeded him. Dr. Palmer served until August 2, 1965, when the present Chief, Dr. Alfonso H. Holguin, was named to the post.

The Chiefs of the five Programs that have been added to NCDC since November 22, 1968, are: Dr. Tom D. Y. Chin, Ecological Investigations Program; Dr. Arthur S. Osborne, Foreign Quarantine Program; Dr. F. Robert Freckleton, Immunization Program; Dr. Robert L. Kaiser, Malaria Eradication Program; and Dr. J. D. Millar, Smallpox Eradication Program. Mr. Donald J. Schliessmann served as Chief of the Malaria Eradication Program until June 30, 1967, when Dr. Kaiser became Chief.

The Chiefs of the two Programs added to NCDC since November 22, 1968, and recently transferred from NCDC are: Dr. James V. Smith, Aedes aegypti Eradication Program, and Dr. Samuel W. Simmons, Pesticides Program.

Only two changes in Chiefs of Staff Services, Office of the Center Director, have occurred between November 22, 1963, and the present. Mrs. Mary F. Jackson became Chief of the Library in July, 1966, succeeding Mrs. Mary S. Waddell, and James L. Blakely became Chief of Management Analysis on March 10, 1968. Mrs. Maxine B. Hayes was Chief on November 22, 1963.

Two new offices have been added to the Office of the Center Director since November 22, 1963. Their respective Chiefs have served continuously. The Office of Research Grants was activated on April 13, 1964, with Dr. George H. Connell as Chief. Three years later, on April 23, 1967, the Office of Planning and Analysis was activated with Dr. Warren A. Rasmussen as Chief. Mr. B. H. Pedigo, Jr., became Special Assistant to the Director for Field Activities in February 1968, succeeding Mr. Warren T. Davis, Jr., who retired January 30, 1968.

Document I, attached to the NCDC history which precedes the individual NCDC Program histories, includes information relating to the first two headings of this history: "Organizational Changes" and Personnel and Staff Changes." Document I is composed of: (1) CDC organizational chart dated October 1963; (2) NCDC organizational chart dated June 1968; (3) personnel in the Office of the Chief, CDC, on November 22, 1963; (4) personnel in the Office of the Chief, NCDC, on July 1, 1968; (5) CDC operational statement approved September 11, 1962; (6) NCDC operational statement approved September 15, 1967, and (7) note on a change in CDC's title, and (8) budget information. Document I is labeled "Organizational Changes: Personnel and Staff Changes."

PROGRAM CHANGES

Changes in the overall program of the NCDC will be dealt with under the heading "Changes in Character or Emphasis." Changes in the individual NCDC Program will be dealt with in the histories of the respective Programs.

OPERATING METHODS

Grants: Research

The NCDC research grants program had its origin in 1961 when it was recognized that while a great deal of PHS money was being invested in research grants involving infectious diseases, relatively little was spent on projects that were designed to have early application. A precedent had already been set in environmental health areas about a year earlier. As a result, Dr. George H. Connell, then Assistant Chief, Microbiology Section, Laboratory Branch, CDC, was assigned the job of organizing a research grants program which would differ from those of the National Institutes of Health in that program-relatedness would be an overriding consideration. At the same time similar programs were set up in other Divisions of the Bureau.

The staff of the National Institutes of Health organized an intensive training effort to indoctrinate those individuals in the divisions of the Bureau of State Services (Community Health) who would be responsible for the several new research grant programs in that organization. After completing the orientation, the problem of identifying existing grants for transfer was attacked, since funding of the new programs was to be based on the mechanism of a comparative transfer. Orientation, identification of existing projects, and subsequent negotiations of funding levels were not completed until July 1963.

During this time a research grants assistant was chosen and trained, and in February, 1963, Dr. Myron J. Willis joined the embryo staff in the capacity of Deputy Chief. His training began at once, and a few months later a secretary was added to the office staff. By November 22, 1963 the staff was composed of the four individuals identified above, and at the present time includes three scientists, a research grants specialist, a research grants assistant, a secretary, and a clerk typist. Drs. Connell and Willis are still responsible for management of the program.

Much of fiscal year 1963 was invested in program planning and in stimulating interest in the scientific community in various areas of the country. By July, 1963, when the actual transfer of existing grants was made, the staff of the new program was trained and ready to handle the many intricate problems that are a part of the research grants business.

Although the purpose of the program was clearly intended to support projects of a practical and applied nature, it was apparent immediately that many of the grants transferred to CDC did not fit this category. This occurred because the transferring agency released a number of projects that had not been agreed upon earlier. At any rate, a decision was made to visit all of the principal investigators whose projects had been assigned to the Center's program in order to find out what they were really doing and to determine whether or not future support would be warranted from our appropriation. These field visits were well accepted by the investigators involved; for the first time, they had the opportunity to discuss both scientific matters and grants management problems with representatives of the funding agency. For staff of CDC, the advantages of dealing personally with the investigators, of knowing their problems and plans first-hand, and of being able to define the goals of the program were extremely profitable.

These field visits have continued to the present and have been interrupted only once, as the result of restrictions on travel in FY 68. Investigators and potential investigators are also encouraged to visit with NCDC staff when in Atlanta on other business, a system which generates good research proposals clearly related to the aims and program responsibilities of the NCDC.

The comparative transfer of projects from NIH was set at $1,714,315, and increases have been very small in subsequent budgets. As the result of this continuing period of austerity, management innovations were introduced that made it possible to survive and make progress. For instance, before the first award is made all grants are negotiated to the level where the minimum dollars are awarded which still permit ~~the~~

the approved project to be accomplished, and awards in all subsequent approved years are handled in the same way. This avoids obligating Federal funds unnecessarily and allows some latitude in funding new projects that would otherwise never be paid.

In November 1966 the program was increased by $1.2 million by the addition of a group of pesticide grants when the Federal Pesticides Program was added to the Center's responsibilities. This brought the FY 68 appropriation to $3,791,000, which was reduced by a "cut" to $3,631,000 before the end of the year. The "cut" resulted in the non-funding of a group of new projects that had been scheduled for funding late in FY 68.

The program operates within the overall rules and regulations of the PHS research grants program, and thus deals directly with non-profit research organizations, without reference to PHS regional offices. Close liaison is maintained with other PHS research granting agencies, as well as with the National Science Foundation, the Science Information Exchange, and other interested groups. Only research grants are supported, with no provision having been made for training grants, formula grants, and the like. Most of the projects supported are located in medical schools and universities, but some of the best grants have been awarded to health departments, foreign researchers, and international agencies such as the World Health Organization and the Pan American Health Organization. The number of foreign grants is small, but the work done, in relation to the dollars invested, has been impressive.

Initially, the scientific review panels, called "study sections", of the National Institutes of Health were used for the scientific review of projects assigned to CDC, but this arrangement was very unsatisfactory, because of the basically-oriented outlook of these groups. Under these conditions, projects of an applied or practical nature, however important to CDC's mission responsibilities, generally fared poorly in terms of priority. Eventually the Center received authority to appoint its own review panels, and this procedure has been eminently more successful and fairer to the investigators whose

projects were being reviewed. NCDC's study sections are composed of first rate scientists in a variety of professions, all of whom are well-versed in some aspect of public health problems. Reviews are thorough and objective, and not only scientific merit, but also health relatedness are considered. A National Advisory Communicable Disease Council, a major policy reviewing group, was also recently appointed. Serving in an advisory capacity, the Council has been of considerable value to the management of the Center.

While evaluating the success or lack of it in research grant programs is difficult, it is apparent that a broader spectrum of supported studies was needed when the program was initiated. Jurisdictional problems, which in turn cause referral problems, remain and probably never will be fully resolved, but relations between our group and the staffs of other PHS funding agencies at the same working level have been generally good over the years, making it possible to resolve many difficulties. By maintaining emphasis on practical and applied research, we hope to achieve the objectives that led to the program's being organized.

OPERATING METHODS

Grants: Project

The NCDC has made effective use of project grants (awarded to State and local health departments) as principal measures in meeting nationwide goals for the control or eradication of certain communicable diseases. The project grant programs that have been administered by the NCDC have been conducted as integral parts of our direct operating programs, as exemplified by the highly successful measles eradication campaign. Detailed descriptions of these project grant activities can be found in the histories of the Venereal Disease Program, the Tuberculosis Program, and the Immunization Program.

OPERATING METHODS

Direct Operations

Although NCDC works primarily through States and other agencies, it does perform certain direct operations. The Foreign Quarantine Program, for example, is responsible for certifying that people coming into the U. S. are free from communicable disease. The Program also performs medical examinations for persons in foreign lands who are applying for visas to visit the U. S.

Another direct operation of the Foreign Quarantine Program is to certify the good health of certain animals being imported to the U. S. These include animals for zoos, for experiments, and animals destined to become pets of U. S. residents. Excluded from the Program's responsibility are agricultural animals.

To perform these direct operations, the Foreign Quarantine Program has hundreds of inspectors stationed at airports and seaports in the Nation and medical personnel in foreign lands.

OPERATING METHODS

Headquarters and Field

The NCDC Programs depend upon funds, people, and places to work. Places to work for NCDC run the whole gamut of facilities from the simple, standard office or warehouse to the most sophisticated of modern research laboratories and experimental animal facilities.

Public Health Programs in the field of communicable disease must be supported by special-purpose space. Special-purpose space, such as laboratories, experimental animal areas, special animal breeding facilities, dog runs, and open grazing areas, are the backbone of NCDC facilities.

Support facilities to this mixture of needs are as varied as those items listed above. Laboratory glassware washing, sterilizing, and shipping is one illustration of a type of these support areas. Cafeterias, auditoriums, classrooms, and teaching laboratories, as well as offices, warehouses, and mailrooms, must also be provided.

All of these special-purpose facilities must be considered not only from the point of view of technical work, personnel, safety, and economics, but also from the point of view of handicapped persons - and it has been only in the last several years that facilities have been designed for handicapped persons.

Because of the nature of communicable disease control, a considerable number of field studies or demonstrations must be done, and this, over the years, has evolved a policy and need for not only a single major facility, but also for smaller, strategically placed facilities nearer to the study areas.

As a result, NCDC has a complex in Atlanta, Georgia, for headquarters, with an animal breeding and holding facility at Lawrenceville, Georgia, to support it.

In addition, ~~there are~~ laboratories are located at major installations in Kansas City, Kansas; Phoenix, Arizona; Fort Collins, Colorado; Savannah, Georgia; San Juan, Puerto Rico; Perrine, Florida; and at San Salvador, El Salvador. There are smaller stations of a temporary nature, such as offices and/or warehouses, for short-term research studies and/or control programs.

NCDC has a history of using many of the surplus World War II facilities and of "making do" in an effort to solve immediate health problems; but such facilities ~~there are~~ have many disadvantages. ~~to such facilities:~~ they are expensive to maintain, lack many safety features for both the work and the worker, and, in many cases, affect the psychology of the workers. A conscious effort has been made to upgrade and improve those stations for which NCDC will have a long-term need.

-- During the last five and one-half years, NCDC has acquired facilities and equipment valued at $19,093,000.

In August 1966, NCDC enlarged its facilities in Atlanta by 105 percent. At Clifton Road, Atlanta, about thirteen million dollars provides space, in square footage, as follows: 41,000 for laboratories; 50,000 for animal experimental rooms; 37,000 for offices; 20,000 for training, cafeteria, and auditorium; 20,000 for scientific support areas; and 33,000 for shops and warehouses.

Even with this great expansion, unmet needs for offices and laboratories at the Clifton Road facilities still exist. Some office space has been

rented at two sites, and space at Chamblee, Georgia, is being used for laboratories and supporting offices. The previously mentioned World War II surplus facilities at Chamblee consist of wooden structures which have been rehabilitated to some degree. These buildings have long been noted for supplying "temporary space". Permanent space for these needs will have to await the termination of the Vietnam War and other emergencies.

In June 1965, the Lawrenceville Breeding and Holding Facilities were opened. This is a very special facility, designed for producing standard and specific pathogen-free animals for the laboratories at Clifton Road, Atlanta. In addition, the National Rabies Investigations Laboratory is located there so that dogs and wild animals for experimental purposes can be humanely caged in large runs.

This facility cost $2,477,000, fully equipped. The square footage is as follows: 6,500 for laboratories; 34,000 for animal rooms; 1,000 for offices; 10,000 for feed storage; 14,000 for warehousing and other special facilities, including two small residences for animal caretakers.

Special areas for swine and fowls are still needed. These facilities have been requested, but they have had to be postponed because of the National effort in Vietnam and other programs.

In June 1967, a laboratory facility for Ecological Investigations at Fort Collins, Colorado, was acquired. This facility, leased from the Colorado State University Research Foundation but designed for NCDC needs, replaced facilities in the "old people's home" at Greeley, Colorado. This three-story, modern laboratory also has facilities for breeding

mice and holding experimental animals. Its cost was $1,300,000, and it provides square footage as follows: 3,984 for offices and classrooms; 14,331 for laboratories; 1,575 for animal rooms; and 3,003 for supporting services. As in the Clifton Road and Lawrenceville design, one hundred percent fresh air is tempered to the specific needs of temperature and humidity and circulated in the laboratories and animal rooms for maximum control and safety. This facility provides space for plague research formerly done in non-laboratory-type buildings in San Francisco, California. The move was made in June 1968.

Placing the NCDC facility near or in a university environment is in keeping with the policy followed at Atlanta and also in Kansas City.

The Kansas City Field Station, headquarters for the Ecological Investigations Program, is in rented quarters, again designed for NCDC needs. In November 1967, an addition was started which will provide 1,923 square feet of office space and 2,415 square feet of storage space for field equipment. The cost of this addition is $92,670.

In 1963, the NCDC acquired 60 acres of open grassland at the site of the Sunflower Ordnance Depot, Kansas. The land was acquired for purposes of conducting field studies and providing badly needed research animal holding facilities for the main laboratory in Kansas City. In 1968, NCDC erected a portable building on the property. The building, which cost $18,000 consists of 644 net square feet of animal space.

In March 1968, a small portable building, with 2,240 net square feet, was erected at Phoenix, Arizona, to house a special "Clean Room."

This work was performed in collaboration with NASA for the study of interplanet quarantine studies and is one of several examples of "specialty experimental space" developed by NCDC.

Plans and specifications were completed in October 1967 for a new laboratory in San Juan, Puerto Rico, for the Tropical Disease Section of the Ecological Investigations Program. This $1,480,000 laboratory, situated at the University of Puerto Rico Medical Center, will replace facilities at El Arsenal, San Juan, Antigua. The new two-story structure will provide space, in square footage, as follows: 7,165 for laboratory space; 3,374 for scientific central service; 1,800 for training; 3,370 for research - program offices; and 1,629 for animal-aquarium space for snail and other research.

Although money has been appropriated for the project, it has been held in abeyance as an economy measure.

The Pesticides Research Laboratory, located in a reconditioned World War II structure at the former Richmond Naval Air Station, has, during the period 1966 through the present, experienced rapid growth. Initial facilities occupied by the laboratory were made available on the basis of a "use permit" issued by the U. S. Navy. Since initial occupancy, the permit has been amended to include several additional World War II-type temporary structures. In addition, NCDC has, during the past year, erected several portable metal buildings for use as special animal holding facilities. To date, a total of approximately 55,376 square feet of research and program office space has been occupied by the laboratory at an expenditure of $328,000. Additional animal facilities provided totally at NCDC expense have increased usable square

feet of space by 1,440 square feet at a cost of $125,000.

INTERAGENCY RELATIONS

Other Federal Agencies

The growth of the Center's interagency relations has been substantial. In November 1963 the Center anticipated reimbursable contracts from other government agencies totaling about $2,500,000. Of this, less than $300,000 was funded by the Agency for International Development. On June 30, 1968, the Center had reimbursable contracts totaling $22,956,962. Reimbursable work for the Agency for International Development during fiscal year 1968 alone totaled almost $20,000,000. This funding was provided under participating agency service agreements with the two major efforts being devoted to the worldwide Malaria Eradication Program and the South African Smallpox/Measles Vaccination Programs. During fiscal year 1968, the Center performed reimbursable work for the following federal agencies: Department of Agriculture, Atomic Energy Commission, Department of Defense, Department of Interior, General Services Administration, National Aeronautics and Space Administration, Veterans Administration, Agency for International Development, and other agencies within DHEW. During fiscal year 1968, the Center also performed services for the World Health Organization totaling $62,278.

INTERAGENCY RELATIONS

International Agencies

I. Background Information

Early in 1964, it was clearly evident that the international activities of NCDC were becoming a major and time-consuming responsibility. The then existent international training program of the Center was also requiring more staff, time, and effort. Trainees from various parts of the world, particularly those from the developing countries of Latin America, Africa, and Asia, were expected to increase in number, as they sought specialized technical training in laboratory diagnostics and field work at the Communicable Disease Center.

With the evolution of the Center from an office of Malaria Control in War Areas to its present status as the National agency for control of infectious diseases, an increasing number of health officials from around the world have been interested in charting a similar course for their own infant or growing health institutions. Actually, in many countries there are Centers today that seem to be pursuing this same evolutionary trail blazed by NCDC.

The Center, known in health circles around the world as CDC, is being increasingly identified with the health objectives of developing nations where communicable diseases still exert a maximum toll in morbidity and mortality.

NCDC enjoys a reputation for scientific competency, for pragmatism in field applications, for development of new techniques in the control of

communicable diseases, and for excellence in training and consultation.

II. Developing Trends

In 1963, CDC entered into research agreements in many countries where Public Law-480 funds were available for purposes of conducting collaborative studies with the local health and scientific communities for the mutual benefit of both the United States and the host country. This meant more time demands, more exchange of personnel, more international visits to project sites, and an added awareness of the desirability of international involvement in communicable disease control if the U.S. is to continue playing a leading role against the main scourges of mankind, the infectious diseases.

More of the Center's laboratories were being designated as global or hemispheric reference centers as a part of the world-wide network of detection-mechanisms to identify and type various infective agents.

III. Personnel and Staff Changes

The growth of the international involvement of the Center paralleled the growth of the International Affairs Office in staff and scope. On November 22, 1963, two employees, a Training Officer and a Staff Assistant, devoted their time to the International Training Program. Today the International Affairs Office is headed by an expert in international health and a veteran of ten years' health work in Africa and Asia; a Staff Assistant of twenty years' experience and background with the Center, and five

administrative and clerical staff chosen meticulously for their quality and dedication to the cause of international health.

Besides planning, organizing, and administering programs of specialized training for foreign representatives and for domestic representatives to foreign countries, the International Affairs Office designs, develops, and implements seminar services and resource references on current international health affairs for the Center's staff, and renders advisory services on varied international questions. It also establishes and maintains liaison with other organizations concerned with international health. Functioning through the Office of the Director, the International Affairs Office administers the PL-480 International Research Program. It is in a position to tap the resources of the Center's programs in fulfilling the Center's international obligations and commitments. All the Center's international activities ? eminating are in consonance with those of public and private agencies and international programs administered by WHO.

- A Country-by-Country Resource File on Health is rapidly developing ~~for~~ into a reference library. ~~based on~~ of trip reports by CDC scientists who have ~~to some 90 countries~~ already visited some 90 countries ~~by CDC scientists~~ in the course of their training, consultation, and research missions.

At the closing ceremony on July 12, 1968, for the graduates of the special CDC course, New Techniques and Developments in Communicable Disease Control, (designed for professional health workers from or working in countries other than the United States), ~~the following is taken from the address by~~ the Chief

of the International Affairs Office said: "As I bid you farewell on behalf of our Director, let me repeat that in recent years, we have become much more involved in international health problems. In the fight against disease, such programs as Foreign Quarantine, Malaria, Smallpox Eradication, Measles Contro, studies of cholera, epidemic investigation, training, research, and consultation extend beyond our national frontiers. Only jointly and cooperatively can our efforts stamp out communicable diseases throughout all parts of the world. It seems appropriate, therefore, that we should continue to sponsor such a course tailored to the needs of physicians and other professional health workers of other lands. We will continue to welcome you and your countrymen as our guests, and trust that this opportunity in which you learned and in which you contributed through participation, comparison, and involvement was pleasant and beneficial to you. We speak for CDC when we say, 'It was for us.'"

correct?

IV. Mission

In the past five years, the Center's international activities have developed from strictly administering training to foreign health workers to involvement in collaborative special international research programs and to other research and consultation services requested by international organizations or by countries where such service is in harmony with the mission of CDC.

To fill the need for some centralization of these activities from a management standpoint and to give a Center-wide staff service to CDC members involved in international health activities, an International Affairs Office was established to coordinate many of the functions and the responsibilities

of the Executive Office and the program chiefs of the Center and to render training, consultation, and staff services in the many complex areas of international health.

CDC directs the International Influenza Center for the Americas, the Regional Reference Laboratory for Viral-Respiratory Diseases other than Influenza, the Regional Laboratory for the Arboviruses, the International Shigella Center, and the WHO Serological Reference Center for Syphilis.

The Public Health Service and the Agency for International Development, through a participating agency service agreement negotiated in 1965, transferred the Malaria Eradication Program of the United States to CDC. The Malaria Eradication Program history is outlined separately.

In FY67, a Smallpox Eradication--Measles Control Program was initiated in a contiguous region west of Central Africa comprising a population of 110 million in 19 countries. This program's history is also outlined separately.

With the addition in FY68 of the Foreign Quarantine Program as an operating segment of CDC, with the increased involvement of anti-epidemic assistance by the Center's Epidemic Intelligence Service, and the continuation of the Aedes aegypti Eradication Program to fulfill a United States commitment to ~~PAHO~~ Pan American Health Organization and WHO, NCDC is in a large measure an international, as well as a National, Center in its involvement and its mission.

INTERAGENCY RELATIONS

Federal-State-local partnership

Partnership with States and localities has been the key to the NCDC's success in carrying out its mission of prevention, control, and eradication of communicable diseases. The Center's services are channeled to the public through assistance to State and local health departments. Detailed reports from the Center's major Programs, which form the bulk of this history, will bear this out through numerous examples.

The Center's assistance takes many forms -- training of thousands of State and local health department personnel in numerous technical courses; assignment of disease investigators, public health advisors, and epidemiologists to States and localities; laboratory back-up services; granting of funds for research, training, or projects such as immunization programs; epidemic aid; and consultation are a few of the services that are provided on a partnership basis.

The Morbidity and Mortality Weekly Report is based on an exchange of information. States provide statistical and narrative information each week on a number of reportable diseases. The Center analyzes this information and compiles it into a useful weekly report which is mailed to State health departments and to several thousand other interested agencies and individuals.

EXTERNAL RELATIONS

Public Advisory Committees

NCDC makes extensive use of public advisory committees. Information describing the authority, structure, functions, and meetings of public advisory groups established since 1963--those that are presently active and those now inactive--is presented in Document I, titled "Public Advisory Committees."

The active committees are: Communicable Disease Control Study Section, Immunization Practices Advisory Committee, Medical Laboratory Services Advisory Committee, National Advisory Communicable Disease Council, Pesticides and Alternatives Study Section, Rabies Advisory Committee, Tuberculosis Control Advisory Committee, and Venereal Disease Control Advisory Committee.

Inactive committees are: Task Force on Tuberculosis, National Advisory Serology Council, and the Surgeon General's Advisory Committee on Influenza.

In addition, numerous ad hoc committees have been convened during the period covered by this history.

EXTERNAL RELATIONS

Cooperation with Voluntary Agencies

The NCDC has enlisted the cooperation of non-government agencies in carrying a number of its services to the public. Traditionally, the Tuberculosis Program has shared the fight against TB with the National Tuberculosis Association, ~~as~~ and the Venereal Disease Program has enjoyed the cooperation of the American Social Hygiene Association. The Center in general has been supportive of the American Public Health Association.

An unusual alliance with voluntary health agencies, civic organizations, and medical and professional organizations occurred in 1967 and 1968, when the Center spearheaded a national campaign to eradicate measles.

The American public was generally unaware at the beginning of 1967 of the seriousness of measles, and millions had not bothered to provide their children with vaccine protection which had been available since 1963.

Before 1963, the number of reported cases had ranged from 400,000 to 700,000 per year, about one tenth of the number actually occurring. In 1966, when several million children had been vaccinated either through public health programs or by private physicians, the reported cases were still more than 200,000. The NCDC at that time, with the support of the Surgeon General and the backing of the President, proclaimed that measles would be eradicated in 1967 if certain conditions were met.

The Center, in partnership with the American Medical Association, led a campaign which called for and received the active support of numerous other Federal agencies, State and local governments, the medical and public health professions, voluntary and civic organizations, the press, radio and television, and many thousands of individuals. The Junior Chamber of Commerce, the Kiwanis Club, the Loyal Order of the Moose, the American Legion, the National Council of Catholic Men --

and nearly a hundred other organizations -- joined in the national campaign to get parents to have their children vaccinated against measles.

Although 1967 did not see absolute eradication of measles, the campaign was successful in reducing measles to about 5 percent of normal occurrance by mid-1968. The campaign engendered, between the Public Health Service and the numerous other agencies, a new or renewed sense of partnership that hopefully will continue in other activities.

CHANGES IN CHARACTER OR EMPHASIS

The NCDC spearheads the Nation's attack against all infectious diseases. Through its assistance and investigative programs, NCDC supports and supplements State health department control activities by providing technical competence, manpower, and facilities as needed and requested by these agencies.

NCDC also cooperates with other Government agencies and with international health organizations. Because infectious diseases transcend geographic barriers and because distances are now measured by travel time rather than miles, the global activities of NCDC are of increasing significance. For example, the Foreign Quarantine Program is emphasizing locating and eliminating sources of disease outside the Nation's borders as well as stopping disease from coming into the U. S.

The primary emphasis at NCDC---to fight infectious diseases---has not changed since November 22, 1963. Intermediary objectives directed toward this primary goal have changed, but these changes are cited in the histories of the individual NCDC Programs. Organizational changes within NCDC, which further reflect changing emphasis, are described under "Organizational Changes."

Commenting recently on NCDC's character, Dr. David J. Sencer, Center Director, said: "Our work is carried out most effectively through specialization and concentration. In fact, our organization received its name, after World War II, from a plan known as the 'Center Concept'..... An important benefit of the Center Concept at NCDC is that our specialists in viral diseases, for instance, can communicate biomedical information with

each other on a personal basis. They keep up with the work of other specialists who themselves usually are centralized. They are on call for consultation and epidemic aid, where again, they communicate on a person-to-person basis. And, following this Center concept, we have...international centers for shigellosis, salmonellosis, arbovirus, and influenza....

"Thus, we find that centralization and specialization breed good communication....

"As a great nation and a humanitarian nation, we are seeking to raise the level of the health of less fortunate peoples in other parts of the world. We at NCDC, with the cooperation of the Agency for International Development, have undertaken active programs to eradicate malaria and smallpox and measles from major portions of Africa, Asia, and the Americas. Accompanying our humanitarian motives are others of enlightened self-interest. Until smallpox, for example, is eradicated from the world, we can never be confident of our own immunity from this dread disease. We may also call it diplomacy or good foreign policy....

"While we are seeking to communicate personal health messages to the American citizen, we are also attempting to communicate the idea that we do not live in a world apart from other peoples."

LEGISLATIVE HISTORY

Laws Affecting Programs

Numerous laws affect NCDC and its Programs.

The Vaccination Assistance Act of 1962, for example, provided funds for grants to States to immunize against poliomyelitis, diphtheria, whooping cough, and tetanus. Amended legislation in 1965 provided funds for measles vaccination programs. NCDC administered the immunization program and, through a government-wide contract, states and political subdivisions obtained the vaccine at the most economical price.

On another occasion, the Foreign Quarantine Program was asked to prepare a report on a bill to amend the Immigration and Nationality Act to permit certain aliens with mental defects to immigrate into the United States, subject to controls and conditions prescribed by the Attorney General after consultation with the Surgeon General.

The waiver of excludability for immigrants was at that time limited to one of three conditions--tuberculosis, mental retardation, and one or more previous attacks of insanity. Purpose of the extended waiver provision was to keep family units together.

Perhaps the most recent law to affect an NCDC program is the Clinical Laboratories Improvement Act (CLIA) of 1967. The law, a section of the amended Public Health Service Act, is to become effective Jan. 1, 1969. CLIA authorizes the Secretary of the Department of Health, Education, and Welfare to license clinical laboratories which solicit or accept specimens in interstate commerce and which meet certain standards. A new section is being set up in Laboratory Program to implement the law.

As an initial step in implementing CLIA, Laboratory Program called together two ad hoc committees for the purpose of defining what constitutes "satisfactory achievement" in proficiency testing. Pathologists, clinical chemists, microbiologists, and other laboratory experts from outside the government were brought to NCDC for this purpose.

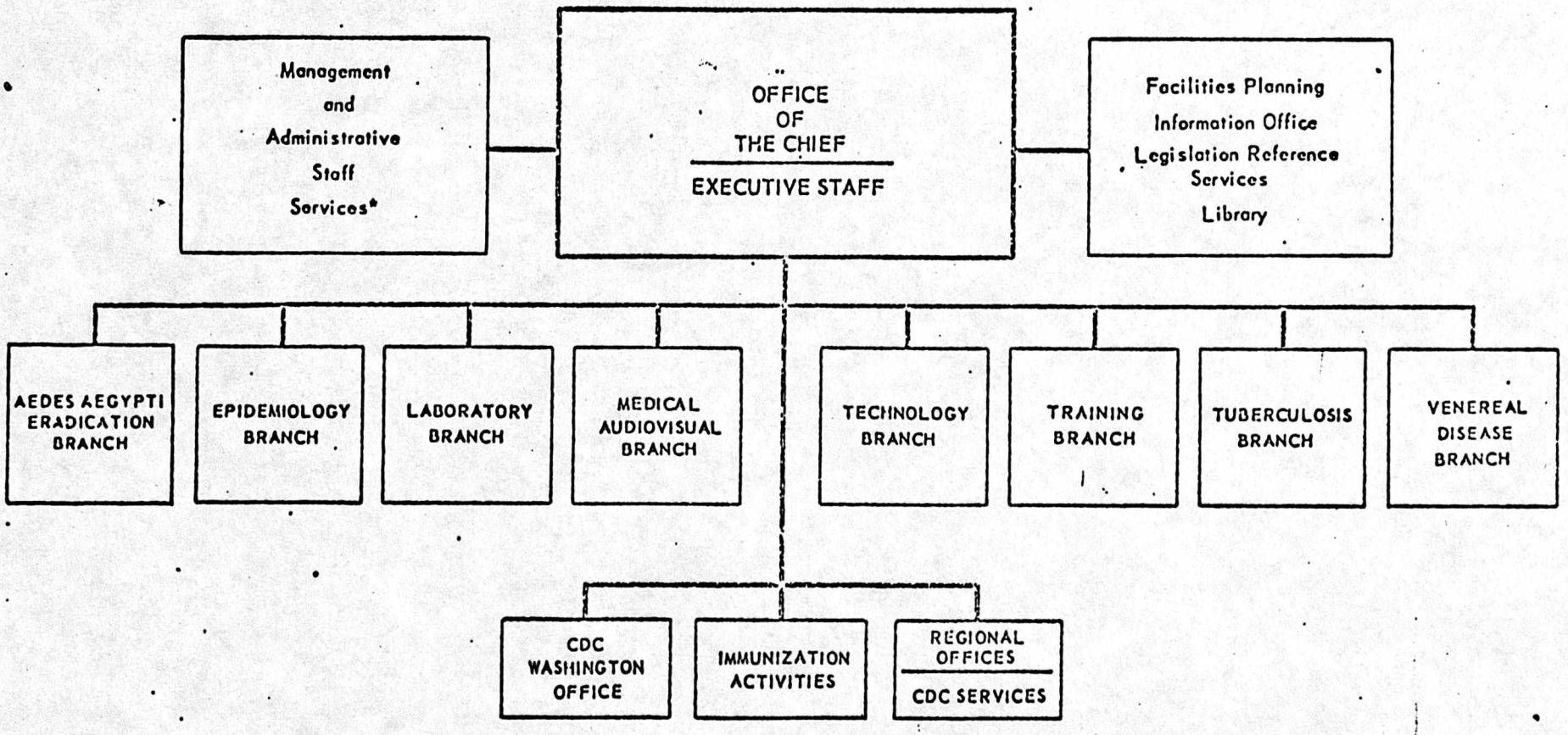
DOCUMENT I

Organizational Changes: Personnel and Staff Changes

C3-CDC (0)
October 1963

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
Bureau of State Services
Communicable Disease Center

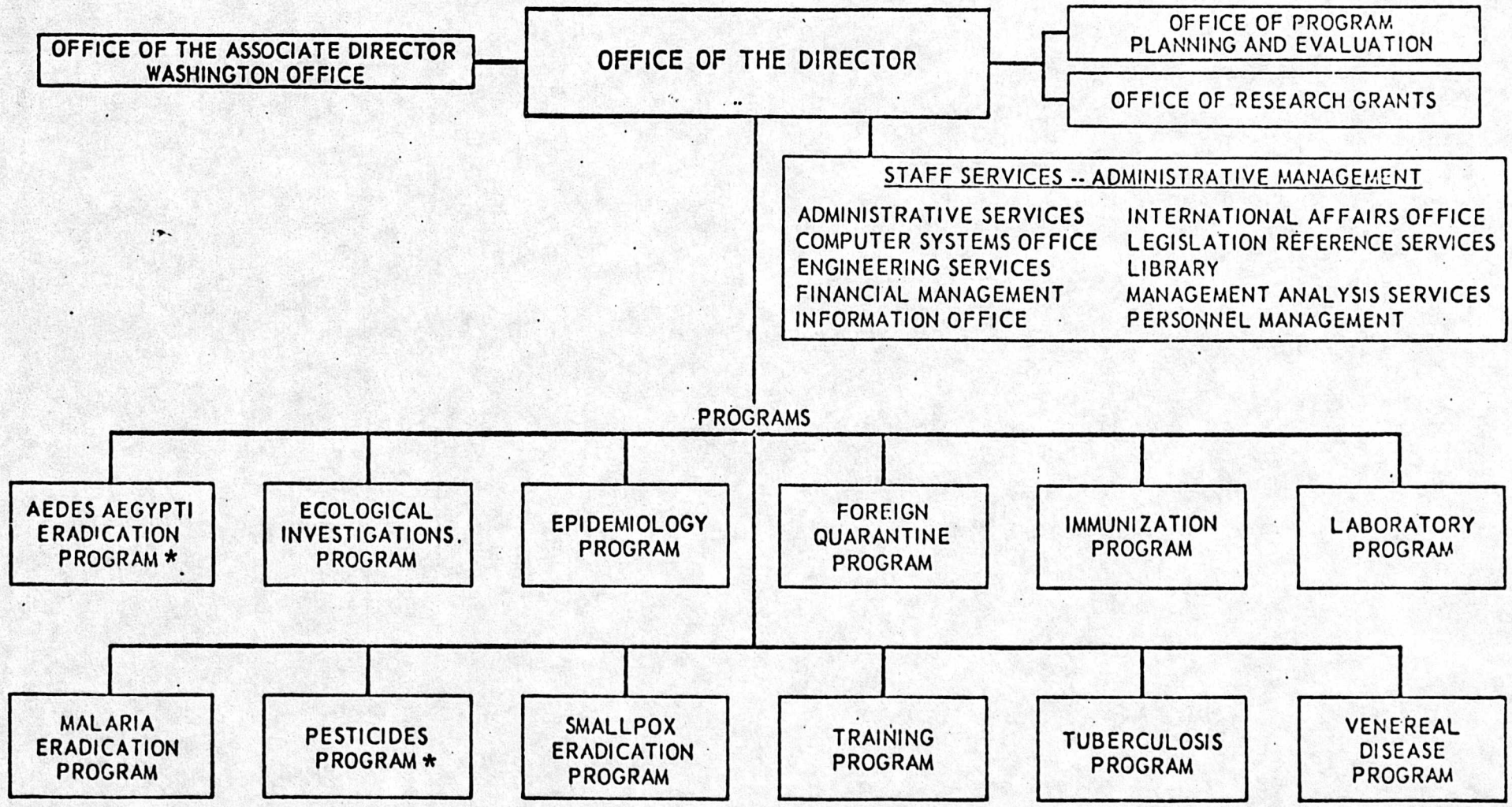
RECORD COPY



*Administrative Services
Engineering Services
Financial Management
Management Analysis Services
Personnel Management

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION
NATIONAL COMMUNICABLE DISEASE CENTER

NCDC-2561 (0)
June 1968



*Transferred to Consumer Protection and Environmental Control 7/1/68.

11/22/63

OFFICE OF THE CHIEF

Dr. James L. Goddard	Chief
Dr. Alan W. Donaldson	Deputy Chief
Dr. David J. Sencer	Assistant Chief (and Chief, Immunization Activities, Office of the Chief, CDC)
George B. Tremmel	Executive Officer
William C. Watson, Jr.	Assistant Executive Officer
John M. Horstkamp	Chief, CDC Washington Office
Dr. George H. Bradley	Consultant

7/1/68

OFFICE OF THE CENTER DIRECTOR

Dr. David J. Sencer MD, M.P.H.	Director
Dr. John R. Bagby, Jr., Ph.D.	Deputy Director
Dr. H. Bruce Dull M.D. 3-35 SW Walters	Assistant Director
William C. Watson, Jr.	Executive Officer
James D. Bloom	Assistant Executive Officer
B. H. Pedigo, Jr.	Assistant to the Director for Field Activities
Dr. Johannes Stuart M.D. 495-6314	Associate Director, NCDC Washington Office
George B. Tremmel	Management Consultant to the Director, NCDC

(Approved 9/11/62)

COMMUNICABLE DISEASE CENTER

Plans, conducts, coordinates, and evaluates comprehensive nation-wide programs for the prevention and control of communicable and certain other preventable diseases. Activities are conducted through laboratory and field studies for the development of better techniques, materials, and equipment for use in diagnosis, prevention, and control; through demonstrations, consultation, training, and other educational activities, including the production, dissemination, and exchange of medical audiovisuals; by furnishing epidemic and disaster aid; by enforcing the medical aspects of interstate quarantine regulations; and by continuous surveillance over communicable diseases through epidemiological investigations.

Present statement
(Approved 9/15/67)

NATIONAL COMMUNICABLE DISEASE CENTER

Plans, conducts, and coordinates (1) a national program for the prevention and control of communicable and certain other preventable diseases, (2) a national program for the detection, assessment, control, and reduction of potential and harmful and/or unnecessary exposure of man to pesticides and other chemical agents, and (3) a comprehensive national laboratory improvement program, including the provision of laboratory technical support for other national centers of the Bureau, other segments of the Public Health Service, and State, local, and other groups engaged in medical laboratory practice or administration.

TITLE CHANGE

The title of the Communicable Disease Center was changed to the National Communicable Disease Center effective 12/12/66.

DOCUMENT II

Public Advisory Committees

PHS PUBLIC ADVISORY GROUPS: AUTHORITY, STRUCTURE, FUNCTIONS

IMMUNIZATION PRACTICES ADVISORY COMMITTEE
(Active)

Authority.--Established by the Deputy Chief, Bureau of State Services, on March 20, 1964, under section 222 of the Public Health Service Act (P.L. 410, 78th Congress, amended by P.L. 87-838); reestablished January 1, 1967, by the Director, Bureau of Disease Prevention and Environmental Control, pursuant to Reorganization Plan No. 3 of 1966; and terminating in March 1974.

Structure.--Consists of the Director, National Communicable Disease Center, as Chairman and seven members appointed by the Director, BDPEC. Members are appointed for overlapping terms of four years. In addition, the Chief, Program Services Branch, Children's Bureau, Social & Rehabilitation Service, and the Director, Division of Biologics Standards, NIH, serve as ex-officio members. The Chairman, Committee on the Control of Infectious Diseases, American Academy of Pediatrics, serves as official liaison representative of that professional body. Members are selected from experts in the field of immunization practices.

Functions.--Provides advice and guidance to the Surgeon General regarding the best and most appropriate application of available and new antigens and other related agents and materials for effective disease control. Reviews and reports regularly on immunization practices and recommends improvements in the national program.

Meetings.--Two to three meetings are held annually, as called by the Chairman

MEDICAL LABORATORY SERVICES ADVISORY COMMITTEE

(Active)

Authority.--Established by the Director, Bureau of Disease Prevention and Environmental Control, June 2, 1967, under section 222 of the Public Health Service Act (P.L. 410, 78th Congress, amended by P.L. 87-838); and terminating June 30, 1977.

Structure.--Consists of the Director, National Communicable Disease Center, as Chairman and twelve members who are appointed by the Director, BDPEC, for overlapping terms of four years. Members are leaders in the fields of bacteriology, microbiology, virology, laboratory methodology, medical technology, hematology, biochemistry, physiology, clinical chemistry, pathology, parasitology, and tropical public health.

Functions.--Evaluates the approaches of the Laboratory Improvement Program and recommends revisions or additions.

Meetings.--Meetings are held at least once a year, at the call of the Chairman.

COMMUNICABLE DISEASE CONTROL STUDY SECTION
(Active)

Authority.--Established by the Director, Bureau of Disease Prevention and Environmental Control, June 22, 1967, under section 222 of the Public Health Service Act (P.L. 410, 78th Congress, as amended by P.L. 87-838); and terminating June 30, 1977.

Structure.--Consists of twelve members, appointed by the Director, BDPEC, one of whom is designated as Chairman. Members are appointed for overlapping terms of four years and are eligible for reappointment to the same group only after a lapse of one year. Members are selected for their outstanding knowledge and experience in the field of public health and in applied research areas such as arbovirus field studies, vaccine evaluation, public health laboratory research, epidemiology, and zoonotic disease field studies.

Functions.--Reviews research grant applications relating to the development of methodology and technology for the diagnosis and control of communicable diseases, and makes recommendations to the appropriate National Advisory Council as to their merit for grant support. Advises on research activities which should be initiated, expanded, or curtailed.

Meetings.--Meetings are held three times a year -- usually in January, April, and September.

NATIONAL ADVISORY COMMUNICABLE DISEASE COUNCIL

(Active)

Authority.--Established as the Communicable Disease Center Advisory Committee by the Deputy Chief, Bureau of State Services, in September 1962; reestablished under section 222 of the Public Health Service Act (P.L. 410, 78th Congress, amended by P.L. 87-838) as of July 1, 1963; reestablished as the National Communicable Disease Center Advisory Committee by the Director, Bureau of Disease Prevention and Environmental Control, January 1, 1967, pursuant to Reorganization Plan No. 3 of 1966. Established June 30, 1967, by the Secretary as the National Advisory Communicable Disease Council under section 3(b) of Executive Order 11007, 27 FR 1875, pursuant to Reorganization Plan No. 3 of 1966, 31 FR 8855.

Structure.--Consists of the Surgeon General as Chairman and 12 members appointed by the Surgeon General, with approval of the Secretary, who are leaders in the fields of fundamental sciences, medical sciences, education, or public affairs. At least six shall be leading professional or scientific authorities in the fields of communicable diseases and pesticides. Members are appointed for overlapping terms of four years and no member is eligible for reappointment within one year after the end of his preceding term.

Functions.--Advises and consults with the Surgeon General on matters relating to prevention and control of communicable diseases and on the health hazards associated with pesticides. This includes advice on national policies, programs, and planning in marshalling the necessary efforts and resources to meet broad major problems and responsibilities. Reviews applications for grants-in-aid for research in the communicable diseases and pesticides, and such other programs as may be determined, and recommends to the Surgeon General approval of those projects which merit support.

Meetings.--Three meetings are held annually -- usually in March, June, and November.

TUBERCULOSIS CONTROL ADVISORY COMMITTEE
(Active)

Authority.--Established by the Surgeon General on July 9, 1957; reestablished under section 222 of the Public Health Service Act (P.L. 410, 78th Congress, amended by P.L. 87-838), as of July 1, 1963; reestablished January 1, 1967, by the Director, Bureau of Disease Prevention and Environmental Control, pursuant to Reorganization Plan No. 3 of 1966; and terminating July 1, 1973.

Structure.--Consists of the Chief, Tuberculosis Program, National Communicable Disease Center, as Chairman and eight members who are outstanding experts in fields pertinent to tuberculosis control, including the Vice Chairman of the Disease and Disability Control Committee of the Association of State and Territorial Health Officers. Members are appointed by the Director, BDPEC, for overlapping terms of three years.

Functions.--Consults with and advises the Tuberculosis Program on policies and programs in tuberculosis control.

Meetings.--Two meetings are held annually, as called by the Chairman.

VENEREAL DISEASE CONTROL ADVISORY COMMITTEE

(Active)

Authority.--Established by the Chief, Bureau of State Services, in January 1959; reestablished by the Deputy Chief, BSS, under section 222 of the Public Health Service Act (P.L. 410, 78th Congress, amended by P.L. 87-838) as of July 1, 1963; reestablished January 1, 1967, by the Director, Bureau of Disease Prevention and Environmental Control, pursuant to Reorganization Plan No. 3 of 1966; and terminating July 1, 1973.

Structure.--Consists of the Chief, Venereal Disease Program, National Communicable Disease Center, as Chairman and 12 members. Members are experts in venereal disease control or public interests considerably broader than venereal disease but in which the venereal diseases constitute an important element. One member from the Bureau of Health Manpower serves in an ex officio capacity. Members are appointed by the Director, BDPEC, for overlapping terms of four years.

Functions.--Advises the Venereal Disease Program on means and methods of implementing its program in assisting States to carry on activities in the field of venereal disease control. Reviews program operations and suggests new areas of emphasis.

Meetings.--As called by the Chairman.

PHS PUBLIC ADVISORY GROUPS: AUTHORITY, STRUCTURE, FUNCTIONS

RABIES ADVISORY COMMITTEE*

(Active)

Authority.--Established by the Director, Bureau of Disease Prevention and Environmental Control, June 2, 1967, under section 222 of the Public Health Service Act (P.L. 410, 78th Congress, amended by P.L. 87-838); and terminating June 30, 1977.

Structure.--Consists of the Chief, Veterinary Public Health Section, National Communicable Disease Center, as Chairman, and twelve members who are appointed by the Director, BDPEC, for overlapping terms of four years. Members are selected for their competence and experience in the surveillance and investigation of rabies in man, domestic animals, and wildlife.

Functions.--Consults with and provides advice and guidance to the Epidemiology Program, Veterinary Public Health Section, on means and methods of implementing the program in the field of rabies control.

Meetings.--Meetings are usually held once a year, as called by the Chairman.

*This committee is formally established, but it has not been staffed and is not functioning at the present time.

~~Staffed: this Committee is formally established, but has not been staffed and is not functioning at present time~~

TASK FORCE ON TUBERCULOSIS

(Inactive)

Power: Authority:--Established by the Surgeon General in September 1963 under Section 222 of the PHS Act. To be terminated September 1965. Authority to appoint members delegated to the Deputy Chief, BSC.

Ser: Structure.--Consists of seven non-Federal Government members representing public health, medical practice and education, research, and the public.

Canon: Appointments are for two-year terms (not overlapping).

Director: Leiper, John H. (65)

Fho: Functions.--Studies and evaluates effectiveness of the Nation's present tuberculosis control efforts and recommends steps the Public Health Service might take to promote effectiveness. No grant review functions.

Stat:

Provi:

Divey: Meetings.--As called by the Chief, Tuberculosis Branch, Communicable Disease Program Center.

Dent, Albert W. (63)
President
Dillard University
New Orleans, Louisiana 70122

Robins, Arthur B. (65)
Director, Bureau of Tuberculosis
New York City Department of Health
125 Worth Street
New York, New York 10013

Executive Secretary:

Lewin, Richard
Program Services Section
Tuberculosis Branch
Communicable Disease Center
Public Health Service
Atlanta, Georgia 30333

As it was at time of Termination — 9/30/

BSC(CH) 4/30/64

NATIONAL ADVISORY SEROLOGY COUNCIL

(Inactive)

Authority.--Established administratively by the Surgeon General in 1934.

Structure.--Consists of the Chief, Operational Research Section, Venereal Disease Branch, Communicable Disease Center, who serves as Chairman, and seven non-Federal Government members who are recognized as authorities in the field of serology. Members are chosen on the basis of their experience and knowledge in the areas of public or private laboratory operation, public health interests, and research competencies.

Functions.--Advises the Venereal Disease Branch on laboratory aspects of serology; advises on the development of practical serologic tests for venereal diseases, on the standardization of testing procedures involved, and on other related laboratory activities.

Meetings.--As called by the Chairman of the Committee.

Abolished 10/28/64.

As submitted 8/28/63

From covering memo:

The Venereal Disease Branch prefers to omit any reference to length of terms; however, if this information is required, the following sentence should be added under structure: "Appointments are for one-year terms." (You will recall that we recently requested approval of three-year terms but the memorandum to the Surgeon General was rewritten by Mr. Pond and the terms changed to one year.)

LIST OF CONTRIBUTORS

The Director of the Center is the principal contributor to this history. Program Chiefs have contributed to the Program histories. Names of Program Chiefs are listed on pages 5 and 6. In some cases, additional contributors are named within individual Program histories.

Compiled by Edwina Davis

HISTORY OF

THE NATIONAL COMMUNICABLE DISEASE CENTER

FROM 1963 TO 1968

PROGRAMS

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Health Services and Mental Health Administration
National Communicable Disease Center
Atlanta, Georgia

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HISTORIES OF CENTER'S PROGRAMS...(Attached separately)

Aedes aegypti Eradication*

Ecological Investigations

Epidemiology

Foreign Quarantine

Immunization

Laboratory

Malaria Eradication

Training

Tuberculosis

Venereal Disease

*This Program was moved to Consumer Protection and Environmental Health Services, Environmental Control Administration, in July 1963. It is being included here for later inclusion in that Administration's history.

Aedes aegypti Eradication Program

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AEDES AEGYPTI ERADICATION PROGRAM

EARLY HISTORY

The yellow fever mosquito, Aedes aegypti (L.), was repeatedly introduced to the New World from Africa during the time of slave trade. Sailing vessels with open water casks provided breeding places for successive generations of this mosquito during the long voyage. Ports of call were often infested during summer and deadly outbreaks of yellow fever were not infrequent. In temperate regions epidemics continued until the first frost. Wherever the climate was suitable, Aedes aegypti became a permanent resident living in or near the habitations of man.

Yellow Fever in the United States

In the United States, devastating epidemics of yellow fever occurred during the period from 1668 (New York) to 1905 (New Orleans), striking seaports and some inland cities from Texas to New England.

Philadelphia suffered 20 epidemics, New York 15, Boston 8, and Baltimore 7. The last epidemic in this country (1905), with 8,399 cases and 908 deaths, struck most heavily in New Orleans, which reported 3,384 cases and 443 deaths. The fact that the 1905 epidemic was much less extensive in New Orleans than that of 1898 was attributed largely to a concerted drive against Aedes aegypti, the sole urban vector of yellow fever.

Dengue

Dengue, or "break-bone fever" transmitted in this country by Aedes aegypti has occurred in epidemic proportions more recently than yellow fever.

The following major outbreaks of dengue have occurred in the United States and nearby areas:

1922-1923	Florida to Texas - perhaps 2,000,000 cases. The epidemic originated in Galveston, and 500,000-600,000 of the cases were in Texas.
1934	Florida and Georgia - an estimated 15,000 cases.
1943	Hawaii - an estimated 1,400 cases.
1945	Louisiana - several hundred cases.
1963-1964	Caribbean - at least 30,000 cases. These include over 1,300 cases in Jamaica, 27,000 in Puerto Rico, 300 in Antigua (B.W.I.), and 28 cases in persons coming to the United States from epidemic areas.

DEVELOPMENT OF ERADICATION GOALS

The concept of *Aedes aegypti* eradication may be traced to the period around 1933. The confirmation of jungle yellow fever in widely separated points in Brazil, Bolivia, and Columbia occurred simultaneously with the demonstration in a number of Brazilian cities that this domestic mosquito could be eradicated.

In 1915, the Rockefeller Foundation started active collaboration with infested countries (Ecuador, Columbia, Peru, Mexico, Central America, Bolivia, Brazil) in campaigns against *Aedes aegypti*. In each country, yellow fever receded and disappeared from its cities and towns. New yellow fever epidemics, starting with the one in Rio de Janeiro in 1928, and subsequently related to the jungle source of virus, made it clear

that prevention of urban yellow fever would depend either on maintaining costly permanent programs of Aedes aegypti control in all cities and towns or on complete eradication of this mosquito from the region.

In 1942, Bolivia, which was the first country to complete the eradication of Aedes aegypti, proposed to the XI Pan American Sanitary Conference that the countries of the Americas should join in a campaign for the continental eradication of this vector. No action was taken at this time, but in 1947 Brazil brought the proposal for the permanent solution of the urban yellow fever problem through the eradication of Aedes aegypti in the Western Hemisphere before the Directing Council of the Pan American Health Organization (PAHO). The United States and other member countries of PAHO concurred in a resolution to this effect and the Pan American Sanitary Bureau was given the mandate to coordinate the eradication of Aedes aegypti from this Hemisphere. In 1961 the Directing Council of the PAHO further resolved that all nations in the Western Hemisphere initiate and complete eradication of Aedes aegypti within five years. The following year (1962) the Surgeon General of the Public Health Service, speaking at the Pan American Sanitary Conference, declared this country's intent to conduct an eradication program. In 1963, at the specific request of the President, the 87th Congress appropriated funds to begin limited eradication operations.

ORGANIZATION OF ERADICATION OPERATIONS

The Public Health Service established national headquarters for the program in Atlanta, Georgia, with the activation of an *Aedes aegypti* Eradication Branch in the Communicable Disease Center. Mr. Donald J. Schliessmann was appointed Chief of the new Branch.

The initial plan provided for concurrent state programs throughout the infested area, with field operations in all major urban areas. Limited funds precluded such extensive activities, and in the spring of 1964 initial efforts were concentrated in urban localities of Puerto Rico, the Virgin Islands, southern Florida, and portions of Texas.

State Projects

Eradication operations must be pursued on private premises, since the grounds around homes and businesses are the site of most of the *Aedes aegypti* breeding. To get at this grass-roots problem most effectively, the eradication program was conducted cooperatively by the Public Health Service and the health departments of the States involved. The program was financed with federal funds and is under the general direction of the Public Health Service; but each of the cooperating States contracts to eradicate *Aedes aegypti* from within its boundaries, using federal funds to pay its program costs.

For operational purposes each contracting State is a separate project in the total program. The Aedes aegypti Eradication Program assumes responsibility for overall policy, planning, and guidance, provides training, research, and other supportive services, and procures

and supplies the necessary equipment and materiel. The State health department carries on the day-to-day operations in a manner compatible with the overall eradication plan and with policies of both the Public Health Service and the State.

A project staff is headed jointly by a Project Director, representing the State health department, and a Project Officer, representing the Public Health Service. Below State headquarters level, the program is set up in operating areas of one or more counties, each headed by an area supervisor and one or more assistant area supervisors, who are federal employees, with sometimes a State representative as a counterpart for the area supervisor. At Program headquarters and State and area levels in the projects, staff members are professional people, i.e., entomologists, engineers, vector control specialists, sanitarians, health educators, and others as needed.

The largest segment of staff is made up of inspector-spraymen and their foremen, who are State employees. These are the men who work from door-to-door inspecting for Aedes aegypti, spraying as needed, and teaching the importance of container removal or proper management. They are in daily contact with the public and sometimes are the only contact between the program and the people.

Extension of Operations

Operations were expanded in 1965 to include more of the heavily infested localities of Puerto Rico, Florida, and Texas. Initial program plans were also completed for Hawaii. At this same time preliminary work was initiated in Alabama, Georgia, and South Carolina and operations

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started in these States in some heavily infested metropolitan areas in 1966. Due to budgetary constraints, it became necessary late in 1966 to effect some re-programming of the United States' effort in order to apply adequate pressure on the Aedes aegypti population in an area large enough to more readily assure success.

FACTORS AFFECTING BUDGETARY CONSIDERATIONS

Although the United States was formally committed to eradication of Aedes aegypti from the Western Hemisphere, there was recurrent discussion of the priority such a campaign should receive when compared with other urgent needs for funding of federal programs. It was pointed out that the last epidemic of yellow fever in the United States had occurred in 1905; the last reported case was introduced in 1924. Quarantine regulations, which required immunization of travelers from places where yellow fever was endemic, had prevented introduction of the disease for many years. There were doubts as to the advisability of expending large sums for eradication and even as to the possibility of accomplishing such a difficult objective. Compared to other problems, the elimination of Aedes aegypti had little appeal to the health departments of southeastern states and certainly had negligable support from the general public. At the same time, it was recognized that this species of mosquito was also capable of transmitting dengue fever and that immunization was unavailable to guard against this disease. More important, many countries of Latin America had completed eradication at great expense and were greatly concerned that delay in action by the United States would result in reinfestation. It was clear that any stretch-out in the schedule for eradication from the United States would not only increase total costs of the campaign but also place our

neighbors to the south in jeopardy of recurrent problems of public health due to inadvertent export of the yellow fever mosquito from infested to clean areas. Thus, progress toward eradication became more of an international concern than a domestic issue.

PROGRAM CHANGES

In August of 1966, Mr. D. J. Schliessmann was reassigned to work on international malaria eradication and Dr. James V. Smith was appointed Chief of the Aedes aegypti Eradication Program. At this time it had become apparent that the initial plan for rapid extension of eradication operations to all areas of infestation would have to be abandoned pending necessary funding. Many decisions on establishment of additional local operations were logical and desirable if adequate resources were forthcoming in the next year. However, the expected increases in budgetary support were far short of planned expansion and operations were overextended to an extent that did not permit eradication progress in many local areas. These preparatory areas were valuable for one or possibly two years if they could then be phased into full-scale attack. Lacking funds for the planned phasing, it became necessary to readjust and concentrate resources to apply successful pressure on the *Aedes aegypti* population. Such readjustments were necessarily slow and painful due to a natural desire of States and cities to retain popular federal programs and of reluctance on the part of both federal and contract employees to accept transfers.

Research Developments

Continuing research has resulted in solution of numerous operational problems involving insecticides, equipment, and methods for detection and

destruction of the mosquito population. Outstanding examples include development of Abate and ovitraps. Abate, a new insecticide, was tested and proved both safe and effective for treatment to kill mosquito larvae in pottable water found in cisterns and barrels in Virgin Islands, Puerto Rico, and Hawaii. The ovitrap is a one-pint, black-painted jar containing a small amount of water and a hardboard paddle. Females of Aedes aegypti are attracted to the jar and lay their eggs on the hardboard paddle. Use of ovitraps has proved to be a more sensitive and efficient means for detecting presence of this mosquito than traditional larval surveys.

Current Status

By January 1968, the operational activities had resulted in marked and general reduction of heavy initial Aedes aegypti populations where concentrated cyclic efforts have been made. Eradication was far from complete. Of the 26,744 infested zones; 88 percent were not yet operational, 6 percent were under concentrated attack, and 6 percent had entered the consolidation phase with reduced forces to detect and eliminate isolated infestations or reinfestations which may be found.

Experience has shown the feasibility of eradicating Aedes aegypti in this country whenever well-trained and adequately supervised personnel are provided with sufficient resources. Because the goal is complete eradication of the species, the undertaking is complex, costly, and exacting. Experience has shown that progress requires continuous and

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simultaneous pressure against the species over relatively large geographical area. Reinfestation is a continuing possibility, requiring careful surveillance and detailed planning to provide an overall strategy that moves forward with minimum risk of regression.

LIST OF CONTRIBUTORS

Harvey B. Morlan

Ecological Investigations Program

ECOLOGICAL INVESTIGATIONS PROGRAM

The Ecological Investigations Program was organized and began operations in July 1966. It was officially established in January 1967 with the responsibility to (1) plan, direct, and coordinate field station activities which include (a) viral meningitis and encephalitis; (b) hepatitis and gastroenteritis; (c) respiratory infections caused by viruses, bacteria, and fungi; (d) plague and other zoonoses; (e) schistosomiasis and other tropical diseases; and (f) epidemiology of oncogenic viruses; (2) develop measures for prevention and control of the communicable diseases under investigation.

Although the Ecological Investigations Program was created in 1966, it was made up primarily by reorganization of field stations which were in existence in 1963.

The Ecological Investigations Program headquarters, which are on the grounds of the University of Kansas Medical Center in Kansas City, Kansas, was formerly the Kansas City Field Station of the Epidemiology Branch of the Communicable Disease Center and was under the direction of Dr. M. L. Furcolow. When the National Communicable Disease Center was reorganized in 1966, it was felt that the mission of the Epidemiology Program should be to gather statistical data and other epidemiologic information, and that a new Program should oversee the applied investigative duties. For this purpose the Ecological Investigations Program, first known as the Investigations Program, was created with the Kansas City Field Station as its nucleus.

Added to this nucleus were other related field stations and their projects. From the Technology Branch came the Encephalitis Section, Greeley, Colorado; the Phoenix Field Station Section; the San Francisco Field Station; and the

Schistosomiasis Unit of the Technological Development Laboratories, which was located in San Juan, Puerto Rico.

When the Ecological Investigations Program was created, Dr. Tom D. Y. Chin, Chief, Kansas City Field Station, was appointed Chief of the new program; Dr. Fred E. Tosh, Chief, Mycoses Unit, Kansas City Field Station, was appointed Deputy Chief; and Dr. Archie D. Hess, Chief, Greeley Field Station, was appointed Assistant Chief. At the same time, as a reflection of proposed reorientation of activities within the program, the San Francisco Field Station and San Juan Field Station were retitled Zoonoses Section and Tropical Disease Section, respectively. The Greeley facility was retitled Disease Ecology Section, since streptococcal disease studies had already been initiated there in addition to the already established arboviral studies.

In 1963 the Kansas City Field Station sheltered the Virus Disease and Pulmonary Mycoses Units under the direction of Dr. M. L. Furcolow. When Dr. Furcolow retired in April 1964, Dr. Chin succeeded him, moving up from Assistant Chief to Chief of the station. He reorganized the station, adding Office of the Chief as a unit and developing a plan for leukemia study groups.

When the Ecological Investigations Program was established, the Virus and Mycoses Units were raised to section status. Viral studies were enlarged to include neurotropic and oncogenic viruses in addition to the enteroviruses and respiratory virus studies undertaken heretofore. Mycoses studies were expanded in the direction of control and decontamination of sources of infection. The Office of the Chief was reorganized to include services and activities as follows: Administrative Services under Mr. Dean E. Smith, Administrative

Officer; Laboratory Management under Mr. Clifton R. Gravelle, Laboratory Management Officer; Statistical and Publication Services under Miss Irene L. Doto, Chief; and the Leukemia and Oncogenic Virus Activities with Dr. William J. Flynt, Acting Chief.

The Mycoses Section has been under the direction of Dr. Tosh, Acting Chief, who succeeded Dr. Furcolow as Chief, Pulmonary Mycoses Unit, in 1964. This section has concentrated its attention on the systemic fungal diseases. Studies have included investigations aimed at defining the clinical courses of the diseases and pinpointing and controlling sources of infection. Advances have also been made in diagnostic techniques, skin test antigens, and the ecology of pathogenic fungi.

The Virus Disease Section, an outgrowth of the Virus Disease Unit established by Dr. Chin at Kansas City, concentrates on respiratory enterovirus and neurotropic virus diseases, evaluating developmental vaccines, and new laboratory and diagnostic techniques as well as providing consultative services in these areas. Personnel stationed in Bethel and Anchorage, Alaska, participate in longitudinal studies of acute respiratory diseases. Upon becoming Chief of the Kansas City Field Station, Dr. Chin appointed Dr. William Paul Glezen to succeed him as Chief of the Virus Disease Unit. Dr. Glezen departed in 1965 to be succeeded by Dr. Jack D. Poland, who continued as Chief after the reorganization in 1966 until July 1968 when he departed Kansas City for Fort Collins to become Chief of the Zoonoses Section, newly transferred from San Francisco.

The Zoonoses Section, prior to its incorporation into the Ecological Investigations Program was known as the San Francisco Field Station of the Technology Branch. Headed by Dr. Frank M. Prince until his retirement in

April 1967, the Zoonoses Section was directed by Dr. Leo Kartman until July 1968. Dr. Jack D. Poland has served as chief since then. Throughout its history this Section has been concerned primarily with plague and its control. Animal diseases transferable to man, such ailments as tularemia, leptospirosis, and pasteurella infections, have been receiving increasing attention. In connection with plague research and control, the Section has maintained a station at Window Rock, Arizona. As stated above, the Section was transferred to the Ecological Investigations Laboratories in Fort Collins in June 1968, and Dr. Poland has been named Chief.

As the Encephalitis Section of the Technology Branch, the Greeley Field Station dealt with anthropod-borne encephalitides and related water-resources problems under the direction of Dr. Archie D. Hess. The Section conducted related activities in Taunton, Massachusetts; Hale County, Texas; Kern County, California; and later in Hawaii. In 1964 a streptococcal unit was incorporated into the Section. When the Ecological Investigations Program took over the field station, the name was changed to Disease Ecology Section. Just prior to the move to Fort Collins from Greeley and the accompanying name change to Ecological Investigations Laboratories, a reorganization in the spring of 1967 split the Section into the Arbovirus and Streptococcal Disease Sections, under the direction of Dr. Richard O. Hayes and Dr. Robert A. Zimmerman, respectively.

The Ecological Investigations Laboratories at Fort Collins opened in June 1967 after completing a move from its original quarters in Greeley, Colorado. The new three-story building housing laboratories, offices, and the Office of the Assistant Chief is located on the Foothills Campus of the Colorado State University.

The Tropical Disease Section, formerly a part of the Technological Development Laboratories at Savannah, Georgia, has maintained a continuous campaign against schistosomiasis under the guidance of Dr. Frederick F. Ferguson. Both chemical and biological means of controlling the intermediate snail host have been attempted in addition to alerting the human population in Puerto Rico.

The Phoenix Field Station Section formerly was also a part of the Technology Branch. Directed until his retirement in November 1966 by Dr. Melvin H. Goodwin, Jr., the Station concentrated its efforts on the etiology and treatment of enteric viruses and hepatitis on the Indian Reservations of Arizona. In 1964 the Section contracted with the National Aeronautics and Space Administration to develop standards in laboratory procedures and personnel training in planetary quarantine operations and decontamination of spacecraft. A laboratory for part of the National Aeronautic and Space Administration project is maintained at Cape Kennedy. From November 1966 until January, 1968, Dr. Gory J. Love headed the Section. Dr. Martin S. Favero, Chief of the Planetary Quarantine Unit, served as Acting Chief of the Station in the interim between the departure of Dr. Love and the arrival of Dr. James E. Maynard in August 1968.

In its activities, the Ecological Investigations Program has worked with a number of other agencies and organizations. Epidemiological investigations have been conducted in communities, public schools, childrens' homes, and other appropriate populations. Assistance has been provided to the States in coping with health problems which fall within the scope of the Program's competence.

Program headquarters in Kansas City has had extensive instructional, consultant, and research relations with the University of Kansas Medical Center since the Station's establishment. Studies by the Leukemia and Oncogenic

Virus Activities have involved state and local health authorities in Wisconsin, South Dakota, and Nebraska.

The Mycoses Section at Kansas City has worked through a number of public and private sanatoriums throughout the Midwest in providing case assistance and gathering research data on the mycoses, especially histoplasmosis.

The Virus Disease Section has maintained personnel in Anchorage and Bethel, Alaska, for research on acute respiratory diseases. These personnel have had contact with Alaskan native health authorities as well as the Arctic Health Research Center. A research relationship is also maintained with several childrens' homes in the Kansas City area.

The Ecological Investigations Laboratories, situated on the Foothills Campus of Colorado State University, has cooperated with both that University and with the University of California, Berkeley, and state and local health departments in studies and training projects involving all the Sections headquartered at Fort Collins.

The Arboviral Disease Section has conducted activities in Texas, Hawaii, California, and Massachusetts. Epidemiologic investigations and mosquito control procedures have been carried out in encephalitis epidemic areas of Texas with the Section's guidance.

A number of epidemiologic investigations have been conducted by the Streptococcal Disease Section. The Section has been especially active in Colorado, Wyoming, and the Indian reservations of the Northwest.

The Zoonoses Section has worked closely with the Bureau of Indian Affairs and a number of state health departments in the West and Southwest in con-

junction with its work on the status and epidemiology of plague. In February and March 1968, personnel from Ecological Investigations Program served as consultants to the Indonesian government in its efforts to contain an epidemic of plague in that country.

The Phoenix Field Station Section has worked under contract with the National Aeronautics and Space Administration since 1964 to develop standards and laboratory methods in planetary quarantine procedures and decontamination of spacecraft. With the cooperation of the Bureau of Indian Affairs, the enteric virus unit has conducted population studies on the southwestern Indian reservations.

The Tropical Disease Section works in conjunction with the Puerto Rico Department of Public Health to train workers in health education and schistosomiasis control. In cooperation with the University of Puerto Rico School of Medicine, it also conducts a graduate seminar in schistosomiasis and its controls.

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EPIDEMIOLOGY PROGRAM HISTORY

The Epidemiology Program has the responsibility for the surveillance and investigation of communicable diseases of national importance, consultative services to state and local health departments, and recruitment, training, and career development of a cadre of epidemiologists to carry out the above responsibilities and to strengthen the epidemiological resources of the nation.

Since November 1963, two new sections have been added: Family Planning Evaluation, and Leukemia Surveillance. The Family Planning activity has grown from one physician assigned to the Grady Hospital Family Planning Clinic on an experimental basis in 1964 to the establishment of the Family Planning Evaluation Section in 1967; in January 1968, the staff included nine physicians, one statistician, and one public health advisor. Each officer is assigned to an individually negotiated collaborative project either at NCDC headquarters, Grady Hospital, with state or local health departments, or with consultants. A former staff officer is now serving in a family planning program in Ceylon and another is Director of the West Pakistan Research Center in Family Planning in Lahore.

On July 1, 1965, the Leukemia Surveillance Section was established in the Epidemiology Program. However, before the establishment of a formal program, our staff was actively engaged in leukemia surveillance. In 1964, a study of identical twins (children) concordant for leukemia was initiated in cooperation with the Department of Epidemiology,

Harvard School of Public Health. In 1965, pilot studies in leukemia case surveillance in the United States were established. During 1966-1967, 583 cases of leukemia were investigated.

In the fall of 1967, the surveillance of congenital defects and their relation to leukemia was begun in cooperation with Emory University and the Georgia Department of Public Health.

Also since 1963, new responsibilities have been added in cholera research, parasitic diseases, and rabies research.

In 1965, Dr. A. D. Langmuir, Chief, Epidemiology Program, was appointed to the SEATO Cholera Research Advisory Council. That same year NCDC provided assistance to the SEATO Cholera Research Laboratory, Dacca, East Pakistan, in further developing its epidemiologic program. Since 1966, we have assigned two physicians to the laboratory on a full time basis, and each year send epidemiologists to the laboratory on short term assignments, especially during the cholera season. NCDC also supports the Dacca laboratory with backup support in its own cholera laboratory.

In November 1967, the Parasitic Disease Drug Service was formed in Epidemiology Program. This service was organized to satisfy the growing demand for anti-parasitic agents, many of which are unlicensed or not readily available in this country. The first drug sponsored by the Drug Service was Pentamidine isethionate. This is indicated in the treatment of *Pneumocystis carinii* pneumonia and the early stages of sleeping sickness due to *Trypanosoma gambiense*. In addition,

the following drugs are now available: Niclosamide (Yomesan) for the treatment of cestode infections, and Parenteral Chloroquine and Parenteral Quinine for the treatment of falciparum malaria.

In 1967, the Rabies Investigations Laboratory was named the Rabies Reference Laboratory for the Americas by the World Health Organization. Working through the Pan American Health Organization, the staff of the laboratory has provided technical assistance in rabies control and training in diagnostic techniques to at least three countries in Latin America.

In 1963, the major communicable disease problems being encountered by NCDC were salmonellosis, hepatitis, encephalitis, measles, hospital infections, and influenza.

In light of the extent and importance of the salmonellosis problem in the United States, the Communicable Disease Center sponsored a National Conference on Salmonellosis in Atlanta in March of 1964. Over 200 representatives from state and federal agencies, industries, and universities attended. The multiple interrelated facets of the problems associated with salmonellosis were presented in formal papers and discussed in informal sessions. The interchange of ideas that transpired was instrumental in opening channels of communications necessary to the development of a successful salmonella control program.

Following the establishment of the Salmonellosis Surveillance Program in 1962, the National Communicable Disease Center, the Food and Drug Administration, and the National Academy of Sciences

have collaborated in efforts to delineate and solve the salmonella problem. From 1963 through 1967, 37 outbreaks of salmonellosis -- 11 interstate -- have been investigated and brought under control.

One of the largest outbreaks of salmonellosis occurred in 1963, when 822 isolations of Salmonella derby were made from patients, staff, or employees of 53 hospitals in 13 states. Epidemiological investigation indicated that the organism had been introduced into the hospitals by a common source involved in interstate movement. Raw or undercooked eggs were implicated as the common vehicle of infection.

In 1965 and early 1966, an outbreak of 29 cases of S. new brunswick, involving 17 states, was investigated. Instant nonfat dry milk, a commercial product not previously implicated in salmonellosis, was recognized as the common vehicle of infection. The same serotype was isolated from patients, shelf samples of the product, and from a single large milk-drying plant.

By 1963, the poliomyelitis problem had been essentially solved. However, there was the nagging question about the use of the Sabin vaccine in adults. For a 2-year period from July 1962 to July 1964 a special Surgeon General's Advisory Committee on Poliomyelitis Vaccines wrestled with this problem. It was finally resolved with the recommendation that use of Sabin vaccine be limited to children under 18 years of age. In 1963, a total of 336 cases of paralytic polio were reported in the United States. In 1964, of 122 cases reported, 106 were paralytic; in 1965 of the 72 cases reported, 61 were paralytic,

and in 1966 because of an epidemic of polio in southern Texas and Mexico, the total jumped up to 113 cases, 106 of which were paralytic. A new low was reached in 1967 with only 53 cases, 40 of which were paralytic. Polio is still a major world health problem, and epidemic assistance to foreign countries has been an integral part of the program, such as when teams were sent to British Guiana in 1963 and Nicaragua in 1967.

Encephalitis is still a major health problem in the United States. The 1962 epidemic of St. Louis encephalitis in Tampa and St. Petersburg, Fla., was followed by major epidemics in Houston, Texas -- 276 cases -- in 1964, and in Dallas and Corpus Christi -- 258 cases -- in 1966. Since 1963, a new agent, California Encephalitis, has become a significant problem with more than 50 cases reported each year in the east north central states.

Viral hepatitis, both the infectious and serum types, has continued to be a major problem. We have been engaged in increasingly intensified surveillance of these problems; in 1963, eight outbreaks of infectious hepatitis were investigated and brought under control. This number included an outbreak of 66 cases in Sitka, Alaska, in which person to person transmission was suspected. The administration of gamma globulin to family members prevented secondary household cases.

In 1967, an outbreak of serum hepatitis in Morris County, New Jersey, reemphasized the problem of this disease among persons

engaged in the illicit use of parenteral drugs. Fourteen of 57 known addicts developed jaundice over a 3-month period. This investigation prompted a detailed examination of narcotics-associated viral hepatitis in New Jersey; during the period July 1963 to March 31, 1967, of the 1599 cases of viral hepatitis between the ages of 15 to 29 years, 263 or 16.5 percent could be associated with the use of narcotics. In 1967, considerable risk of acquiring viral hepatitis was demonstrated among patients on chronic hemodialysis and hospital staff caring for these patients.

Hospital infections are a continuing problem. Approximately 5 percent of all patients who enter hospitals acquire infections while there. There are 30,000,000 acute care admissions to hospitals each year; approximately 1,500,000 of these acquire hospital infections. At a conservative cost of $60 per person added expense, this is $90,000,000 these infections cost the public each year. The major organisms that cause hospital infections are Staphylococcus aureus and Escherichia coli. In recent years there has been an increase in the number of infections caused by gram negative organisms, especially Pseudomonas and Klebsiella. One third of all hospital infections are associated with the urinary tract; in most instances these result from catheterization of the bladder. Studies of closed drainage systems indicate many of these infections can be prevented.

Control methods involve the prevention of cross infections and particularly the use of good isolation techniques. We have developed

a manual describing precautions needed in isolation of patients with different infectious diseases. Control of the above hospital infections depends on the ability to systematically detect them; the Hospital Infections Unit has been deeply involved in promoting and evaluating surveillance techniques for hospital infections.

On August 15, 1965, the President signed the Bill which extended the Vaccination Assistance Act to include measles. Although the measles vaccine had been licensed in March 1963 and was in limited use by private physicians, measles was still a major problem. In 1963, a total of 381,156 cases were reported. At the onset of the eradication program, emphasis was placed on intensified surveillance -- including case finding and epidemiological investigation -- and encouragement of the use of the vaccine.

By mid-1967, 100 organizations had joined NCDC in Measles Eradication 1967. More than 40 state health departments were conducting state-wide measles eradication programs and hundreds of city and county health departments were likewise engaged. For the first 9 weeks of 1968, reported measles totaled only 5 percent of the number reported for a similar period in 1962, the year before the measles vaccine was licensed. Only a mop-up program remains for the immediate future involving the fighting of small brushfire epidemics in a few non-immunized areas of the country. Health departments will support a continuing program of vaccinating future generations of youngsters as they reach 1 year of age.

For 17 years, the Epidemic Intelligence Service has provided the main source of qualified professional personnel not only for the Epidemiology Program, but also for many of the activities of the PHS. The Service recruits and trains epidemiologists who are assigned to many activities of NCDC, state and local health departments, international health agencies, and special research projects. Since its inception in 1951, 576 physicians, veterinarians, statisticians, public health nurses, dentists, microbiologists, and an anthropologist, mycologist, and public health advisor have been recruited and trained, or are now in training. In November 1963, 70 active EIS officers were on duty and another 7 were in the career development program. In July 1968, 122 active EIS epidemiologists were on duty with another three participating in the career development program. Of the 447 epidemiologists who had completed training by July 1968, 115 are now in government service in health related jobs, 14 are in state and local health departments, 115 are in full time academic positions conducting research and teaching public health or preventive medicine, four are in family planning activities, two are medical missionaries, 116 are in private practice or business, and 81 are now taking further graduate training. EIS officers have gone out to positions of responsibility and importance: The present Surgeon General of the Public Health Service, an assistant Surgeon General, and two state health officers are alumni of the EIS. Also the chiefs of the Smallpox Eradication Program, the Malaria Eradication Program, and the Ecological Investigations Program are former EIS Officers.

A continuing responsibility of the Epidemiology Program is the publication of the Morbidity and Mortality Weekly Report which serves as an archive for reports of communicable diseases from state health departments and from 123 cities that report mortality due to influenza and pneumonia. This report is a communication medium for disseminating current information on control of communicable diseases. Included in this report are narrative accounts of current epidemics as they occur, regular surveillance summaries of communicable diseases of national importance and the official statements of the Surgeon General's Advisory Committee on Immunization Practices. In July 1968, the distribution was approximately 17,000 copies per week.

Laboratory Program

Departmental

History

of

LABORATORY PROGRAM

NATIONAL COMMUNICABLE DISEASE CENTER

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

U.S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

ATLANTA, GEORGIA 30333

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LABORATORY PROGRAM

INTRODUCTION

In 1946 the Malaria Blood Parasite Laboratory was established on the second floor of a building on Peachtree Street in downtown Atlanta. This laboratory was set up as a follow-up laboratory, to examine specimens from military men returning from stations in the Pacific during World War II who were known to have had malaria.

The next year bacteriologists and mycologists were recruited for this embryonic program. A tuberculosis laboratory sponsored by the Tuberculosis Program was established and became part of the Bacteriology Section. By 1949 there were five Sections; one of them, Virology, was located in Montgomery, Alabama. It was not moved to Atlanta until 1960 when the present facility was built.

Between 1949 and 1963, several organizational changes were made in an effort to keep pace with changing public health laboratory needs and an expanding program.

PROGRAM CHANGES

Personnel

In 1950, Laboratory Program employed approximately 150 people; in 1960, approximately 232; on November 22, 1963, the Program had 385 employees; and at the present time, the staff has grown to 631.

The top officials of the Laboratory Program are the Chief and Assistant Chief. These posts are held by U. Pentti Kokko, M.D., Dr.P.H. (Chief), and Roslyn Q. Robinson, Ph.D. (Assistant Chief). Historically, Laboratory Program has only had physicians in these top posts, but Roslyn Robinson, a microbiologist, was appointed early this year (1968) because of the growing awareness of the contributions to be made by paramedical personnel in the health field.

Organization

On November 22, 1963, Laboratory Program consisted of seven Sections: 1) Bacteriology, 2) Biological Reagents, 3) Laboratory Consultation and Development, 4) Medical Laboratory, 5) Mycology and Parasitology, 6) Scientific Services, and 7) Virology.

Since 1963, several changes have occurred in the Laboratory Program. The Mycology and Parasitology Section was divided into two separate Sections that were given equal status to reflect the growing importance of both fields in public health. They became the Mycology Section and the Parasitology Section.

In September 1965, the Laboratory Program accepted the responsibility from the U. S. Army Biologic Center at Fort Detrick, Frederick, Maryland, for distributing certain rare vaccines to personnel whose occupations place them at high risk of infection. The Laboratory Program created an Investigational Vaccines Activity to handle this responsibility which was organizationally located in the Office of the Chief. After the program was established, it was transferred to the Biological Reagents Section and became known as the Immunobiologics Activity. Before the Laboratory Program accepted this responsibility, these vaccines were unavailable from a practical standpoint. This Activity also assumed the responsibility for procurement or production of immune substances for particularly hazardous agents for the purpose of treating individuals involved in laboratory accidents.

The addition of the Management Consultation Unit to the Laboratory Consultation and Development Section was a new step in efforts to aid the laboratories of the States in every way possible. This Unit has a specialized capability which is essential to State, city and county health departments, as well as to hospitals and other institutions which may be provided these services through the State laboratory director. The facilities planning consultants assist in translating the particular requirements of a laboratory into concrete and steel to create the most efficient working space. This Unit has now been expanded to include consultation to laboratory directors in the entire field of management.

The Licensure and Performance Evaluation Section was established in early 1968 and is now pending approval by the Administration. This Section was created in order to implement the provisions of the Clinical Laboratories Improvement Act (CLIA) of 1967, signed by President Johnson on December 5, 1967. This law concerns the licensure of laboratories engaged in interstate commerce.

Activities

The addition of the Licensure and Performance Evaluation Section is a major program change in the Laboratory Program. Until this Section was established, proficiency testing activities in laboratories were carried out on a voluntary basis, that is, the States volunteered for participation. Since participation in proficiency testing is mandatory for a license to operate in interstate commerce, State laboratories are now morally obligated to meet the same requirements as the licensed laboratories in their State. The same moral obligation extends to Federal laboratories as well. [1]

The establishment and expansion of the Management Consultation Unit was also a change in direction. As laboratory directors became more aware of the relationship between good personnel practices, good budgeting procedures, and good laboratory work, they realized that the management aspects of their operation needed more of their attention. Because of this, the laboratory directors increased their demands to the Laboratory Program for such services.

Another program change involves laboratory work in "chronic diseases" which the Laboratory Program has done. Because of the competency of the Medical Laboratory Section in this field, and the service philosophy of the Program, participation in this work has progressed even though it does not directly involve communicable diseases. A recent innovation

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[1] A REPORT ON LABORATORY PERFORMANCE AND METHODS FOR IMPROVEMENT June, 1967.

in this area is that research and service activities for clinical chemistry and hematology have been funded to a limited degree with direct monies instead of being funded entirely by contracts.

In an effort to upgrade the educational level of State laboratory directors, a doctoral program at the University of North Carolina was established. The program is funded by a NIH grant and pays tuition, fees, and stipends for three to four laboratory directors or assistant laboratory directors each year.

Also contributing to the improvement in educational level of laboratory personnel is the Post Doctoral Residency Training Program established in 1963. The Laboratory Program is now certified by the American Board of Microbiology as an institution offering an acceptable training program in several microbiological specialties.

OPERATING METHODS

The Laboratory Program operates entirely under direct money and reimbursable agreements. The Program has requested granting authority as an additional means of assisting the States, but at present it has no such authority.

Direct Operations

All of Laboratory Program's permanent operations are at its headquarters in Atlanta, except the animal breeding and holding facility at Lawrenceville, Georgia, and the laboratories concerned with cholesterol standardization at Chamblee, Georgia. The Program's objectives involve service through training, consultation, reference diagnosis, evaluation, licensure, production of reagents, and research.

Training courses presented at the Center utilize Center employees, facilities, and supplies. Training courses presented in the field are in cooperation with the State laboratory directors, and often utilize State facilities and some State supplies. A recent innovation has been to assist the State to utilize grant monies of the Bureau of Health Manpower to help pay a portion of their costs as well as the students' costs.

Reference diagnosis work is also done through the State laboratory director - specimens are sent to him and forwarded on to the Laboratory Program if the State does not offer the particular service or if there is a need for confirmation of diagnosis.

The reagents produced by the Laboratory Program are those which are not commercially available or if they are available, are of an unacceptable quality. When the reagents are used as standards, against which to compare the quality of commercial reagents, they are usually distributed in small quantities. Two manuals have been written to guide reagent manufacturers in the production of materials of high quality. One manual is concerned with specifications for more than 1,000 reagents and sets forth acceptable levels of performance for the products, whereas the other is concerned with methods recommended for the evaluation of reagents. Several of the reagents produced by the Laboratory Program have been accepted by the World Health Organization's Biological Standards Committee as International Reference Antisera.

Relationships

States:

The Federal-State-local partnership as practiced by Laboratory Program is a continual flow and exchange of requests, aid, recommendations and development of new projects. The Laboratory Program provides training, consultation and diagnostic aid to local health activities such as hospitals, private laboratories, and universities. All such activities are arranged and conducted through the State laboratory.

The training courses are in the form of headquarter courses (at the Center), field courses (at the laboratory in a State), and bench training (at the Center, individual in nature). Consultation is provided to the State laboratories in facilities planning and management analysis. Laboratory Program does reference diagnostic back-up work for the States

concerning problems of unusual difficulty or performs tests which cannot be carried out in the State laboratories.

The Laboratory Program also provides support for the Center's Epidemic Aid Program.

Other Federal Agencies:

The Laboratory Program has worked with the Division of Medical Care Administration and the Social Security Administration in connection with the regulations for participation by independent laboratories in the Medicare and Medicaid Programs.

The National Center for Chronic Disease Control and the Laboratory Program cooperate in a program to determine the relationship between streptococcal infections and heart disease. Also related to heart disease is a cooperative effort of the Laboratory Program with the National Center for Chronic Disease Control, the National Heart Institute, several universities, and a number of participating private clinics to determine the efficacy of four drugs in reducing cholesterol levels in heart patients.

The Program works with the Agency for International Development (AID) in providing diagnostic services for malaria to underdeveloped countries selected by AID. This work is the responsibility of the Helminthology and Protozoology Unit of the Parasitology Section which is also active in providing service to other Federal organizations. With malaria specimens received from Viet Nam, the Unit makes initial diagnoses and also confirms the diagnoses made by other agencies concerned with health problems among U.S. military and civilian personnel in Viet Nam.

The Program also works in cooperation with the Office of Economic Opportunity (OEO) in providing jobs for the disadvantaged.

At the request of the Commissioner of the Food and Drug Administration, Laboratory Program performed a study on the organization and operating procedures of that Administration's various field offices. As the former Chief of the Center, Dr. James L. Goddard recognized the competency of the Laboratory Program in this area and realized that the conditions in the Administration's field offices could be improved.

Cooperative research programs are also carried out with other agencies of the Federal government with whom there is a common interest such as the National Center for Urban and Industrial Health, the U.S. Army Biologic Center at Fort Detrick, the U.S. Navy and Air Force, the Veterans Administration, the Atomic Energy Commission at Oak Ridge, Tennessee, and certain divisions of the National Institutes of Health (NIH) such as the Division of Biologic Standards and the National Institute of Allergy and Infectious Diseases.

National and International Reference Centers:

In cooperation with the World Health Organization (WHO), the Laboratory Program serves as reference centers in a number of areas. These are: WHO International Shigella Center, WHO International Influenza Center for the Americas, WHO Regional Reference Center for Respiratory Virus Diseases other than Influenza, WHO Regional Reference Center for Arboviruses, WHO Regional Reference Center for Smallpox, and the WHO Reference Laboratory for the Standardization of Cholesterol Measurement.

In addition there are a number of Nationally designated reference centers in Laboratory Program. They are: the National Streptococcal Disease Center, National Listeria Typing Center, National Center for Enteric Phage Typing, National Reference Center for Bacteriophage

Typing of Staphylococci, National Salmonella Center, National Escherichia Center, and the National Shigella Center.

The Laboratory Program also cooperates with the Pan American Health Organization (PAHO) by providing training, consultation and reagents to investigators in Central and South American laboratories. Cooperative research projects are also developed and carried out between the Program and these investigators.

Public Advisory Committees

On a broad level, the Laboratory Program uses the State laboratory directors as an advisory committee. They meet with the scientists and administrators of the Laboratory Program every two years to hear various program proposals and accomplishments presented and to offer their consideration, comments, and recommendations.

The Laboratory Program uses ad hoc advisory committees for certain specialized problems such as development of reagent specifications - where there is a need for advice and cooperation of the scientific public. A permanent Medical Laboratory Services Advisory Committee has recently been established to provide guidance in the conduct of existing programs or in the initiation of programs to meet new responsibilities.

SUMMARY

By 1963, the Laboratory Program's effort to improve the Nation's laboratories was beginning to develop momentum. Delineation and clarification of the problems causing poor laboratory performance, and which could result in unnecessary suffering, prolonged illness, and death, were beginning to show the steps necessary in redirecting program emphasis. Consequently, less emphasis is now being placed on classical microbiology and taxonomy in research efforts, and more is placed on improving and standardizing diagnostic techniques, including automation. Training has been expanded to include the use of automated equipment and the newer instrumentation techniques in clinical chemistry determinations.

Voluntary participation in evaluation programs was recognized as inadequate, and the lack of requirements and qualification standards for personnel working in laboratories was also recognized as part of the problem of poor performance. As a result, efforts were successfully made to obtain legal authority to license laboratories engaged in interstate commerce, on the basis of personnel qualifications and satisfactory performance in evaluation programs. Efforts to help State laboratory directors obtain this authority in their own States were increased. Contact with commercial manufacturers of reagents was expanded, and they have been supplied with recommended specifications for producing and evaluating reagents.

In recent years, the emphasis in Laboratory Program has shifted from the more internally oriented classical problems to the externally oriented practical problem of laboratory medicine in an effort to meet today's needs.

Foreign Quarantine Program

Foreign Quarantine Program

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FOREIGN QUARANTINE PROGRAM

I. Organizational Changes

A. Structure of Program on November 22, 1963

On November 22, 1963, Foreign Quarantine had the status of a Division within the Bureau of Medical Services with headquarters in Silver Spring, Maryland. The Division consisted of the Office of the Chief and three branches: Domestic Operations, Foreign Operations, and Administration. Chart I, attached, shows this organization.

The Foreign Operations Branch which dealt primarily with medical examination of aliens making application for visas, had an area supervisory office in Paris to cover all European activities and another office in Montreal to cover Canadian activities. Other foreign stations reported directly to the Chief, Foreign Operations Branch.

The Domestic Operations Branch had an area supervisory office at El Paso, Texas, which was responsible to the Division for all quarantine activities along the Mexican-United States Border. All other quarantine stations reported directly to Division of Foreign Quarantine Headquarters in Silver Spring, Maryland.

The Administration Branch took care of all administrative activities at Headquarters and provided certain services to the field stations.

B. Organizational changes since that time

As a result of the reorganization of the Public Health Service during FY 1967, the Division of Foreign Quarantine became a Program of the National Communicable Disease Center of the newly established Bureau of Disease Prevention and Environmental

Control January 1, 1967. The Program moved to the NCDC Headquarters, Atlanta, June 22, 1967. The Administration Branch was abolished and a Program Management Office was established within the Office of the Chief. Many of the services previously supplied by the Administration Branch are now furnished by the Center. The Program Management Office is more directly involved in the development and implementation of program plans.

The Epidemiology and Immunizations Section of what was previously known as the Domestic Operations Branch was reorganized as the Epidemiology and Research Analysis Section with four component units: (1) International Health Statistics Unit with responsibility for collecting and compiling international health data, as well as providing other statistical services; (2) International Epidemiology Unit, which analyzes data concerning quarantinable and other serious illness abroad; (3) International Zoonoses Unit which analyzes data concerning zoonoses abroad; and (4) International Immigration Unit which compiles and disseminates information on vaccination requirements and recommendations for overseas travel. Reorganizational changes are shown in Chart II which is attached.

II. Personnel and Staff Changes

A. Employment on November 22, 1963

B. Present employment

Date	Foreign	Domestic	Headquarters	Total
11-30-63	91	501	26	618
6-30-64	92	513	26	631
6-30-65	104	514	27	645
6-30-66	105	510	28	643
6-30-67	91	491	11	593
6-30-68	85	412	30	527

Above includes only permanent full-time positions. There were an additional 25 (average per year) part-time and WAE employees.

C. Top officials

Dates	Chief
8/61 - 5/64	James G. Telfer, M. D.
7/64 - 1/67	Louis Jacobs, M. D.
3/67 - present	Arthur S. Osborne, M. D.
	Deputy Chief
6/63 - 6/65	Ray H. Vanderhook, M. D.
7/65 - 6/66	Harry S. Wise, M. D.
7/66 - 3/67	Eugene W. Veverka, M. D.
4/67 - present	John H. Hughes, Ph. D.

III. Program Changes

Multiple inspection

A Multiple Inspection Program was implemented at 21 Border Crossing Stations along the Mexican-U. S. Border during 1962. This program required the training and cross designation of over 700 of the other inspectional agencies involved (U. S. Immigration and Naturalization Service, U. S. Customs, and Plant Quarantine). This new inspectional concept made it possible for a single inspector of any one of the four agencies concerned, to admit persons, conveyances, and certain animals and things that were eligible and to refer to a secondary area those persons, conveyances, and animals and things that required more detailed inspection.

In April 1967 a feasibility study on dual inspection by the Public Health Service and the Immigration and Naturalization Service was conducted at John F. Kennedy International Airport, New York. The conclusions were that clearance of traffic could be better facilitated and inspectional personnel could be better utilized by combining inspectional forces.

A Ports-of-Entry Task Force was appointed by the President in December 1967 to assess federal inspection procedures and the impact of

steadily rising passenger arrivals. The Task Force recommended a multiple inspection, one-stop procedure which was to be implemented at JFK and San Antonio International Airports, on a trial basis. This inspectional procedure was put into effect during June 1968 at the airports mentioned. The Task Force also recommended that a dual, or multiple-inspection procedure be implemented at other airports.

Changes in epidemiologic concepts

Following transfer of the Foreign Quarantine Program to NCDC, policies, procedures, and goals have been changed and up-dated according to modern epidemiological concepts. The old theory of the "Maginot Line" of defense is rapidly changing to any early-warning and in-depth type of defense. Accordingly, many changes have been implemented; these include: expanding and liberalizing radio pratique privileges; allowing commingling of passengers of different flights prior to quarantine clearance; change in policy on smallpox vaccination requirement at ports-of-entry and for persons arriving from Mexico; and being more cognizant of high-risk quarantine areas as opposed to an over-all quarantine area.

Inspection of vessels

For many years vessels subject to a quarantine inspection were required to anchor in a designated quarantine anchorage and await inspection. This caused undue delays at a great inconvenience and financial expense to the maritime industry. In cooperation with industry, dockside boarding was further expanded. Vessels presently requiring quarantine inspections, with the exception of New York, New Orleans, and Norfolk, proceed directly to the pier and await quarantine inspection at the dock. Recently, arrangements were made at the U. S. Quarantine Station in New York for the U. S. Coast Guard to provide transportation of inspectors to vessels in the anchorage. In the past the cutters were owned and operated by the Service. This operational change will result in considerable

savings to the government.

Importation of psittacine birds

The regulation governing the importation of psittacine birds was revised and became effective on October 10, 1967. Under the provisions of this regulation, the importation of psittacine birds was liberalized and at the same time the potential hazard of psittacosis infection in humans was further reduced by requiring prophylactic antibiotic medication of imported birds. For the first time since 1946, the commercial importation of psittacine birds, quarantined and prophylactically medicated prior to shipment is allowed.

Contract locations

Prior to 1964, Foreign Quarantine Medical Officers were assigned overseas to perform the visa medical examinations; local national physicians assisted at locations with heavy work loads. A combination of fund limitations, personnel ceilings, or a shortage of medical officers prevented the program from increasing and improving the scope of the Visa Medical Examination Program. Beginning in FY 1964, by agreement with the Department of State and the Bureau of the Budget, funds were made available to establish contract medical examinations at Department of State posts having large numbers of visa applicants. Contract doctors were provided supervision and consultation by the Public Health Service medical officers. Four Public Health Service stations were converted to contract operations and 11 new contract locations were established between FY 1964 and FY 1967. This resulted in an increase from 60 per cent to 80 per cent for the number of visa medical examinations performed under the direct supervision of Public Health Service officers.

Changes due to balance of payments operation

The Foreign Operations participation in the President's 1968 Operation BALPA (Balance of Payments) will result in the closing of the Paris

Headquarters Office, closing of the Canadian Area Headquarters, Montreal, conversion of two Public Health Service stations and seven contract locations in Canada to panel physician operation, and conversion of the Hamburg, Germany, Public Health Service Station to a panel physician operation. These program changes will result in net dollar savings even though Department of State administrative costs will increase for the European Area.

As of January 1969, supervision and consultation for the 14 Public Health Service stations and 14 contract locations outside the United States will be provided from Headquarters, Atlanta, Georgia.

Mental waiver

The 1965 amendments to the Immigration and Nationality Act provided a waiver procedure for entry to the United States for certain aliens with mental retardation or for a previous attack of insanity. This new provision required that a control system be established and mental waiver reviewing officers were designated for the European Area, Western Pacific Area, and the United States.

Epidemiology and research analysis

The collection of epidemiologic information has been systematized with the establishment of an International Health Statistics Library. Through the Department of State arrangements have been made to obtain morbidity and mortality reports by all governments issuing such material. The information is being coded and processed by computer to provide rapid, up-to-date summaries of significant changes. The information is being disseminated through two new publications: (1) Trends in Quarantinable Diseases, published weekly; and (2) International Epidemiologic Report, published quarterly.

Development of container-type vessels and aircraft

The Foreign Quarantine Program is responsible for preventing the introduction of plague-infected rodents and ectoparasites into the

United States. This activity has been implemented mainly by inspection of conveyances arriving from plague-infected areas. Widespread use of containerized vessels and aircraft during recent years, however, has reduced the effectiveness of former inspectional techniques. Emphasis in rodent and ectoparasite surveillance and control methods has shifted from inspection of the conveyance itself to the inspection of the containerized cargo which has been removed from the conveyance. Accordingly, it has been necessary to develop new operational and administrative practices as a result of this technological advance within the transportation industry. Specifically, new rodenticide and insecticide formulations have been developed by the Public Health Service and other agencies for use in vessel and aircraft containers. Measures designed to provide for the preinspection and pretreatment of cargo containers at the point of origin have been developed and coordinated with inspectional activities at the point of destination. Close working relationships have been established between the Public Health Service and other Federal agencies in regard to the inspection of containerized cargo originating in plague-infected areas. The maritime and aviation industries have also actively participated in the necessary planning incidental to these developments.

Development of an automated aircraft disinsection system

Disinsection of aircraft is a method of preventing the importation of arthropods from areas where arthropod-borne diseases are present. In view of the importance of this function, the Foreign Quarantine Program has participated with other Public Health Service agencies in developing an automatic disinsection system which can be used on aircraft engaged in international commerce. This system automatically disperses a fumigant insecticide, commonly known as DDVP or dichlorvos, while the aircraft is in flight. The World Health Organization has endorsed the use of this system on all aircraft making international flights and has adopted it as an official

method of disinsection.

Vector control and sanitation

In April of 1968, the Foreign Quarantine Program realigned its vector control and sanitation activities on an area wide basis. Professional entomologists and sanitarians were assigned to four major quarantine stations as Vector Control and Sanitation Consultants for all quarantine activities located within large geographic areas. This organizational realignment now permits all quarantine stations to obtain immediate professional assistance on vector control and sanitation problems, thereby substantially increasing operational capabilities in these areas.

Consolidation of inspectional personnel within the Foreign Quarantine Program

In July of 1968, all inspectional activities of the Foreign Quarantine Program were being consolidated into a single position description. This action is intended to provide for the most effective and efficient use of Foreign Quarantine Program personnel. Functions previously performed by sanitation and entomological personnel will be conducted by the quarantine inspector staff, thereby permitting maximum resource utilization. An intensive training program has been developed in connection with this transfer of function within the Program.

Farm placement

With the discontinuation of the Farm Placement Program on November 19, 1964, it was no longer necessary for the Division of Foreign Quarantine to examine agricultural workers who were recruited by the U. S. Department of Labor for work on farms in the United States. However, more than 5½ million Mexican workers were examined and over 54,000 were rejected for medical reasons from the time the program began in FY 1952 until it ended. This program was phased out by law in order to make available more employment opportunities to unemployed American farm workers.

IV. Operating Methods

The Division of Foreign Quarantine receives an appropriation for direct operations. No grant funds have been appropriated. Historically, the Division of Foreign Quarantine had interlocking relationships with other Divisions. The most extensive arrangement was with the Division of Hospitals. During the years when the Division of Hospitals and the Division of Foreign Quarantine were under the Bureau of Medical Services, there were many cooperative arrangements between the two Divisions. Where there were hospitals and quarantine stations at the same location, the Medical Officer in Charge of the hospital also served as Medical Officer in Charge of the quarantine station. Space and facilities were shared under formal and informal agreements. In the fall of 1967, following the Foreign Quarantine Program move to NCDC, Atlanta, the long-standing connection with the Division of Hospitals was formally dissolved. Quarantine personnel were made Officers in Charge of the Quarantine Stations and a formal agreement for medical consultation was made with the Division of Hospitals.

As a Division, Foreign Quarantine Headquarters and field staff dealt directly with state government and health officials. Since its affiliation with NCDC, communication with states is through DHEW Regional Offices.

Foreign Quarantine Program Headquarters administers :(1) Domestic Operations activities through U. S. Quarantine Stations located at 400 Ports-of-Entry in Continental United States, Puerto Rico, Virgin Islands, Hawaii, and Alaska; (2) Foreign Operations through Overseas Area Headquarters. Domestic Stations are of four kinds: Type I Stations, with an Officer in Charge and personnel assignment; Type II Stations with personnel assignment; Type III Stations having personnel from Types I and II Stations assigned as needed; and Type IV Stations with contract services only.

Types II, III, and IV Stations are assigned by locations to the

jurisdiction of a Type I Station which furnishes administration and consultation.

The Medical Officers in Charge of Overseas Area Headquarters supervise and give consultation to Visa Medical Examination Units in the assigned area. These Units employ U. S. citizens, Foreign Service locals and, in addition, have contract professional services.

Formal communications between the Chief, Foreign Quarantine Program at Headquarters, and Officers in Charge of quarantine stations and area headquarters are in the form of Program Manuals and Numbered Circulars, transmitting regulations, policies, and procedures. Regular site visits provide consultation and on-the-spot assistance with problem solving. Field operations furnish statistical reporting on workload, manhours, staffing, and epidemiologic intelligence necessary for program evaluation and planning. Additionally, field personnel serve on advisory committees to examine and develop policies and procedures.

Periodic seminars and training courses are held to assure an informed and well-trained field staff.

V. Interagency Relations

A. Other federal agencies

Department of State

The 1965 amendments to the U. S. Immigration and Nationality Act have required close coordination with the visa office in planning and effecting visa medical examination requirements.

U. S. Immigration and Naturalization Service, Customs, and Plant Quarantine Division of the Department of Agriculture

The multiple inspection program has resulted in much closer

liaison and cooperation among the four federal inspectional agencies (Immigration and Naturalization Service, Customs, Plant Quarantine Division of the U. S. Department of Agriculture, and the Foreign Quarantine Program of NCDC). Periodic meetings are held to resolve mutual problems in the area of training, staffing commitments, statistical reporting, methodology, space, and evaluation.

Department of Defense

From 1965 to 1968, the Foreign Quarantine Program has been particularly concerned with the inspection of aircraft and vessels from the Republic of Vietnam. This concern has been due to the large number of human cases of plague reported from that area. The Department of Defense and the Public Health Service have maintained a close working relationship in regard to such inspectional activities, particularly with respect to the rodent inspection of military conveyances. Special training courses have been developed by the Public Health Service in cooperation with the military to provide instruction to military personnel in quarantine inspectional procedures.

General Services Administration

The Program has had many associations with the Public Buildings Service of GSA. During the five and one-half year period, the Program negotiated for space and assisted in the design of new Border Crossing Stations at Nogales, Arizona; Del Rio, Texas; and two at El Paso, Texas with regard to the Chamizal resettlement agreement. In addition, several other stations were refurbished and altered.

Peace Corps

As part of a project to better evaluate health hazards faced by Americans overseas, a cooperative program to computerize

morbidity data for Peace Corps volunteers was initiated in June 1968.

B. International agencies

International Quarantine, World Health Organization

Suggestions for extensive revisions of the International Sanitary Regulations to eliminate unnecessary restrictions on international travel were made to the Expert Committee on International Quarantine. Many of these were adopted in the Committee's report and recommended to the World Health Assembly. Final action has not yet been taken. The changes include:

1. Elimination of louse-borne relapsing fever and typhus fever as quarantinable diseases.
2. Elimination of infected local area concept.
3. Separation of enzootic plague areas from those in which likelihood of human infection is truly significant.
4. Authority for improved reporting and epidemiological analysis of data by World Health Organization.
5. Emphasis upon surveillance of diseases of present and future potential importance: malaria, poliomyelitis, and measles.

C. Federal-State-local partnership

State and local health departments

The Uniform Stamp program for validation of International Certificates of Vaccination by state and local health officers was initiated in 1960 and fully implemented by 1965. Under this state and local health departments have responsibility for validation of Certificates.

In January 1964, the Division of Foreign Quarantine entered into a cooperative agreement and contracted with the City of

Calexico, California, to provide a dog surveillance activity to control the entry of rabid and potentially rabid dogs from Mexico. This activity was subsequently incorporated into a joint United States - Mexico - Pan American Health Organization comprehensive border rabies control program. This program, which was initiated in the Mexican Territory of Baja, California, has since been moved eastwardly to include major population centers and rabies problem areas along the border.

VI. Legislative Relations

A. Studies, investigations

During the past five and one-half years, six studies have been conducted, some of which have markedly changed Foreign Quarantine Program Operations.

First, the joint survey of multiple inspection on the Mexican Border was conducted by representatives of the Immigration and Naturalization Service, Bureau of Customs, Public Health Service, and Plant Quarantine Division, from October 26, 1964, through November 20, 1964. This survey was conducted in order to evaluate the effectiveness of multiple inspection program with regard to faciliating traffic as well as improving man power utilization at all crossing points on the United States-Mexican Border. The study indicated the multiple inspection procedures were working well although certain improvements could be made. These suggestions were adopted and greatly facilitated the multiple inspection process.

Second, in May 1965, a committee was appointed by the Secretary of Health, Education, and Welfare, and the Director, Bureau of the Budget in order to develop a methodology for estimating workloads and related staffing requirements within the Division

of Foreign Quarantine. This committee's draft report presented in May 1966, made several recommendations; however, the recommendations were not implemented due to possible conflict with the June 1966 release of the Report of the Advisory Committee on Foreign Quarantine.

Third, in December 1965, a committee was appointed by the Surgeon General to review and evaluate: (1) the authority and responsibility of the Division of Foreign Quarantine for the conduct of an effective quarantine program for the United States; (2) the appropriateness of major quarantine program activities of the Division of Foreign Quarantine in the light of assigned responsibilities; as well as (3) to recommend modifications, additions, or deletions in the authority and activities which would best meet the quarantine needs of the United States. This committee's report, the Report to the Surgeon General of the U. S. Public Health Service by the Advisory Committee on Foreign Quarantine, made several recommendations updating our quarantine control measures to meet modern technological advances, altering inspectional methods in conjunction with other federal agencies, and the discontinuance of smallpox vaccination of persons coming from Mexico. These, together with increased emphasis on early awareness of disease abroad and increased capabilities for providing defense in depth in the event of importation of disease, also recommended by the Committee, have resulted in profound changes in all areas of Program operations.

Fourth, in April 1967, the Public Health Service and the Immigration and Naturalization Service undertook a study at John F. Kennedy International Airport to determine the feasibility of dual inspection. Although the recommendation was that such a procedure would facilitate traffic as well as improve manpower utilization, it was not implemented due to the subsequent release of the President's Ports-of-Entry Task Force recommendations. As an outcome of this

study, the National Communicable Disease Center conducted management analysis studies at virtually all its Type I and Type II Quarantine Stations from September 10, 1967 through November 17, 1967. Their major recommendations were a reduction-in-force and improvement of the managerial capabilities of the Supervisory Quarantine Inspectors. The reduction-in-force is underway and a concerted effort is being made to strengthen the managerial capabilities of the Supervisory Quarantine Inspectors.

Fifth, the Ports-of-Entry Task Force was appointed by President Johnson in December 1967, to evaluate Federal inspectional procedures as well as the impact of rapidly increasing passenger traffic. The Task Force recommended that a trial multiple inspection one-stop procedure be implemented at John F. Kennedy and San Antonio International Airports by June 15, 1968. This recommendation has been implemented. They further recommended that a dual or multiple inspection procedure be implemented at other international airports within the United States.

B. Financial support

During FY 1963-1967, the Division of Foreign Quarantine was funded by a yearly Congressional appropriation. However, since July 1, 1967, operating funds have been included in the NCDC appropriation.

Certain funds are appropriated which are reimbursed to the government. First, funds are appropriated for the medical examination of visa applicants; however, the State Department collects a fee of $10.00 for each medical examination of a visa applicant performed or contracted for by the Public Health Service (except non-immigrants under United States

government sponsorship or refugees or escapees). These monies are subsequently deposited to the Treasury Department and equal or exceed the funds appropriated. Second, funds are appropriated to pay overtime expenses as specified in Section 364(c) of the Public Health Service Act amended by Public Law 85-58 and Public Law 85-580. Overtime which is paid to employees for inspection of unscheduled arrivals is charged to carriers and is reimbursable. Payment is credited to Foreign Quarantine Program funds for reuse.

During the past five and one-half years, two programs have been carried out under a reimbursable agreement with other government agencies. First, beginning in 1952 and continuing until November 1964, the Department of Labor made available the monies necessary to provide for the medical examination of Mexican agricultural workers who were recruited by the Department of Labor for work in the United States. Second, beginning December 1, 1965 and continuing to the present, the Cuban Refugee Program of the Welfare Administration has provided the funds needed to provide for the medical examination of Cuban refugees prior to or during their arrival in the United States.

VII. External Relations

A. Public advisory committees

The National Advisory Health Council makes recommendations to the Surgeon General on dangerous contagious diseases excludable by law under Section 212(a)(6) of the Immigration and Nationality Act, as amended.

Recommendations concerning vaccines either required or advised for international travel are reviewed by the NCDC Advisory Committee on Immunization Practices. Revised recommendations are formulated for smallpox, typhoid,

paratyphoid, cholera, plague, and typhus vaccines in relation to international travel.

B. Cooperation with volunteer agencies

The Foreign Quarantine Program, NCDC, cooperates with the American Council of Voluntary Agencies for Foreign Service on medical problems relating to the Immigration and Nationality Act. The Program also works actively with missionary societies, church groups, and volunteer organizations in the field of mental retardation.

VIII. Changes in Character or Emphasis

(Omitted)

IX. Legislative History

As of November 1963, the Division of Foreign Quarantine carried out its program of quarantine, sanitation, public information, epidemiological communications, and international activities under the Public Health Service Act, as amended, Title III, Part G: Quarantine and Inspection, Sections 361-369 (42 U.S.C. 264-272) and Foreign Quarantine Regulations (Title 42, Code of Federal Regulations, part 71). Furthermore, under Immigration and Nationality Act of 1952; as amended, specifically Sections 212(a), 212(g), 221(d), 234, and 236 (8 U.S.C. 1182, 1201, 1224, and 1226); and Section 325 of the Public Health Service Act, as amended (42 U.S.C. 252); and Regulations for Medical Examination of Aliens (Title 42 Code of Federal Regulations, part 34), the Division of Foreign Quarantine examined aliens at major United States consulates abroad and at United States ports-of-entry to detect excludable conditions specified in immigration law and applied health controls to certain aliens admitted under excludable disease waivers.

In December 1965, PL 89-236 amended the Immigration and Nationality Act of 1952. This amendment, effective December 1, 1965, repealed the national origin quota provisions of the Immigration and

Nationality Act as well as extended the provisions of conditional entry to eligible relatives who are mentally retarded or who have suffered a previous attack of insanity. Epilepsy was deleted as an excludable condition, and the term "feeble minded" was changed to "mentally retarded."

The Division of Foreign Quarantine also participated in two programs for which the legislation was written for other Federal agencies. The first of these was the Mexican Farm Labor Program authorized in 1951 under Title V of the Agricultural Act of 1949, as amended (Public Law 78), under which authority the Secretary of Labor conducted a program for recruitment of farm workers in Mexico for agricultural employment in the United States. The Department of Labor made funds available to the Division of Foreign Quarantine to provide for medical examination of Mexican farm laborers arriving at designated centers along the Border. This program was closed out December 31, 1964.

The second such arrangement since December 1, 1965 is the Cuban Refugee Program conducted under the authority of 37 U.S.C. 301(a)(4). The Welfare Administration of the Department of Health, Education, and Welfare has made funds available to provide for medical examination of those aliens who leave Cuba.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

BUREAU OF MEDICAL SERVICES

DIVISION OF FOREIGN QUARANTINE

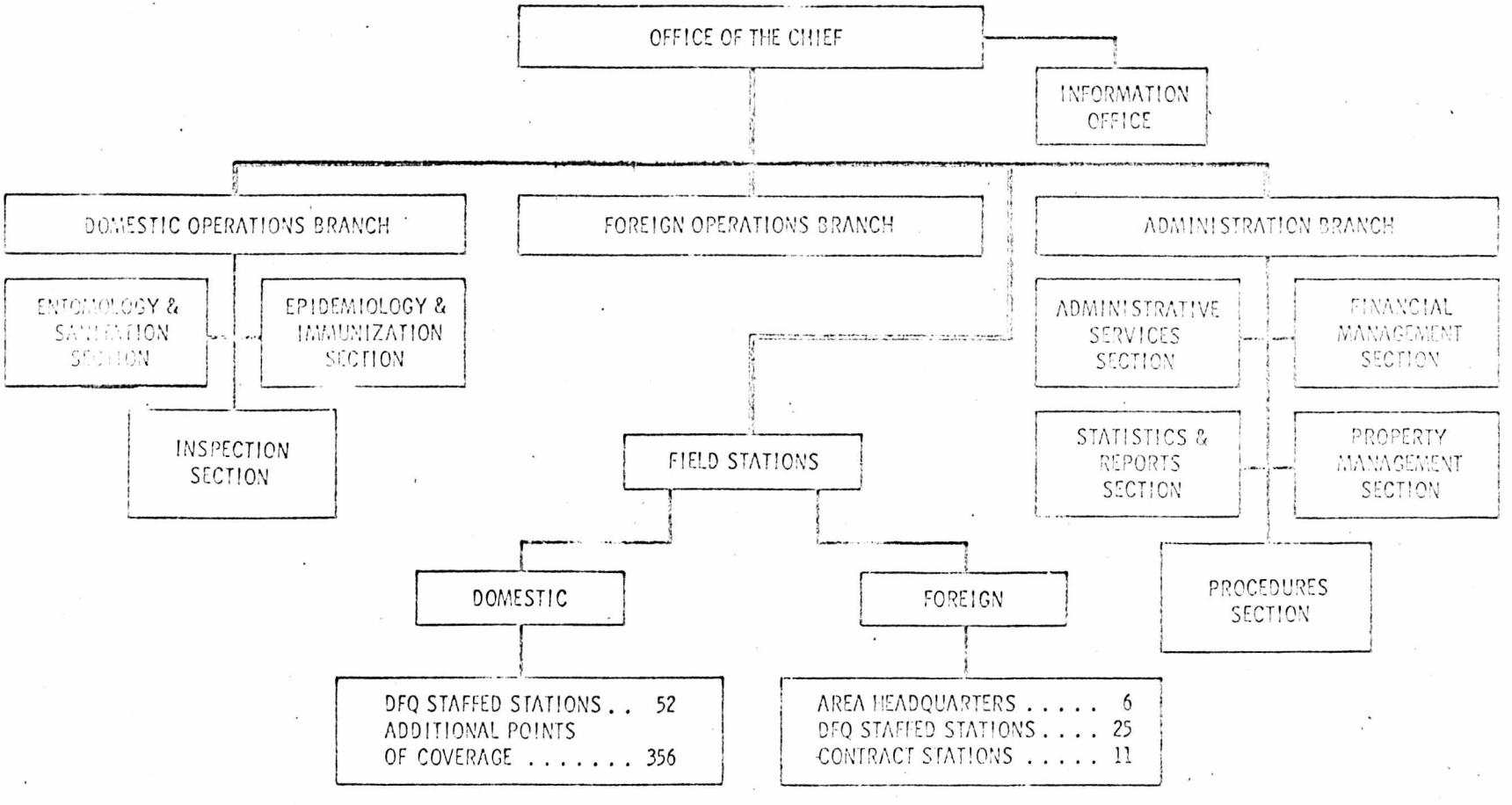
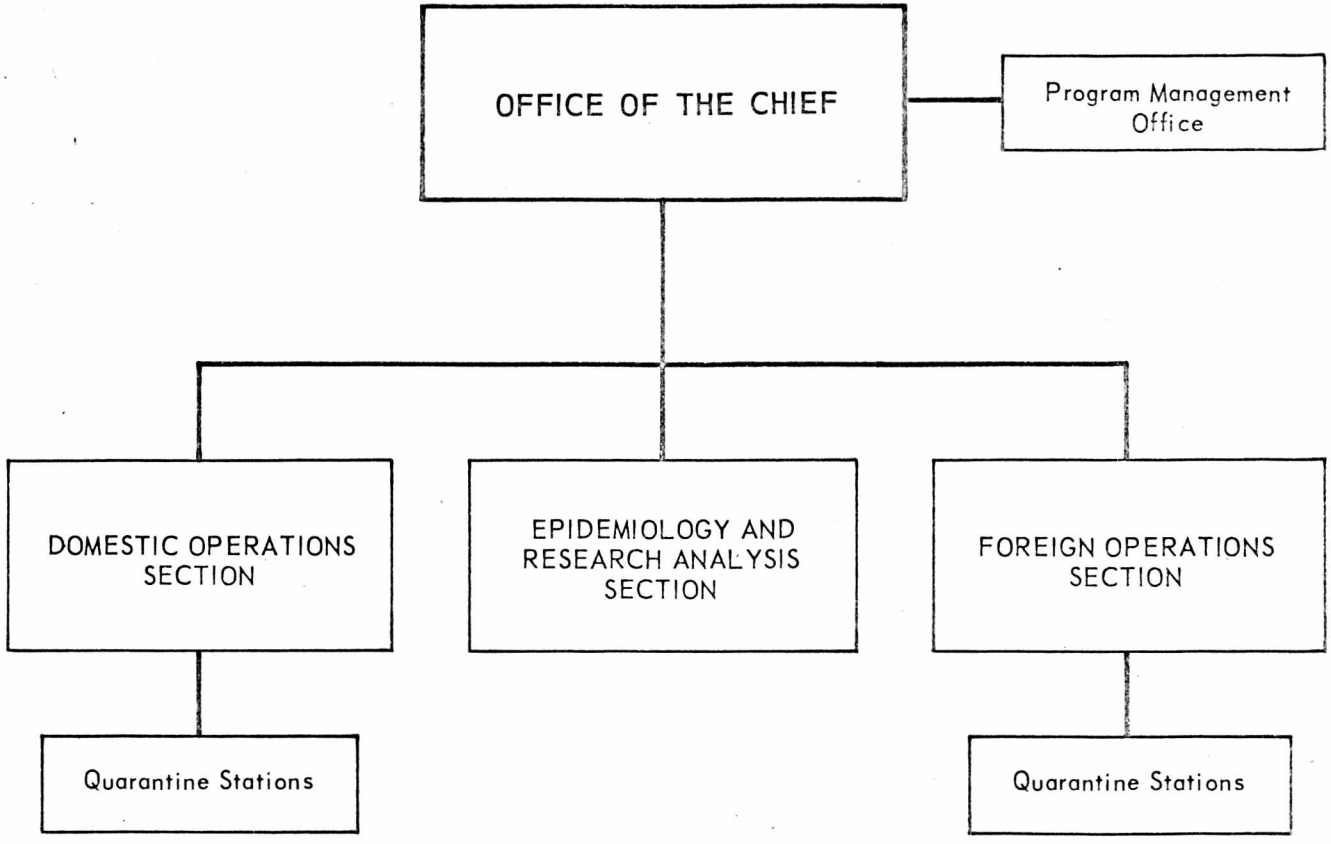


Chart II

NCDC-2561H (0)
September 1967

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
BUREAU OF DISEASE PREVENTION AND ENVIRONMENTAL CONTROL
NATIONAL COMMUNICABLE DISEASE CENTER
FOREIGN QUARANTINE PROGRAM



FOREIGN QUARANTINE PROGRAM

Portion of History:		Contributors:
I.	Organizational Changes	Mr. Joseph Giordano Mr. Elvin Hilyer
II.	Personnel and Staff Changes	Miss Elizabeth Lee
III.	Program Changes	Mr. Edward Larson Mr. John D'Agnese Mr. Richard O'Connor
IV.	Operating Methods	Miss Elizabeth Lee
V.	Interagency Relations	Dr. James Mosley Mr. John D'Agnese
VI.	Legislative Relations	Mr. Joseph Giordano Mr. Anthony Scardaci
VII.	External Relations	Dr. John H. Hughes
VIII.	Changes in Character or Emphasis	(Omitted)
IX.	Legislative History	Dr. John Hughes Mr. Anthony Scardaci

Immunization Program

IMMUNIZATION PROGRAM

Program Organization and Structural Changes

Program Development and Status, November 22, 1963

A bill to assist States and communities to carry out intensive vaccination programs designed to protect their populations, especially all preschool children, against poliomyelitis, diphtheria, whooping cough, and tetanus, and against other diseases which may in the future become susceptible of practical elimination as a public health problem through such programs was enacted by Congress and entitled the Vaccination Assistance Act of 1962. This Act (Public Law 87-868) was the result of words spoken by the President on February 27, 1962. These words were a call for action to erase a blot on the health record of the nation. "There is no longer any reason why an American child should suffer from polio, diphtheria, whooping cough, or tetanus. Diseases which can cause death or serious consequences throughout a lifetime which can be prevented but which still prevail in too many cases." The year that the President made his plea there were more than 500 deaths from these diseases alone. These deaths need never have occurred. Former Secretary of Health, Education and Welfare, Abraham Ribicoff, testified in 1962 on the need of a nationwide vaccination program. Before the House of Representatives he said, "The existing vaccination programs conducted in many communities have been reasonably effective in reaching some groups of the population but they have two major weaknesses. First, they have been so closely related to school admissions that they provided poor coverage of preschool children. Second, they have been least effective in reaching families in low income neighborhoods. The latter difficulty

is not due simply to the cost barrier, for the problem has been encountered in such neighborhoods even when vaccination is readily available without charge."

Funds were appropriated in May 1963 and the National Communicable Disease Center was charged with the responsibility of administering and carrying out the provisions of this Act. An organizational unit designated as Immunization Activities was established in the Office of the Center Chief in 1963. A small headquarters staff of 9 persons was selected to spearhead the Program. The first Immunization Project Grant was made in June 1963. By November 1963, 30 project grants had been awarded. Twenty-two of these to States and 8 to local health departments. Approximately 47% of the population of the United States resided in communities covered by project grants.

The problem facing this new organization was an obvious challenge, for during the year of 1963 there were 444 cases of diphtheria, 910 cases of poliomyelitis, 322 cases of tetanus, and 481,530 cases of measles reported to the National Communicable Disease Center. In the years to follow major strides were to be made in the overall reduction and the virtual elimination of several of these diseases as public health hazards. The purpose of the legislation was clear. Reduce the backlog of inadequately immunized children and establish effective ongoing programs.

Subsequent Development and Current Program Status

Additional legislation extending the Vaccination Assistance Act (Public Law 89-109) was passed August 5, 1965. The Act now included the means of launching measles eradication programs throughout the United States, as well as, extending the authority for another three years.

During the years from November 22, 1963, through the present time, Immunization Programs continued to develop and meet with success throughout the country. Immunization Activities achieved Program status January 1, 1967. As of July 1968, the expanded headquarters staff consisted of the Office of the Chief, Program Services and Technical Services Sections with a total staff of 30 persons. In addition, there are now 72 Immunization Projects throughout the United States. Forty-eight State and 24 local projects serve communities totaling over 183,000,000 people which represents over 90% of the Nation's population. To these projects are assigned 76 Public Health Advisors and 41 Officers of the Epidemic Intelligence Service to assist with the administrative and technical aspects of Immunization Program operations, particularly mass immunization campaigns and infant immunization surveillance systems.

Mass campaigns for disease eradication have been conducted on a widespread basis in virtually all of the States. Mass campaigns have been used as a means of epidemic control as well as the rapid elimination of large backlogs of inadequately immunized children. While a campaign is designed to last, normally, no more than one day, many have run as long as two weeks.

Hundreds of mass campaigns have been conducted on a statewide, county-by-county, and metropolitan area basis during the past several years. It is through the use of these campaigns that a large portion of the susceptible population has been protected.

Infant Immunization Surveillance Systems are currently operating in most State and City Project Grant areas. The remaining areas are planning to commence implementation in the near future. The purpose of these programs is to insure early and adequate immunizations for each year's newborn population. Disease protection stressed in this system is against diphtheria, tetanus, pertussis, measles, and polio. Several areas have also included smallpox immunizations, tuberculin skin testing, and PKU tests, or combinations of these.

The basic operation of these systems is quite similar for all of the project areas. Each area utilizes information recorded from the birth certificate to initiate a program of individual followup that includes mailings, phone calls, and home visits to the parents of the child. When the child is approximately 3 to 6 months of age a business reply card along with an explanatory promotional package is mailed to the parents. The parent is requested to return the card indicating what immunizations the child has received. If no response is received the mailing procedure is repeated. If there is still no response an attempt is made to contact the parents by telephone. Finally, especially in lower socioeconomic areas, a project nurse or immunization field

representative visits the home in order to determine immunization status and encourage the parents to seek immunizations for the child.

Through the concerted efforts of Federal, State, and local health agencies, as well as, numerous community organizations, during the past several years definite progress has been achieved in the control of measles, poliomyelitis, and other diseases. During the first six months of 1968 noteworthy reductions have been realized. Thus far only 1 case of diphtheria, 29 cases of poliomyelitis, 75 cases of tetanus, and 18,190 cases of measles have been reported to the National Communicable Disease Center. It can be conservatively estimated that the Immunization Program has prevented ten million cases of measles, including 10,000 cases of measles encephalitis, 1,000 deaths, and an unknown number of cases of mental retardation.

Operating Methods

The common method of carrying out the overall purpose of the Immunization Program is through the project grant mechanism.

In general, project grant funds were authorized for use by State and local health departments to purchase vaccine for preschool children, to employ personnel, to organize and administer Immunization programs, to improve laboratory and epidemiologic surveillance, and for promotional and publicity activities.

Vaccine contracts were negotiated to enable many areas to utilize those biologicals that heretofore had been too expensive to use in massive eradication and control efforts. The first measles vaccine contract was let February 15, 1966. During the first contract year 1,588,000 doses were ordered for use in Immunization Projects throughout the country.

As more projects were added requests for measles vaccine increased. To handle the increased demand, during the second contract year two measles vaccine contracts were let with a total of 3,074,000 doses being ordered. In addition, the first oral polio vaccine contract was issued with a total of 2,231,000 doses being requested. Thus far in 1968 a total of 1,047,000 doses of measles vaccine and 1,512,000 doses of polio vaccine have been used by Immunization Projects.

It should be mentioned at this point that without the legislation which made measles vaccine available for project use that more than 250 measles epidemic control programs would not have been possible.

Interagency Relations

The Immunization Program has cooperated with such agencies as the Office of Economic Opportunity and Housing and Urban Development, as well as, international agencies such as the Agency for International Development and the United Nations particularly in the realm of measles eradication programs. Numerous mass measles immunization programs have been undertaken in cooperation with the Republic of Mexico along the southwest

border of the United States. Epidemiological assistance has been given to various countries in South America and the Trust Territories through loans of jet injector equipment and personnel.

Change in Emphasis

When the Immunization Program was conceived its primary purpose was to reduce the backlog of inadequately immunized children and assist in the establishment of ongoing immunization programs. Since November 22, 1963, the reduction of the backlog of unimmunized children has been achieved and emphasis has changed and expanded to the establishment of programs for the eventual eradication of these several diseases.

Malaria Eradication Program

NATIONAL COMMUNICABLE DISEASE CENTER

MALARIA ERADICATION PROGRAM HISTORY

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NATIONAL COMMUNICABLE DISEASE CENTER

MALARIA ERADICATION PROGRAM HISTORY

Introduction

Under an agreement (Appendixes A and B) signed on March 3, 1966, with the Agency for International Development (AID), the Public Health Service (PHS) assumed responsibility for administering the worldwide malaria eradication program which AID is currently supporting and intends to support until the program is completed. Because of the technical resources and personnel at the command of the PHS, AID believed that the PHS was in a better position to effectively carry out a health program of this magnitude. Subsequently, on July 29, 1966, the PHS officially established the Malaria Eradication Program within the National Communicable Disease Center (NCDC) in Atlanta, Georgia, to carry out this program of financial, technical, and personnel assistance.

Organizational Changes

In addition to the Office of the Chief and Program Management Services, Malaria Eradication Program headquarters was organized to include four sections: Operations, Evaluation, Training, and Research. Also, a total of 39 AID overseas personnel, employed in U.S.-assisted malaria eradication programs, were transferred to the PHS. Presently, the Program consists of 111 employees. Of these, 39 are employed at NCDC headquarters while 72 are assigned overseas as advisors to the U.S.-assisted country programs. Dr. Robert L. Kaiser, Chief, Malaria Eradication Program, is

assisted by Dr. David J. M. MacKenzie, Special Consultant to the Chief; Dr. Andre J. Lebrun, Assistant Chief; Mr. Russell E. Fontaine, Chief, Operations Section; Dr. Robert G. Scholtens, Chief, Evaluation Section; Dr. Kenneth D. Quarterman, Chief, Research Section; and Dr. David D. Bonnet, Acting Chief, Training Section.

Operating Methods

Of the four sections, Operations is the largest and has the immediate responsibility for helping participating countries carry out the actual eradication program. Headquarters personnel frequently visit country programs to make operational and administrative assessments. Other operations personnel are located in every participating country, and the Chief Malaria Advisor in each country is directly responsible to the Chief, Operations Section, Malaria Eradication Program, NCDC. His job is to aid the country program in making long-range plans and budget estimates, and, as needed, to advise, assist, and demonstrate technical skills, policies, and procedures for the participating countries. Depending on the size of the program and the nature of the malaria problem, operations field staff may include, in addition to a Chief Malaria Advisor, entomologists, epidemiologists, supply specialists, equipment maintenance specialists, administrative advisors, business managers, and health educators.

Evaluation Section was established separate from the normal operational and administrative functions of the Program to assess the ability of country programs to assess their progress and problems and to assist in studies or data analyses relating to the evaluation of progress or

problems. This separate activity was considered necessary because of the amount of U.S. support of the country programs and because of the continued effort needed to effectively evaluate the accomplishment of goals.

Evaluation Section personnel visit participating countries to observe, review, and evaluate the programs. They check the validity of field records, examine trends in the disease, and review such special problems as mosquito resistance to DDT and parasite resistance to drugs. The Section has two regional offices: in Manila for the Far East and in San Salvador for Central America. Ideally, a third office should also be established in New Delhi for the Near East and South Asia. At the present time, most of the Evaluation staff are physicians with epidemiological experience and statisticians.

Training Section is responsible for designing instructional material and visual aids and planning, coordinating, and conducting training programs in malaria eradication in cooperation with personnel of other NCDC Programs, AID, the World Health Organization (WHO), the Pan American Health Organization (PAHO), and malaria training organizations in participating countries. One regional Malaria Eradication Training Center is located in Manila for English-speaking people. Ideally, a second training center should be established in Central America for Spanish-speaking country program personnel. Physicians, epidemiologists, entomologists, public health administrators, statisticians, and engineers, with experience as teachers and administrators, are used to carry out the Section's goals at headquarters and in the training center.

Research Section was established to develop methods and procedures which would overcome current technical obstacles to eradication or would achieve the goal of eradication in a more efficient and expeditious manner. Because some mosquito vectors of malaria have a physiological resistance to insecticides used or have habits which do not bring them into contact with the insecticides as now applied, new insecticides and procedures for vector control, as well as other methods of fighting malaria, such as mass drug treatment, have to be developed. In addition, many programs are proving more costly than anticipated and are falling short of their programmed goals. Much of this problem could be corrected by better means of malaria diagnosis, case detection, treatment, and operational procedures which would ensure more thorough protection of the population at risk of malaria.

To achieve these objectives, the Central America Malaria Research Station, to be staffed by a multidisciplinary team of 13 U.S. specialists supported by 45 country nationals, has been established in San Salvador, El Salvador; and a similar five-man team is anticipated for Bangkok, Thailand. Additional field activities may be required in other locations for problems that cannot be handled by these two stations. Operational research activities of this type require the services of epidemiologists, parasitologists, entomologists, engineers, chemists, and health educators.

Currently, the U.S. Government is assisting 18 countries with their malaria eradication programs: Brazil, Costa Rica, Ecuador, El Salvador, Ethiopia, Guatemala, Haiti, Honduras, India, Jordan, Nepal, Nicaragua, Pakistan, Panama, Paraguay, Philippines, Thailand, and Vietnam. Of a

total population of approximately 843 million in these 18 countries, 730 million live in originally malarious areas. Of these, 258 million (35 percent) live in areas now free of malaria, and an additional 392 million (54 percent) are protected by on-going programs.

Since 1957, the United States has contributed approximately $230 million in grants or loans toward malaria eradication through direct bilateral arrangements with various countries. In addition, the United States has authorized the use of approximately $200 million in local currencies (Public Law 480 funds). Most of this money is used within the United States to buy such commodities as DDT, vehicles, and spray pumps. Although important, the U.S. contribution represents only approximately 20 percent of the total cost of these programs; the remainder is provided largely by the country governments themselves with some additional aid from such international organizations as WHO, PAHO, and the United Nations Children's Fund (UNICEF), which also provide technical and commodity support. The United States contributes approximately 31 percent, 66 percent, and 40 percent respectively to the budgets of these organizations. The total average cost of malaria eradication during the past ten years has been slightly more than $100 million a year; the total average U.S. contribution during the same time period has been approximately $21 million per year.

Interagency Relations

The Participating Agency Service Agreement (PASA) (Appendix B)

between AID and PHS granted considerable authority and responsibility to the PHS. The PHS was to "assume responsibility for the administration of the malaria eradication program which AID is currently supporting and intends to support until completed" and the PHS was "to employ and assign such personnel overseas as may be required to implement this agreement." The PHS's efforts to assume this responsibility and implement an effective program have failed, in a number of instances, to be successful.

The reasons for this lack of success are several:

1. Within the AID structure, financial or technical assistance to country projects, such as malaria eradication, is, in actual practice, controlled by the AID Mission Chief who, within total funds available and a personnel ceiling, must determine priorities for assistance. The competitive nature of this arrangement as well as the individual interests of the Mission Chief have, in a number of countries, made it difficult and sometimes impossible to obtain funds and technical personnel needed to adequately support a malaria program.
2. Basic AID policy, as established by legislation, places emphasis on loans, rather than grants, whenever possible. Despite the worthy intent of this policy, a number of situations have occurred which have set the malaria programs back and have made providing the necessary technical assistance impossible. In a number of countries where grants have been suspended in favor of loans, the time taken to negotiate the loan resulted in

several years of very limited antimalaria activities. By the time the loan agreement was signed, malaria transmission had extensively resumed and the funds provided for in the loan were insufficient to contend with the malaria problem as it currently existed.

Another aspect of loan funding, which seriously retards the effectiveness of PHS efforts to support the needs of malaria programs, relates to loan funding of PHS technicians. Governments entering into a loan agreement are in many instances unwilling to pay for salary or other costs needed to support the PHS technicians required. The absence of technicians within these countries or inadequate within-country travel costs for technicians means that the PHS is extremely limited in taking any responsibility in U.S. involvement in country malaria programs.

Although many attempts are being made by AID and the PHS to settle these problems on an individual basis, results so far are not encouraging. Seemingly, the responsibilities as set forth in the PASA may be inconsistent with what can be accomplished under the current governing policies of AID.

LIST OF CONTRIBUTORS

Dr. Robert L. Kaiser, Chief, Malaria Eradication Program

Dr. John W. McDowell

APPENDIXES

APPENDIX A

GENERAL AGREEMENT BETWEEN THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE AND THE AGENCY FOR INTERNATIONAL DEVELOPMENT

GENERAL AGREEMENT BETWEEN THE

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

AND THE

AGENCY FOR INTERNATIONAL DEVELOPMENT

I. Purpose

This Agreement establishes the framework for cooperative relationships between the Department of Health, Education, and Welfare (hereinafter referred to as the Department) and the Agency for International Development (hereinafter referred to as AID) in carrying out the provisions of Section 632(b) of the Foreign Assistance Act of 1961, as amended.

II. Underlying Premises

The building of the human and institutional resources essential to sustained national development of the less developed societies is a long-term, complex and exacting process. Effective U.S. assistance to this process requires a vigorous technical assistance program, demanding the use of the best professional skills and institutional resources available in the United States. The U.S. has a vital interest in the attitudes, skills, motivation and well-being of the people of the developing countries, and in the characteristics of the institutions they build, for these are the factors which ultimately determine the nature of their developing societies.

AID recognizes the unique personnel resources, capabilities and experience of the Department relevant to this task; it seeks through this agreement, therefore, to enlist as fully and effectively as possible on a partnership basis, the pertinent resources of the Department in planning, executing and evaluating those portions of the foreign assistance program in which it has special competence. 1/

In furtherance of broad U.S. objectives, the Department recognizes its responsibility, within its authority, to contribute toward U.S. foreign policy by participation in foreign assistance programs.

III. Planning, Coordination and Consultation

Effective cooperation between AID and the Department requires adequate arrangements for joint planning, coordination and consultation. These arrangements may include, but are not limited to the following:

1/ These underlying premises, as expressed in AID Policy Directive 23 - "Mobilizing U.S. Government Resources in Support of Foreign Assistance", dated Aug. 12, 1964, are stated in greater detail in AID Manual Order Series 240.

A. The Administrator of AID and the Secretary of Health, Education, and Welfare will each designate a senior officer to coordinate basic negotiations and matters of general policy under this Agreement. The Department and AID will similarly designate appropriate channels for contacts on operations within their subdivision.

B. Joint arrangements may be made for: (1) examining country development plans, total U.S. country assistance programs and, as feasible, those of other U.S. Government or U.S. private organizations, foreign government and other entities participating in economic assistance programs, relevant to the activities the Department might be requested by AID to undertake; (2) reviewing activities proposed by AID for the Department's consideration, including participation in field surveys and (3) evaluating the effectiveness of current and completed Departmental activities on behalf of AID, including operating procedures.

C. In order to facilitate the Department's planning, AID will give the Department the maximum possible advance notice of projected AID requirements for services. The Department will advise AID as early as feasible as to its ability to provide these services.

D. In providing services under this Agreement the Department may use private sources with the concurrence of AID.

IV. Service Agreements

Services which are rendered by the Department either in the U.S. or overseas will be governed by individual Service Agreements except as outlined in Section V.B. below and Appendix III. A Service Agreement will define the scope, location and duration of the service, the personnel requirements, costs, method of financing, and special implementation conditions not otherwise stipulated in this Agreement or required by AID regulations. Arrangements covering Service Agreements and personnel serving under such agreements are contained in Appendices I and II to this Agreement. PASA's may be signed by properly authorized officers of each agency.

V. Types of Assistance

The types of assistance which the Department agrees to provide AID, upon its request, may involve but are not confined to the following:

A. Project Services

A project service can be specifically defined in terms of planned end result, estimated cost, location of implementation and duration. A project may range from a short feasibility

survey to the assumption of a world-wide service over a period of years subject to the availability of resources. It may involve the assignment or temporary detail of a group of technicians or in some instances of a single expert. In providing such a service either in the U.S. or overseas, the Department will assume operating responsibility for the project, which may involve staffing, supervising, backstopping, procurement, inspecting, evaluation and reporting.

B. Technical Consultation and Support Services

Technical consultation and support services cover any service, in support of the foreign assistance program which cannot be characterized as a project or staff service and which is normally performed in the U.S. on a continuing basis. Such support services may include the furnishing of technical information and advice, backstopping of project services in the field, assistance in recruiting technical experts and the provision of training and procurement services, in the fields of competence of the Department, in accordance with Appendices III, IV, and V to this Agreement.

C. Staff Services

A staff service involves the detail or assignment of an individual officer in the uniformed services to fill an A.I.D. staff position overseas. Persons detailed or assigned for staff duty with A.I.D. will be entirely under the supervision and direction of A.I.D. However, questions concerning an officer's status will be dealt with directly between the Department and the officer concerned.

Arrangements covering the assignment or detail of Departmental personnel to A.I.D. are outlined in Appendix II to this Agreement.

VI. Professional Development

The Department considers foreign service for its employees of such importance that it will assure that such service will be fully recognized in their career development and promotion within the Department. A.I.D. will encourage such professional development activities as attendance at appropriate professional meetings, professional publications, research appropriate to their assignments and full utilization of their professional advice and counsel in Agency program planning. To the extent appropriate and feasible, the Department will participate in orientation and other personnel development functions of A.I.D.

VII. Operating Relationships

A. In the United States

General technical and project services provided in the United States will be carried out by the Department in accordance with its established procedures.

B. Overseas

1. Department personnel assigned overseas as members of an A.I.D. mission under this Agreement will receive support, benefits and privileges on the same terms as they are provided to A.I.D. direct-hire personnel and as permitted under legal and A.I.D. regulatory requirements.

2. Unless mutually agreed otherwise, the Department will utilize personnel on its rolls insofar as possible in providing services under this Agreement.

3. Personnel of the Department detailed or assigned for duty overseas with A.I.D. under this Agreement will be administratively responsible to the U.S.A.I.D. Director or his designee on matters of personal conduct, public relations and general program and policy direction. Disciplinary action, if called for, must be taken by the Department. It is the responsibility of A.I.D. to notify the Department promptly of developments which might require such action.

4. With respect to project services, official communications on technical, professional and personnel matters may be direct or through A.I.D. channels at the option of the Department, provided that copies of communications sent directly will be simultaneously provided to A.I.D. mission and AID/Washington headquarters. Official communications dealing with A.I.D. program and policy matters will be transmitted through regular A.I.D. channels. With respect to staff services, all communications except personnel matters are through A.I.D. channels.

5. Problems that arise in the operation of service agreements will be resolved between the U.S. AID Director or his designee and the Department's senior officer at the mission. In the absence of a mutually satisfactory solution the U.S. AID Director may, if he deems it necessary, direct that this views be followed pending decision on the matter in Washington.

VIII. Reporting and Evaluation

In order to facilitate evaluation of the foreign assistance program, the Department agrees to provide AID with project progress and administrative reports as required in AID Manual Orders on the Participating Agency Service Agreements (PASAs) or as otherwise agreed and to assist AID in making periodic reviews of costs and performances.

The US AID Director has a responsibility for continuing evaluation through observation and reports of all projects and programs under his direction.

IX. Termination of Services

If AID or the Department finds it necessary to cancel in whole or in part any project or service under this Agreement, AID agrees to reimburse the Department for appropriate costs which are mutually agreed in writing.

X. Financing

AID will provide the Department with timely forecasts of general requirements in each category of service for its guidance and planning.

AID will provide financial support to the Department for its project or staff services in accordance with the specific agreement set forth in the AID Controller's letter of June 30, 1964, and the HEW Comptroller's acceptance of July 12, 1964, or such other arrangements as may be mutually agreed.

XI. Termination or Amendment of Agreement and Appendices

The Agreement and its Appendices will continue in force until termination by either party upon giving ninety days written notice to the other party; provided that its continuation shall be subject to Congressional action. Either party to this Agreement may propose amendments to the Agreement. Subsequent amendments to the Appendices of the Agreement based on changes in operating procedures or due to legislative requirements will be executed by the Assistant Secretary of the Department charged with the international affairs of the Department or his authorized representative and the Assistant Administrator, Office of Technical Cooperation and Research or his authorized representative.

Not more than three years after the signing of this Agreement, the Department and AID will conduct a joint review of activities under the Agreement to determine whether it will remain in force, or in what respects, if any, it should be modified.

XII. Effective Date

The effective date of this General Agreement and its Appendices shall be the latest date affixed below.

APPROVED:

John W. Gardner
Secretary
Department of Health,
Education and Welfare

March 3, 1966
Date

APPROVED:

David S. Bell
Administrator
Agency for International
Development

March 3, 1966
Date

SUPPLEMENTARY AGREEMENT

APPENDIX I
TO
GENERAL AGREEMENT
BETWEEN THE
AGENCY FOR INTERNATIONAL DEVELOPMENT
AND THE
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

SUBJECT: Participating Agency Service Agreements

The participation of the Department in various aspects of the foreign assistance program, other than technical support, training and procurement services rendered in the U.S., is covered by Participating Agency Service Agreements (PASAs) entered into under the basic terms of the General Agreement between the Department and AID. The following provisions apply generally to all PASAs:

1. Form and Content

A PASA will usually consist of (a) a face sheet, (b) a Budget Plan and (c) a Project Implementation Order/Technical Services (PIO/T) (which includes a statement of Scope of Work which is sufficiently detailed to provide all information necessary to plan and effect the service, and which provides the basis for evaluation of performance). If the PASA covers services which are to be rendered beyond the fiscal year in which the agreement is entered into, the PIO/T includes a summary Scope of Work covering the entire service, as well as an annual Scope of Work. The initial Budget Plan also covers both the estimated total cost of the service and the first fiscal year of operations. Each fiscal year a new PIO/T will be issued to provide additional funds, and as required, a new Scope of Work and Budget Plan will be issued.

II. Duration

The PASA includes the duration of a given project or service.

A specific date for the projected termination of the service covered by a PASA is always stated. This date may be extended by amendment to the PASA.

III. Effective Date

A PASA is effective as of the date of the last AID or Department signature on the agreement, unless another date is specified.

IV. Amendment and Termination of Agreement

PASAs should be appropriately amended, by mutual agreement.

In the event that circumstances are such that AID or the Department deems it necessary or desirable to terminate a PASA before completion of the services to be provided, AID and the Department will consult in advance on such termination and, insofar as possible, will fix a termination date sufficiently in advance so that the parties may make personnel and other adjustments in their operations in the light of such termination. The establishment of a termination date is documented in a format prescribed by AID for signature by the Department and the AID official (or their successors) who signed the original PASA.

If AID or the Department finds it necessary to cancel in whole or in part any project or service, AID will reimburse the participating agency for liabilities relating to termination.

V. Progress Evaluation

In order to facilitate the evaluation of specific services, the Department will prepare periodic reports on implementation progress, including any problems encountered in rendering the services. Such reports will be submitted to: (2) the US AID Director or his designee, and the appropriate AID/W office - for services on behalf of a US AID, (b) the appropriate AID/W office - for services on behalf of AID/W or of a regional or interregional nature.

Unless specified otherwise in an individual PASA, either directly or by reference to an AID issuance, the frequency of such reports will be (a) upon request of AID - for services of less than one year; or (b) quarterly for services of one year or more. Where a completion of service report is required, the Department will make such a submission, where feasible, not later than 60 days after the service or project is completed.

Where the format, number of copies required, and content of progress reports for specific types of services are not stipulated in AID issuances, they will be mutually agreed upon at the time the agreement is entered into so as to meet the operating requirements of both the Department and AID. The Department may, in addition to AID's reporting requirements, establish other reporting requirements from its personnel to satisfy its own supervisory responsibility.

VI. Contracting Under a Service Agreement

When a contract with a private, international or other non-U.S. Government organization is necessary to implement a particular project, AID normally enters directly into such an arrangement. However, under the terms of a PASA, AID may authorize the Department to enter into a contract to implement a specific phase of a project. If such a contract involves the performance of services outside the U.S. the Department will take appropriate action to assure compliance with the loyalty and security investiagtion requirements of Section III of the Foreign Assistance and Related Agencies Appropriation Act of 1966 (Public Law 89-273), or similar law which may be in effect and any regulations or directives issued in connection with such law or with AID requirements for personnel approval. The certification of security clearance will be made by the Department. AID will reimburse the Department for the cost of such investigations.

VII. Maintenance and Disposition of Records

Records and files accumulated and maintained by Department personnel in connection with overseas activities undertaken pursuant to a Service Agreement will be the property of the Department, which will be responsible for their maintenance and will determine and effect their final disposition. If requested and authorized in writing by the Department, AID personnel in the field will arrange for the destruction without screening of those records which have been determined by the Department to be eligible for destruction. However, property records required to validate the inventory paid for from AID funds will be retained and turned over to AID.

VIII. Disposition of Property

All property, including vehicles, equipment, and supplies purchased by the Department relative to and financed under a PASA covering an overseas activity will be turned over to and will become the property of AID upon completion of that activity, unless the PASA specifically provides otherwise. The Department will maintain itemized property records on all non-expendable items costing more than $50 each, showing description, date acquired and from whom, cost and location.

SUPPLEMENTARY AGREEMENT

APPENDIX II
TO
GENERAL AGREEMENT
BETWEEN THE
AGENCY FOR INTERNATIONAL DEVELOPMENT
AND THE
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

SUBJECT: Personnel Arrangements

I. General

The implementation of Participating Agency Service Agreements (PASAs) may entail the utilization of Department personnel resources in a variety of ways depending on the nature and magnitude of the services to be rendered.

As used in this agreement, and subsequent implementing documents and related correspondence - (a) the overseas "assignment" of Department personnel is understood to entail the establishment of an overseas position and the assignment or appointment of an employee to that position for a tour of duty, with the employee remaining on the Department's payroll, (b) the overseas "detail" of Department personnel to the AID program to provide either project or staff services is understood to entail temporary duty (reimbursable or non-reimbursable detail) with a US AID with no change in the individual's employment status with the Department.

In providing personnel services under this agreement the Department may -

A. For Project Services:

(A given project may require any one or a combination of these staffing arrangements):

1. Assign or appoint employees to fill positions established to implement project service PASAs in the US.

2. Detail employees for temporary duty overseas.

3. Assign employees overseas for a tour of duty in an overseas position specifically established by the Department pursuant to a PASA.

B. For Staff Services:

Assign officers of the uniformed services to AID staff positions overseas.

II. Arrangements Applicable to Service in the US

Department personnel appointed or assigned by the Department to duties in the US relating to the foreign assistance program, either for technical support services (including training and related services) under a General Agreement or project services under a PASA, are governed wholly by the Department's rules and regulations.

Under certain circumstances, AID may request and the Department may agree to provide the services of a Department employee to occupy an AID staff position in the US on a detail basis. Such a detail is not considered as constituting technical services and is not covered by a PASA.

III. Arrangements Applicable to Overseas Service

The following basic arrangements are applicable, prima facie, to the overseas detail or assignment of Department personnel in the foreign assistance program. Specific guidance and requirements are provided in AID manual orders. 1/ They apply uniformly to all Federal government employees engaged in any phase of the foreign assistance program overseas and are designed to insure that such employees are treated equitably while on such duty, that the basic requirements for such duty are equally applicable to AID and Department personnel and that to insure effectiveness and economy of operations, the principle of coordinated programming and management is carried out in both the planning and implementation phases of the foreign assistance program.

In the event the Department is to provide services in a country where there is no US AID, AID/W will make appropriate arrangements to have the functions and responsibilities of a US AID as outlined herein, assumed by the Chief of the Diplomatic Mission, or his designee, or will make other appropriate arrangements.

1/ Manual Order 416.6 - Participating Agency Appointments and Employment

A. All Overseas Service

1. Security

AID security regulations apply to all Department personnel (and dependents, where applicable) detailed or assigned to the AID program. An employee may not depart for an overseas post until such clearance is obtained. The Department will arrange for the necessary investigation and certify the security clearance. 2/

2. Standards of Conduct

The conduct, both official and social, of Department personnel (and dependents) assigned to US AIDs must at all times be acceptable to AID and the cooperating country. Discipline of such personnel is a responsibility of the Department - in collaboration with AID, as appropriate. However, AID may have occasion to request that an employee be relieved of his duty. In such an instance, the Department will arrange for the prompt withdrawal of the employee from the US AID. AID will provide the Department with information concerning the circumstances of the case, and such other information concerning the conduct of the employee, as may be necessary to meet the requirements of the Department. In an emergency situation, as determined by the US AID Director, the US AID may issue travel orders and arrange for travel pending administrative action by the Department.

3. Mission Clearance

Each Department employee proposed for an overseas assignment is nominated to the US AID for the purpose of obtaining US AID and cooperating country concurrence as appropriate. This nomination is prepared by the Department and approved and transmitted by AID. Such clearance must be obtained before the employee may be authorized to depart for an overseas post.

2/ Manual Order 244.1 - Procedure for Assigning Participating Agency Personnel Overseas Under a Participating Agency Service Agreement.

4. Administrative Support

AID through the US AID will provide Department personnel with adequate common supporting services including ordinary supplies and equipment and administrative support comparable to services provided AID direct-hire technical assistance personnel, e.g., office supplies, official transportation, office space and equipment and administrative assistance except in cases where the PASA specifies that the Department or the cooperating country will provide any one or all of such support services.

5. Briefing and De-Briefing

AID general orientation and program briefing will be given in addition to briefing required by the Department, unless mutually agreed otherwise in specific instances. Personnel returning from duty overseas will be available to AID for consultation and de-briefing.

B. Overseas Details

1. Departmental personnel detailed overseas for temporary duty under a PASA under authority of Section 632 (b) of the Foreign Assistance Act of 1961, as amended, continue to occupy their position in the Department. Such details are normally not in excess of 6 months.

2. The participating agency authorizes, arranges and pays for the employee's international travel, and per diem for such travel, as prescribed in Standardized Government Travel Regulations or Joint Travel Regulations (governing the Uniformed Services), as appropriate. The Department and AID recognize that maximum use is to be made of local currencies in accordance with Bureau of the Budget Bulletin #65-5, September 15, 1964, and subsequent Department of State and AID notices. In those instances when local currencies are available in countries listed in Bureau of the Budget Bulletin #65-5, and subsequent additions, the PASA will specify when US dollar or local currency expenditures are to be authorized and include necessary procedural guidance.

3. All travel authorizations should remind travelers to use designated AID or Embassy cashiers for exchanging US dollar checks in accordance with the prescribed regulations of the post. This is applicable to both official and personal checks.

C. Overseas Assignments

1. Assignment Authority

The employment or assignment of Department personnel for overseas duty in the foreign assistance program may be authorized by AID pursuant to Section 625(d)(1) of the Foreign Assistance Act of 1961, as amended.

2. Tour of Duty

The normal period of service in an overseas position is a two-year tour from date of arrival in the country of assignment. This period may be more or less than two years depending on the requirements of the project. 3/

3. Establishment of Position

An assignment to a project pursuant to Section 625(d)(1) involves the establishment of an overseas position by the Department. An assignment to a staff position involves a position established or maintained by AID.

Based on information concerning the job to be done, as outlined in the PASA, the Department will prepare a position description and classify it in accordance with Civil Service standards. The General Schedule classification is converted to the appropriate class in the Foreign Compensation (FC) schedule. Two copies of this position description are provided AID.

4. Qualifications and Suitability

The Department is responsible for determining the technical qualifications of employees it selects for assignment to overseas positions in the AID program.

Successful performance in an overseas assignment requires also special personal qualifications. Therefore, to the maximum extent possible, the Department will follow the

3/ Exceptions to the AID criteria applicable to overseas tours of duty are to be processed under the provisions of AID Manual Order 416.6.

guidelines established by AID for determining the suitability of an individual for overseas service and will also obtain necessary information from appropriate sources about those members of the candidate's family who will accompany him overseas. It will provide AID with a certification that such an investigation has been made with satisfactory results.

5. Training

If a project or service requires that the incumbent of a particular position have proficiency in the language of the country of assignment, the Department will insure that the candidate selected meets this requirement. If necessary, arrangements will be made with AID for appropriate language training prior to departure overseas. Language training provided at the overseas post is available to Department personnel on the same basis as AID personnel.

Orientation training by AID in Washington, supplemented at the mission, is normally required. Other training may be made available by AID and Departmental personnel assigned to AID programs overseas may qualify for within-grade step increases for having attained proficiency in an esoteric language if such language is the primary or primary-alternate of the post of assignment. 4/

6. Medical Clearance

Medical clearance for the employee and those of his dependents who will accompany him overseas will be obtained by the Department from the Medical Division, Department of State. Such clearance is a prerequisite for authorization of the employee's departure from the US.

7. Assignment Documentation

The assignment or appointment of a Department employee to a position in the foreign assistance program is

4/ Manual Order 462.9 - Foreign Language Training

documented on a Standard Form 50, or comparable official document. Two copies of such documentation will be forwarded to A.I.D. not later than 15 days after the effective date of the action.

8. Compensation and Benefits

While assigned to an overseas position established under the terms of this agreement, Department employees are entitled to compensation and benefits provided under Section 625(d)(1) P.L. 87-195, including medical benefits, allowances, differentials, and leave, on the same basis as applicable to A.I.D. foreign service personnel.

9. Leave

Before termination of an A.I.D. assignment a Department employee is entitled to take whatever annual leave has been accumulated during that assignment. However, if the employee's employment with the Department is to be terminated in conjunction with the termination of his A.I.D. assignment, he may only take that amount of annual leave which is in excess of his leave ceiling and the balance of annual leave must be paid to him in accordance with the Lump Sum Leave Act. A.I.D. will reimburse the Department for that portion of the lump sum leave earned during the employee's assignment to A.I.D. An employee may be granted home leave in accordance with applicable regulations if he has completed the required continuous service abroad and it is contemplated that he will return to services abroad (including service under PL 85-795) under the Annual and Sick Leave Act of 1951, as amended.

10. Initial Rate of Pay

Department employees are compensated in accordance with the class of the position to which they are assigned. 5/

11. Payment of Salary and Differential

The Department will authorize and pay its employees basic salary and the applicable hardship differential.

5/ Rates of pay in excess of norms prescribed in M.O. 416.6 - "Participating Agency Appointments and Employment" require the written approval of an authorized official of A.I.D. and the Department.

12. Allowances

Allowances for post (cost of living), quarters, temporary lodging, education, local travel and transfer, as well as local travel per diem, Standardized Regulations (Government, Civilians, Foreign Areas) and AID regulations and orders, will be paid directly to the employee by the US AID. Such allowances are normally paid in local currency, except that education and transfer allowances may in certain cases at the discretion of the US AID be payable in dollars. Transfer allowances are authorized for payment by the Department when the transfer is to another bona fide overseas program and when such transfer otherwise meets the eligibility requirements for transfer allowances as set forth in the Standardized Regulations (Government Civilians, Foreign Areas).

The Department will certify an employee's eligibility for separate maintenance allowance in accordance with Standardized Regulations and will pay this allowance directly to the employee.

13. Promotions

The promotion by the Department of an employee assigned to the AID program is based on the reclassification of his position or his reassignment to a higher level position, provided he has served for one year in his present grade and has demonstrated ability to perform the duties of the higher level position.

14. Performance Evaluation

To assure that Department personnel receive full recognition for their contributions in the foreign assistance program, the US AID will furnish AID/W and the Department, if it so desires, with copies of performance evaluation, 6/ or any other document (e.g., letter of commendation) which in any way evaluates the accomplishments of performance of the Department's employees assigned to the US AID.

If the USAID Director determines that an employee's performance is not sufficiently effective in a given work situation, he may request the Department to terminate the employee's assignment.

6/ See Manual Order 416.6 - Participating Agency Appointments and Employment.

15. Travel and Transportation

AID regulations and the Standardized Regulations (Government Civilians, Foreign Areas) govern the travel and transportation of all Department personnel (and dependents) assigned overseas for a tour of duty pursuant to Section 625(d)(1) of the Foreign Assistance Act of 1961, as amended.

a. The Department authorizes, arranges for, and reimburses such employees for:

(1) Travel within the US and between the US and the overseas post.

(2) Costs involved in the transportation and/or storage of household goods, personal effects and a privately owned motor vehicle on the same basis as AID employees at the same mission.

The Department consults with AID as to the availability of local currency for such expenditures and the procedures for its utilization.

b. The US AID authorizes, arranges for, and reimburses Department personnel for:

(1) Other international travel which the Department has approved or concurred in.

(2) Local travel within the country of assignment.

(3) Travel for rest and recuperation in countries where such travel is authorized.

(4) Education travel.

16. Termination

The US AID will furnish a Completion of Assignment Report, in accordance with AID requirements, for all Department personnel, as well as AID employees.

When a Department employee is returned to the US for completion of assignment and is not to be reassigned to another position in the AID program, the Department will ordinarily effect the termination action not later than the next regular pay period ending after the employee's return to the US, unless medical clearance requires a delay, and will provide AID with the appropriate documentation of such action.

Should final medical clearance for a Department employee, or his dependents, not be received within two weeks after return to the US, the termination date will be extended in consultation with AID. In such cases, if the employee is on active duty with the Department after a 60-day period, AID will terminate reimbursement of the employee's salary. Medical benefits will be forfeited if arrangements for medical examinations are not made within 30 days and completed within 60 days after the employee or his dependents depart from post. 7/

17. Recruitment Status Reports

The Department will provide AID/W with a monthly report on the status of recruitment to fill positions established under PASAs.

7/ Detailed procedures governing the medical and health program are contained in Manual Order 454.1.

SUPPLEMENTARY AGREEMENT

APPENDIX III
TO
GENERAL AGREEMENT
BETWEEN THE
AGENCY FOR INTERNATIONAL DEVELOPMENT
AND THE
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

SUBJECT: Technical Consultation and Support Services

I. General

This appendix outlines the types of technical services, which the Department agrees to perform upon request, on behalf of the Agency for International Development, in support of the foreign assistance program.

AID will furnish the Department with copies of reports and communications relating to programs, projects and questions on which AID may request assistance.

II. Types of Support

Services provided by the Department to AID may include but are not limited to:

A. Providing consultation and advice in connection with program planning, review and coordination.

B. Reviewing and evaluating proposed programs, activities or projects concerning which there is need for special technical advice.

C. Advising on technical resources available within the Department or other government or private agencies.

D. Discussing and advising on technical problems with AID/W personnel or individuals referred to the Department by AID/W.

E. Answering technical inquiries made by AID/W or sent in from the field and referred by AID/W in writing to the Department.

F. Providing general technical backstopping for projects being implemented by the Department either in the US or overseas.

SUPPLEMENTARY AGREEMENT

APPENDIX IV
TO
GENERAL AGREEMENT
BETWEEN THE
AGENCY FOR INTERNATIONAL DEVELOPMENT
AND THE
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

SUBJECT: Procurement of Commodities Incidental to the Furnishing of Services

I. General

This appendix outlines commodity procurement services which the Department agrees to provide AID - in cases mutually agreed to by the Department.

II. Procurement Services

Upon receipt of an acceptable authorizing document from AID the participating agency performs the following services in behalf of AID or for a borrower/grantee on behalf of AID. 1/

A. Procures commodities or services specified in the authorizing documents.

B. Renders advice and assistance in selecting commodities or service organizations best suited to accomplish a particular purpose.

C. Prepares requisitions or other listings for the approval of AID or for a borrower/grantee on behalf of AID.

D. Prepares commodity specifications and arranges necessary inspections.

1/ Detailed requirements and procedures governing procurement in AID programs are contained Manual Order 1430, "US Government Agency Procurement, Commodities".

E. Arranges transportation, including packing, inland and ocean transportation, licensing and, where appropriate, marine insurance.

F. Maintains records and prepares reports required by AID.

SUPPLEMENTARY AGREEMENT

APPENDIX V
TO
GENERAL AGREEMENT
BETWEEN THE
AGENCY FOR INTERNATIONAL DEVELOPMENT
AND THE
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

SUBJECT: Training of Foreign Nationals

I. General

This appendix outlines the responsibilities of the Department and AID in the planning and execution of technical cooperation training projects referred to the Department by AID. The carrying out of these responsibilities constitutes an effective contribution to the execution of the program of AID in and for the cooperating country involved.

II. Responsibilities of the Department

At the request of and in consultation with AID, the Department will

A. Develop and administer training programs for foreign nationals who are brought to the United States by AID for training in the field of health, education, and welfare and related subjects, and provide the technical competency needed in carrying out these programs.

B. In the development of training programs

1. Determine which services of the Department, private business, academic or other groups can best assist in the development and implementation of desirable training programs.

2. Prepare and submit to AID for consideration a proposed training program, and such revisions as may be required, including essential cost elements needed to fund approved programs.

3. Provide AID significant reports prepared by or about participants which discuss the participants' programs, progress, or problems.

4. Provide news releases about participants indicating AID sponsorship and the objectives of the study program(s).

5. In consultation with AID, develops alternative procedures when extraordinary circumstances render the above procedures infeasible.

C. In the implementation of the training program

1. Orient the participants regarding their programs.

2. Arrange with organizations, industries, educational institutions, or other groups for assistance in implementing the training program.

3. Evaluate the program effectiveness by appropriate methods as mutually agreed upon by the Department and AID.

4. Inform AID of illnesses, conduct prejudicial to the program, or other emergencies arising during the period of the participant's visit. Assist in making the necessary arrangements for medical care or treatment pursuant to the provisions of the insurance; provided, however, that the Department shall not be responsible for the performance of any medical, legal, professional, or other services of a private nature.

5. Prepare quarterly reports on the numbers of participants trained during the quarter and submit these on the standardized AID report form not later than the 10th day of the month following the quarterly reporting period.

6. Provide in accordance with AID Manual Orders, the necessary implementation of the training programs by:

   a. Obtaining as authorized by AID, the services of technical leaders and processing documents for payments of salaries and other expenses for the same.

   b. Paying in advance, participants' maintenance allowances at the AID approved rates.

   c. Providing assistance and funds to participants for purchase of books, training aids, and equipment.

   d. Providing the necessary program travel for the participants.

   e. Processing documents for payment of tuition and training fees in connection with programs in institutions or forms, or paying tuition and training fees as agreed upon by the Department and AID.

   f. Paying travel expenses for interpreters as authorized.

g. Assisting as required in the shipment of the participant's books, and printed program related training materials to the mission.

h. Mutual consultation regarding the participant(s) scheduled departure date at least 30 days in advance.

i. Whenever possible, collecting all overpayments to the participants prior to departure.

j. Distributing and forwarding mail to participants.

k. Arranging, when appropriate, for the participant's membership in an AID approved American professional society.

III. Responsibilities of AID

A. In the development of training programs, AID will

1. Refer to the Department whose programs which have received approval and may consult with the Department as to their feasibility.

2. Furnish the Department appropriate information relating to requested training for each foreign national for whom training has been approved, such as:

a. Major problems and needs in the cooperating country toward which training should be directed.

b. Type of training desired by the mission and the cooperating country.

c. Training, education, experience, and ability of the participant.

d. Particulars as to the present position of the participant and the position that he is expected to occupy upon his return to the cooperating country after training.

e. Official transcripts of scholastic records, if available, when academic training is indicated.

f. General proficiency of each participant in the English language.

3. Communicate with mission to obtain information on program changes, extensions, funding, etc.

4. Transmit the programs to the mission.

5. Arrange arrival dates in line with the dates shown in the proposed program and inform the Department of those dates.

6. Make appropriate public announcements regarding the training program giving credit therein to the participation of the Department.

7. Obtain systematic information from the missions on the extent to which the participants' training in the United States is being utilized and furnish information of a significant nature to the Department. Information of this type received by the Department directly is furnished to AID.

B. In the implementation of the training program

1. Arrange for reception services at Ports of Entry and in Washington except as mutually arranged otherwise.

2. Provide initial administrative orientation to participants.

3. Collect insurance premium payments from independently financed participants.

4. Arrange for contractual services to cover medical insurance for participants; and forwarding services for shipment of participants' publications and printed training aids.

5. Arrange for renewal of participants' visas as required.

6. Conduct a final conference, where possible, with the participant(s) for the purpose of evaluating the program and its effectiveness. Copies of reports of these conferences will be supplied to the Department.

7. As agreed upon, arrange international return travel for participants upon receipt of scheduled departure dates from the Department, informing the Department of these arrangements in order that the Department can complete all fiscal transactions prior to departure.

8. Arrange for interpreters when needed.

9. Obtain the security clearance for Technical Leaders as required.

APPENDIX B

PARTICIPATING AGENCY SERVICE AGREEMENT

BETWEEN

THE AGENCY FOR INTERNATIONAL DEVELOPMENT

AND THE PUBLIC HEALTH SERVICE

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

FOR THE ADMINISTRATION OF THE

MALARIA ERADICATION PROGRAM

PASA Control No. TCR 2-66

PARTICIPATING AGENCY SERVICE AGREEMENT

between

THE AGENCY FOR INTERNATIONAL DEVELOPMENT

and the PUBLIC HEALTH SERVICE,

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

for the administration of the

MALARIA ERADICATION PROGRAM

1. Purpose

Under authority of the Foreign Assistance Act of 1961, as amended, the Agency for International Development requests the Public Health Service to assume responsibility for the administration of the malaria eradication program which AID is currently supporting and intends to support until completed. Fifteen countries are now receiving such assistance on a grant or loan basis or both; seven in Latin America, four in the Near-East-South Asia region, three in the Far East and one in Africa. Ongoing programs in eight of these 15 countries are scheduled for completion by the close of FY 1969; the remaining seven are expected to be largely completed by or before the end of FY 1975. The individual cooperating countries and possible terminal dates of AID support are listed in Table 1 of the Appendix hereto.

The purpose of this Agreement is to define the terms and conditions for continued AID support of the Malaria Eradication program and to describe the procedures by which decisions are to be reached on matters affecting this program.

II. Scope of PHS Responsibilities

A. Policy

The Surgeon General will make policy recommendations to the Administrator of AID concerning U.S. support for malaria eradication, including the countries to be assisted, the magnitude of programs, the type and duration of assistance and program initiation, continuation or cessation.

B. Program Planning

1. Under the overall foreign assistance program and policy guidance of the USAID Director, PHS technical personnel will advise and assist a participating country in the formulation, revision or refinement of long-range malaria eradication plans and annual programs proposed for further AID support. Such advice and assistance shall be coordinated with that being provided to the country by WHO and other international organizations in order to reach a consensus on the best technical plan of operations.

2. Proposals for U.S. assistance to support the country's annual program, will be reviewed by the USAID mission within the context of the economic and administrative capabilities of the host country as well as the U.S. foreign assistance policies. The proposed program will be transmitted with the USAID recommendations to AID/Washington and PHS.

3. PHS will participate in the annual AID review of country and regional program recommendations made by the field and redistribute resources available for malaria eradication within and among country programs as mutually agreed between AID/W and PHS.

C. Program Implementation

1. Operating Responsibility

Within 60 days of the effective date of this agreement PHS will establish a full-time headquarters staff to provide overall direction and administration of the program and to maintain continuing liaison with AID.

PHS will be responsible and accountable for the administration of program activities negotiated annually with the countries or regional organizations covered by this agreement. However, PHS may redeploy personnel, funds and commodities as mutually agreed with AID/W and in consultation with affected participating countries or regional organizations.

2. Personnel

a. The Public Health Service is authorized under Section 625(d)(1) of the Foreign Assistance Act, as amended, and appropriate AID Manual Orders, to employ and assign such personnel overseas as may be required to implement this agreement, in addition to those personnel covered by paragraph (b) below.

b. With respect to personnel now employed in the malaria eradication program, it is agreed that the transfer of the implementing responsibility for the program from AID to Public Health Service constitutes a transfer of function insofar as personnel are concerned. Accordingly, all personnel presently identified with the program shall be transferred from AID to the Public Health Service. The transfer shall be effected and the employees' rights shall be governed by the regulations prescribed by the Civil Service Commission relating to transfers of functions. In connection with this transfer both agencies agree that AID direct hire employees now assigned to the program, including employees of the Malaria Eradication Training Center, Manila, will be transferred without reduction in salary from AID to Public Health Service.

c. AID direct hire employees now serving under regular Foreign Service Reserve appointments will be transferred to PHS and assigned to an appropriate class and step under an appointment without time limitation.

d. AID direct hire employees presently serving as Foreign Service Reserve officers under a time limited appointment will be transferred to the PHS and assigned to an appropriate class and step under a time limited appointment, the duration of which will not be less than that under which they are currently serving in AID.

e. The PHS shall have responsibility for the reemployment of any former AID employee engaged in the Malaria Eradication program who elects to exercise any reemployment rights he may have during the period of PHS responsibility for conduct of the program.

f. The transfer of personnel will be effected within 90 days of the effective date of this agreement. AID will continue to payroll such employees until such time as the transfer of the employees to the PHS is accomplished.

g. PHS personnel assigned overseas under Section 625(d)(1) of the Foreign Assistance Act of 1961, as amended, will be entitled to the allowances and benefits provided under the Foreign Assistance Act to the same extent as AID direct-hire employees of comparable rank.

h. If the services of foreign nationals are needed in staffing the malaria program, each AID mission will be responsible for the appointment and administration of such personnel. However, the concurrence of PHS will be obtained with respect to the personnel selected, including the numbers and qualifications of foreign nationals.

3. Commodity Procurement

Until June 30, 1966, AID will retain full responsibility for commodities procured from fiscal year 1966 and prior year funds. Thereafter, PHS will be responsible for all commodity procurement, in accordance with Federal Procurement Regulations.

D. Training

1. Malaria Eradication Training Center, Manila

Within 90 days of the effective date of this agreement, PHS will assume the responsibility for U.S. participation in the Malaria Eradication Training Center in accordance with the terms of the 1963 Agreement between AID, WHO and the Government of the Philippines or as mutually agreed among AID, PHS, WHO and the Government of the Philippines. Present arrangements covering support of the METC through the facilities of USAID/Manila will be continued under this agreement.

2. Participant Training

Under this agreement, PHS assumes full responsibility for the training of all U.S. funded participants under the malaria eradication program. In line with this responsibility, PHS field personnel will assist the participating country in determining training requirements to be included in the annual budget submission. PHS will approve the technical qualifications of proposed participants and will process those approved in accordance with Appendix V of the HEW/AID General Agreement. To the maximum extent feasible, training will be provided at the METC in Manila.

E. Research

PHS will continually explore areas in which research can increase the efficiency and economy of malaria eradication programs, and will be responsible for the conduct of all AID funded research projects.

F. Program Evaluation

1. As part of its responsibility for overall administration under this agreement, PHS will systematically evaluate progress and performance in meeting the mutually agreed objectives of the malaria eradication program and will furnish AID with a consolidated annual report covering all aspects of the program.

2. Further, PHS may utilize special assessment groups in conjunction with WHO or other agencies or independently to provide objective evaluations of individual country programs.

G. External Relationships

PHS will be responsible for representing AID in malaria program negotiations and discussions with WHO, PAHO, UNICEF and other agencies.

III. Financial Arrangements

Except for U.S. dollars required to purchase local currency, all dollar costs of country programs and other malaria eradication activities to be administered by PHS under the terms of this Agreement will be financed by AID through the cross-disbursement of funds or such other arrangement as may be mutually acceptable.

Funding of the world-wide malaria eradication program will be effected on the basis of an annual budget jointly concurred in by AID/W and PHS. This budget will detail amounts required for (a) each country or regional program (financed either by loan or grant) (b) the PHS headquarters staff and (c) research. Budget detail for country programs will show the amounts to be used for (1) personnel expense, (2) commodities and, (3) participant training.

A. Estimated Long-Range Costs

U.S. dollar requirements, during the four-year period FY 1966-69, for all purposes encompassed in this Agreement are currently estimated at about $70 million - half to be financed by loans, half by grants. The estimated annual allocation of costs by country and non-regional activity is indicated in Table 2 of the Appendix to this Agreement. Estimates for subsequent years will be developed as rapidly as facts permit.

The FY 1966-69 estimates are not to be construed as amounts that will be automatically programmed for given countries in any given year. Annual program decisions will be conditional on numerous factors, among them a country's capability to meet agreed standards of performance in administering its program including commitment of manpower and financial resources, and alterations in technical strategy which may necessitate substantial modification of current plans. These estimates do, however, serve as benchmarks for forward planning by AID and PHS of the level of appropriations required to assure adequate support of ongoing malaria eradication programs.

B. FY 1967 Funding Requirements

As soon as practicable and not later than June 1, 1966, AID/W and PHS will develop a budget for the program for fiscal year 1967, set forth in the detail described in III above. The approval of the budget by PHS and AID/W will constitute the basis on which PHS plans its operation for the fiscal year.

IV. Availability of Background Information

The following documents providing background information in support of this Agreement are hereby incorporated by reference.

A. AID/PHS Report on the Malaria Eradication Program, August, 1965.

B. Letter, dated August 18, 1965, from the Administrator, AID to the Surgeon General, PHS.

C. President Johnson's Health Message to Congress, February 1964.

D. Section 420 of the Mutual Security Act of 1957.

E. Punta del Este Charter.

F. World Health Assembly Reports, 1955 to 1965.

G. 1963 Agreement between AID, WHO and The Government of the Philippines on the Malaria Eradication Training Center in Manila.

V. Effective Date and Duration

This Agreement shall become effective as of the last date of signature below and shall continue in force until the malaria eradication programs specified herein are completed, unless circumstances make termination necessary or desirable at an earlier date. In such event, AID and PHS will consult in advance of such termination and, insofar, as possible, will set a termination date which will allow sufficient time to make necessary adjustments in their operations. The Agreement may be amended at any time by mutual consent of both parties.

APPROVED FOR	APPROVED FOR
Public Health Service	Agency for International Development
s/ William H. Stewart (name)	s/ David S. Bell (name)
Surgeon General USPHS (title)	Administrator (title)
3/3/66 (date)	3/3/66 (date)

Attachments

TABLE 1

MALARIA ERADICATION PROGRAMS

Estimated Terminal Date of U.S. Dollar Assistance

Country of Activity	Estimated Terminal FY of U.S. Dollar Assistance
Africa	
Ethiopia	1977
Latin America	
Brazil	1975
Ecuador	1966
El Salvador	1968*
Guatemala	1968*
Haiti	1969
Honduras	1968*
Nicaragua	1968*
Regional	1967
Near East-South Asia	
India	1973
Jordan	1969
Nepal	1973
Pakistan	1975
Regional	1975
Far East	
Philippines	1969
Thailand	1972
Vietnam	**
Regional	1972
Non-Regional	
Malaria Training (METC)	1975
Research	1975
Technical Staff Services & Evaluation	1975

* Development loans approved in FY 1965 will cover dollar requirements through FY 1968 for local cost support and two ROCAP Malaria Advisors (see Table 2).

** Continuation subject to U.S. policy determination.

TABLE 2

A.I.D. MALARIA ERADICATION DOLLAR REQUIREMENTS
(in thousands)

	1958 - 64		1965		1966		1967		1968		1969		1966 - 69	
	DL	DG	DL	DG (Allocated as of 4/30/65)	DL	DG	DL	DG	DL	DG	DL	DG	DL	DG
Africa														
Ethiopia		2,539		695		795		1,200		1,200		1,230		4,425
TOTAL		2,539		695		795		1,200		1,200		1,230		4,425
Latin America														
Brazil	6,500 1/	13,838	-	125	-	- 1/	3,440 1/	-	2,380 1/	-	2,120 1/	-	7,940 1/	-
Ecuador	-	1,927	-	250	600	-	-	-	-	-	-	-	600	-
El Salvador	-	400	800 2/	100	-	-	-	-	-	-	-	-	-	-
Guatemala	247	3,168	1,500 2/	250	-	-	-	-	-	-	-	-	-	-
Haiti	-	3,658	-	1,400	-	1,600	-	1,400	-	750	-	750	-	4,500
Honduras	-	2,397	1,440 2/	150	-	-	-	-	-	-	-	-	-	-
Nicaragua	-	1,921	2,450 2/	100	-	-	-	-	-	-	-	-	-	-
Grants to PAHO	-	14,500	-	1,800	-	2,190	-	1,300	-	-	-	-	-	3,490
TOTAL	6,747	41,809	6,190	4,175	600	3,790	3,440	2,700	2,380	750	2,120	750	8,540	7,990
NESA														
India	11,000	62,680	3,500	51	2,040	140	1,910	140	700	140	400	140	5,050	560
Jordan		934		297		360		140		100		90		690
Nepal		3,331		678		700		688		518		287		2,193
U.S. use Indian Rupees				[693]		[743]		[665]		[601]		[436]		[2,445]
Pakistan	5,300	113	5,100	167	5,294	156	6,209	156	5,377	153	4,350	152	21,230	617
Regional		57		35		60		60		60		60		240
TOTAL	16,300	67,115	8,600	1,228	7,334	1,416	8,119	1,184	6,077	971	4,750	729	26,280	4,300
Far East														
Philippines 3/		2,741		554		575		570		105		75		1,325
Thailand		4,632		2,502		2,140		2,188		1,096		1,186		6,610
Vietnam		6,532		959		1,235		1,200		1,000		900		4,335
Regional		88		37		60		60		60		60		240
TOTAL		13,993		4,052		4,010		4,018		2,261		2,221		12,510

1/ Commodities for 1965-1966 funded from $6,500,000 loan approved in FY 1964. The precise amounts of new loans will take account of an unutilized sum of $4,121,000 remaining from the FY 1964 loan, and will be determined after further consultation with the USAID.
2/ Lump sum requirements for FY 1965-1968 for local cost support, and two ROCAP Malaria Advisors.
3/ $60,000 should be added annually FY 1966-69 if Mission proposal to add 3 U.S. advisors is approved.

TABLE 2 (Continued)

	1958 - 64		1965		1966		1967		1968		1969		1966 - 69	
	DL	DG	DL	DG	DL	DG	DL	DG	DL	DG	DL	DG	DL	DG
Non Regional														
Malaria Training		637		156		160		160		160		160		640
Research		1,416		285		700		700		700		700		2,800
Technical Staff Services and Evaluation		264		228 1/		300		300		300		300		1,200
TOTAL		2,317		669		1,160		1,160		1,160		1,160		4,640
Grants to WHO		17,500												
GRANT TOTAL	23,047	145,273	14,790	10,819	7,934	11,171	11,559	10,262	8,457	6,342	6,870	6,090	34,820	33,865

1/ Partially covered by TCR administrative budget.

Smallpox Eradication Program

SMALLPOX ERADICATION PROGRAM

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SMALLPOX ERADICATION PROGRAM

BACKGROUND

Smallpox is one of the most deadly communicable diseases known to man. Fear of the disease is responsible for the most stringent quarantine measures in international travel. Once a world-wide problem, intensive vaccination efforts have progressively reduced the scope of smallpox until it is now confined to parts of Southeast Asia, South America, and Sub-Saharan Africa.

Although smallpox has not been present in the United States since 1949, about 14 million persons continue to be vaccinated annually to prevent its reintroduction. Fear of smallpox is not without cause. During localized European outbreaks in 1962 and 1963, 40% of the unvaccinated persons who contracted the disease dies dispite the availability of excellent medical care. The United States now spends over 20 million dollars annually for vaccination in support of quarantine facilities and for treatment of those experiencing complications following vaccination. Only through total eradication of smallpox can this expenditure be terminated.

Beginning in 1963 the National Communicable Disease Center working with the Army Research and Development Command, carried out extensive field tests of a hydraulic powered foot actuated, portable jet injector capable of administering up to 1000 injections per hour. With a special nozzle for the intradermal administration of smallpox vaccine, the jet injector has exceeded all expectations for fast facile operation, and effectiveness of

vaccination. The jet injector greatly reduced or eliminated a major deterrent to effective vaccination programs, variable vaccinator technique. With the injector paramedical personnel can be rapidly trained to consistently perform vaccinations with take rates on primary vaccinees in excess of 98%.

In 1959 a global eradication program was initiated by the World Health Organization. Although progress was made the effort was hampered by lack of funds. In 1965 President Johnson pledged "this Government is ready to work with other interested countries to see to it that smallpox is a thing of the past by 1975".

In 1966 the World Health Assembly voted a specific budget for smallpox eradication and established a unit at the Headquarters in Geneva, delegated the responsibility for the coordination and direction of the 10-year global Smallpox Eradication Program. In November, 1965 President Johnson announced plans for a program to assist 19 West and Central African countries (Cameroon, Central African Republic, Chad, Congo Brazzaville, Dahomey, Gabon, Gambia, Ghana, Guinea, Ivory Coast, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo and Upper Volta) in a smallpox eradication program, as part of the U. S. contribution to the global eradication campaign.

A Participating Agency Service Agreement was signed between the Agency for International Development and Public Health Service providing for AID funding with the Public Health Service assuming operational responsibility of the U. S. assistance to these countries. The Smallpox Eradication Program

within the National Communicable Disease Center was established in January of 1966 to provide direction of this effort.

ORGANIZATION STRUCTURE

Initial planning provided for the assignment of two man teams as technical advisors to each country, a Medical Epidemiologist and an Operations Officer.

A Regional Office was to be established in Lagos, Nigeria with a staff competent in various disciplines, not economically feasible to be assigned to each country. Included among these were Medical Officers, Administrative Officers, an Equipment Specialist, Health Educator, Virologist, and Statistician. The Regional Office was responsible for coordination among country programs; for providing specialized technical advice, for conducting operational research, for maintaining operational statistics, and preparing anticipated program documentation.

A Headquarters Office was established at the National Communicable Disease Center in Atlanta to provide program direction and evaluation, recruiting, training and orientation of personnel, procurement of commodities, liaison and reporting to Public Health Service and Agency for International Development Washington, as well as liaison with World Health Organization and other international organizations.

Operational experience soon revealed that the role originally envisioned for the country assignees was valid; few changes have been made to date. Assistance with day to day operation of the mass vaccination campaigns was delegated to the Operations Officer; the Medical Officers were intimately involved in the epidemiologic aspects of the program and the establishment of adequate

surveillance and assessment procedures.

The role of the Regional Office has evolved with changing program need. Currently the Regional Office functions as an extension of the Atlanta Headquarters on-site in Africa with prime responsibility for providing inter country coordination of activities, expert technical consultation on an as-needed when-needed basis, and program representation with the Regional Office of World Health Organization and the two African Regional Health Organizations, The Organization of Coordination and of Cooperation for the Fight Against the Great Endemic Disease (OCCGE), and The Organization of Coordination for the Fight Against Endemic Disease of Central Africa (OCEAC). In addition the responsibility for evaluating Phase I operations, (a total assessment of a country or large geographic region on completion of the mass vaccination campaign) was delegated to the Regional Office.

The Headquarters Office has also evolved from the original concept of its role with some increase in personnel. The 19 country region was divided into three areas and a Chief of Operations for each area was designated to provide adequate direction and supervision of the operations in Africa. In addition the involvement in the procurement and supply management operations proved to be more extensive than originally envisioned. An individual has been assigned as Supply Management Officer to coordinate and expedite this activity. Original program planning provided for staff of 63 individuals, 46 in Africa (including country and Regional Office assignees), and 17 in the Headquarters. Currently 68 people are employed in the Smallpox Eradication Program.

OPERATIONS

The Project is carried out as a regional effort in concert with the World Health Organization, Regional African Health Organizations (The Organization of Coordination and of Cooperation for the Fight Against the Great Endemic Diseases, and The Organization of Coordination for the Fight Against Endemic Disease of Central Africa) and the individual countries. The general objectives toward which this African Regional Project will contribute are the eradication of smallpox and the control of measles. The project will be carried out in two phases within a five year period, as follows:

Phase I - Mass vaccination, and an evaluation of the type and extent of appropriate assistance during the remaining portions of the five year period.

Phase II - Type of activity agreed as appropriate to follow mass vaccination.

Systematic mass vaccination programs were initiated in 16 of the 19 countries in the autumn of 1966 and early 1967. In Guinea, Sierra Leone, and Liberia, planning was required during 1966 and 1967, with initiation of vaccination anticipated in 1967. All persons are vaccinated against smallpox; measles vaccine is given only to young children of the susceptible group. It is expected that during Phase I of the program over 110 million people will receive smallpox vaccine and over 20 million, measles vaccine. In most areas, the vaccine is administered simultaneously by mobile teams using jet injectors.

The U. S. contribution consists of technical assistance, vehicles, vaccine, jet injectors, and miscellaneous field equipment. Local operating cost

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including personnel to administer vaccine, and fuel and maintenance for vehicles is the responsibility of cooperating countries.

A major change in the program was a reduction in the recommended age range for measles vaccination. Initially children between six months and six years were vaccinated. Epidemiologic studies of age distribution of measles cases documented that over 90 percent of the children had experienced measles by age 3 years. Consequently the recommended maximum age was reduced to 3 resulting in a considerable reduction in vaccine required.

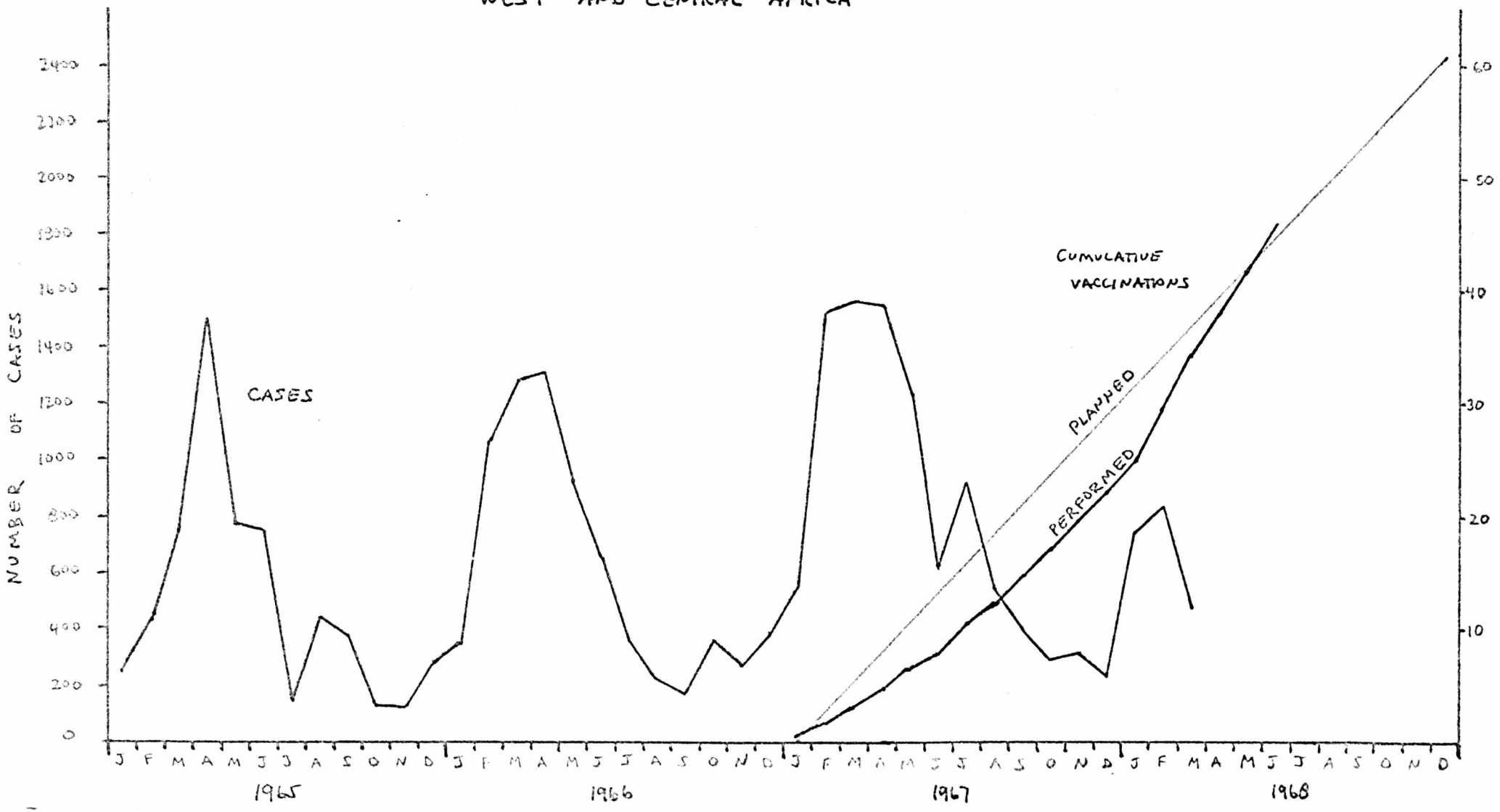
During the first 18 months of operation in Africa 45,978,079 smallpox and 8,204,099 measles vaccinations were performed. The real measure of success is the effect of vaccinations on the incidence of the disease. The attached figures depict effect of vaccination on disease morbidity.

ULTIMATE OBJECTIVE

The ultimate objective for the Smallpox Eradication Program is 0-indigenous cases of smallpox occurring anywhere in the region by 1971.

NUMBER OF SMALLPOX CASES*, JANUARY 1965 TO MARCH 1968
AND
CUMULATIVE SMALLPOX VACCINATIONS*, JANUARY 1967 TO JUNE 1968

WEST AND CENTRAL AFRICA



* SOURCE: CASES; WORLD HEALTH ORGANIZATION
VACCINATIONS; SMALLPOX ERADICATION PROGRAM, NCDC

FIGURE 1.

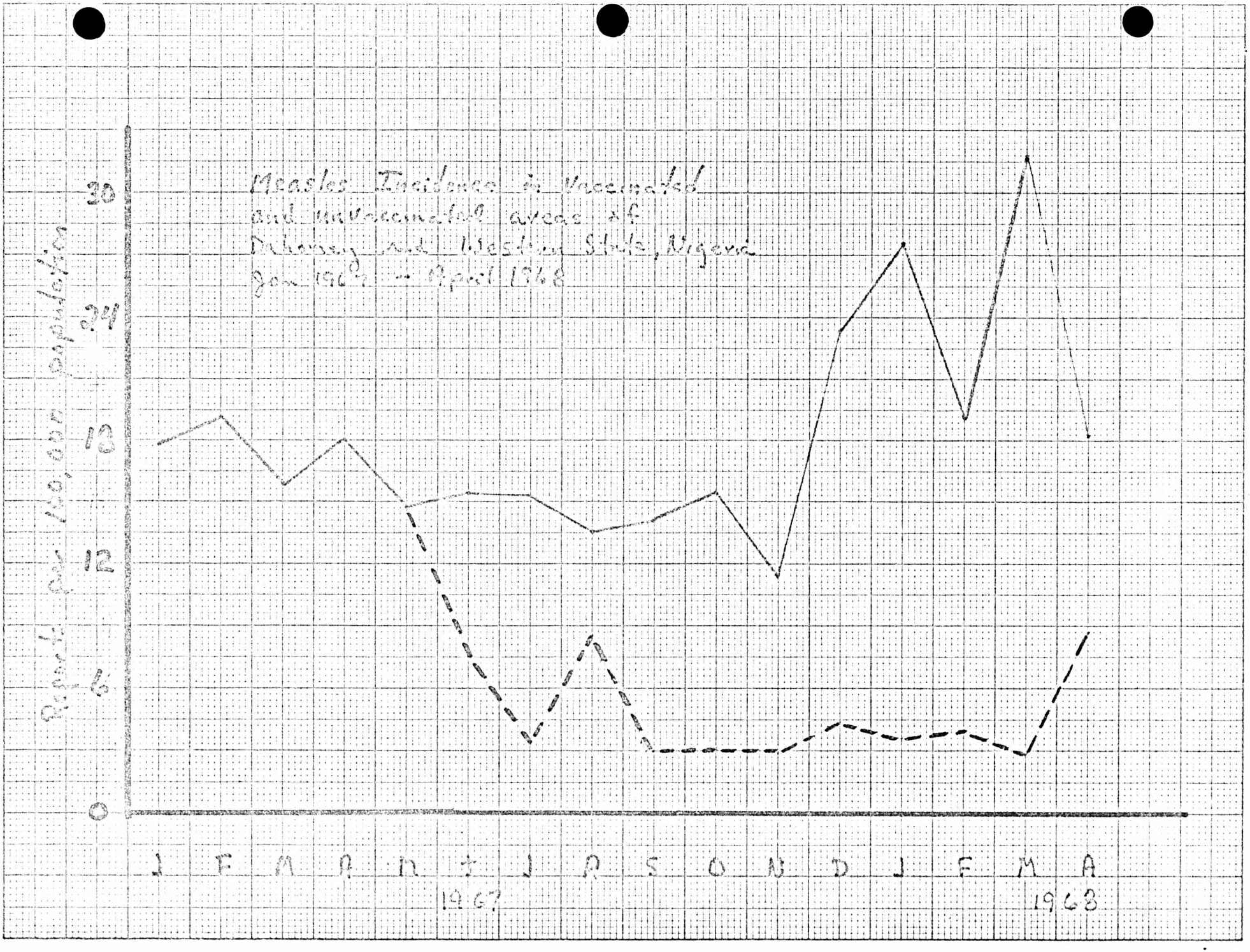


FIGURE 2

K+E 10 X 10 TO ½ INCH 46 1470
7½ X 10 INCHES MADE IN U.S.A.
KEUFFEL & ESSER CO.

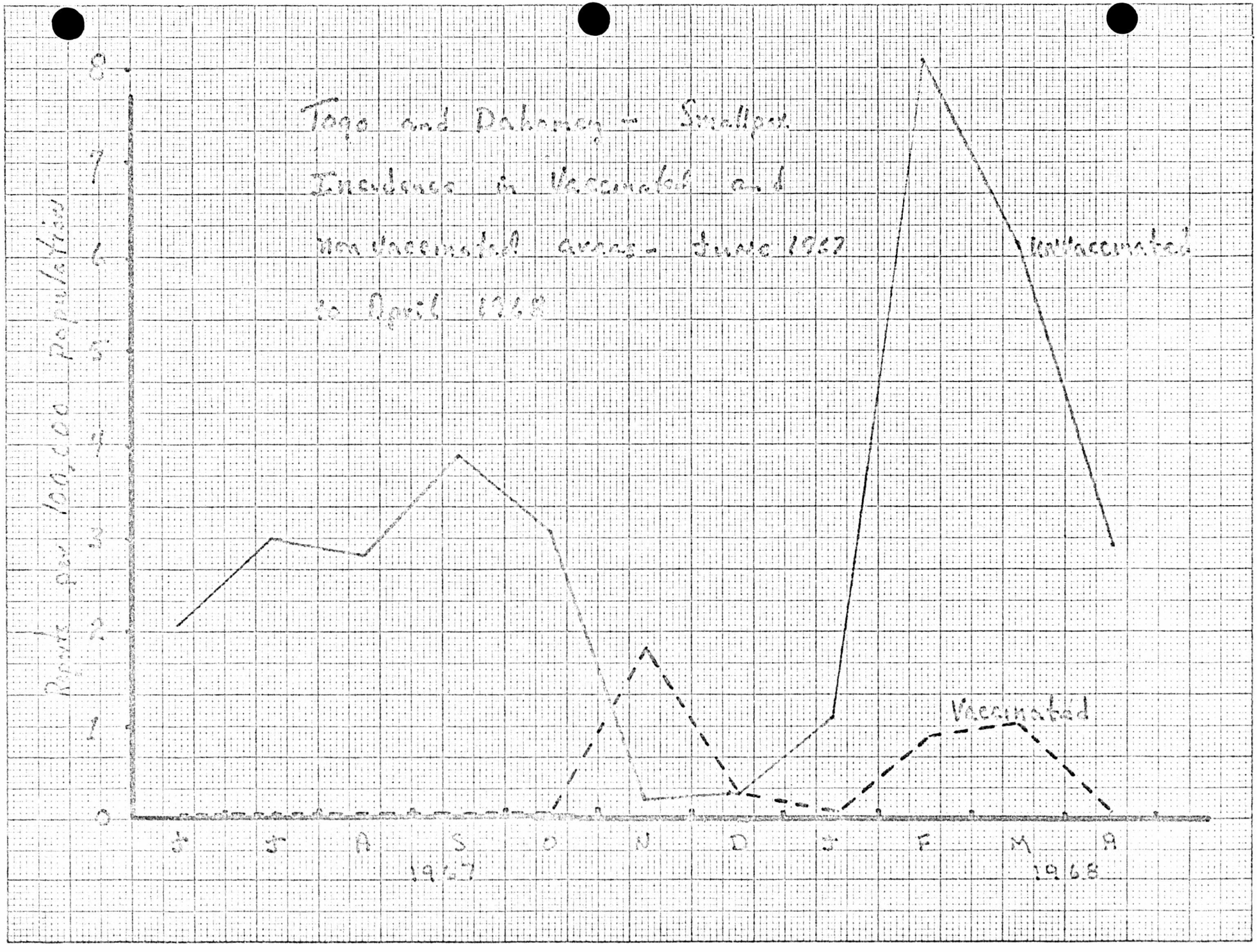
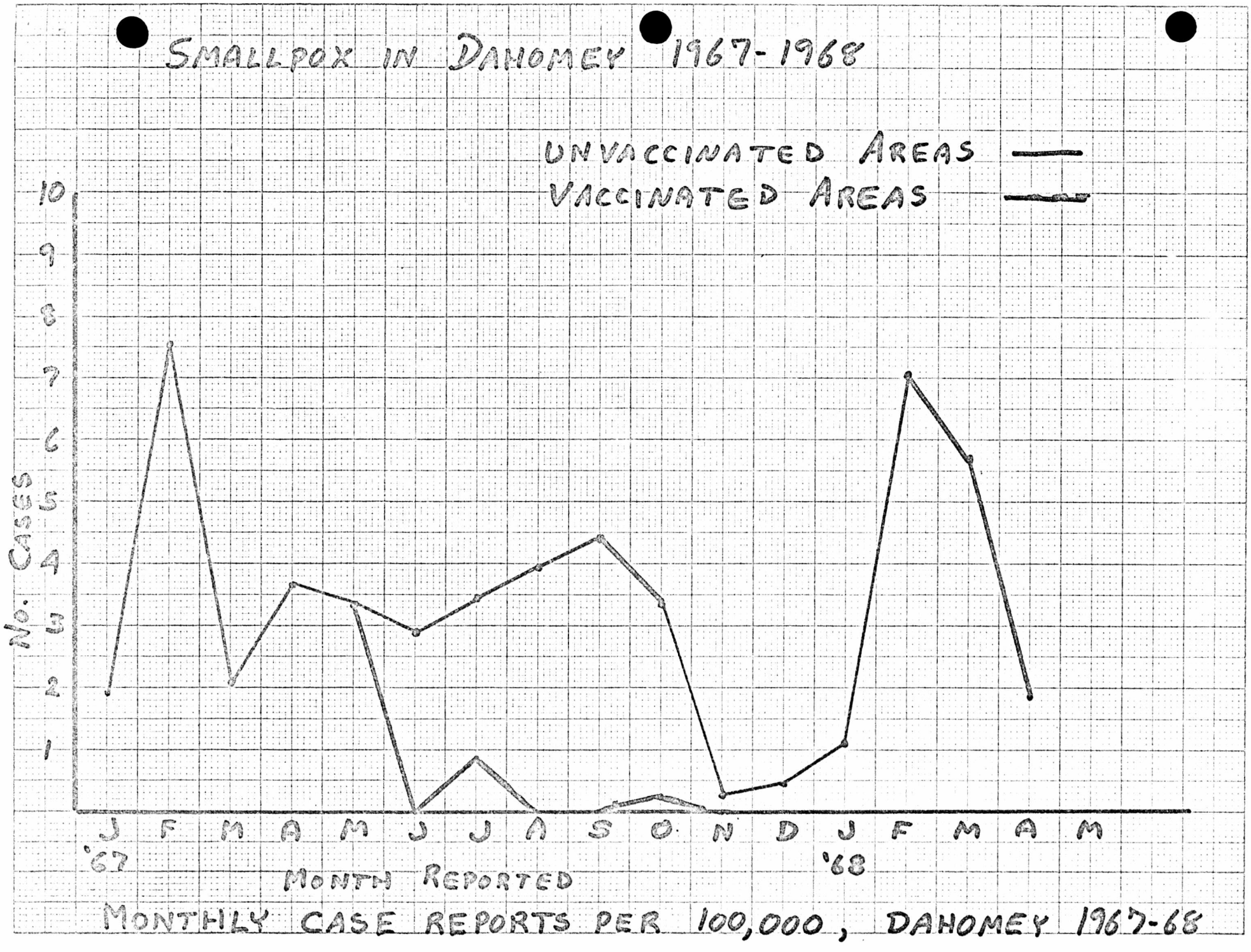


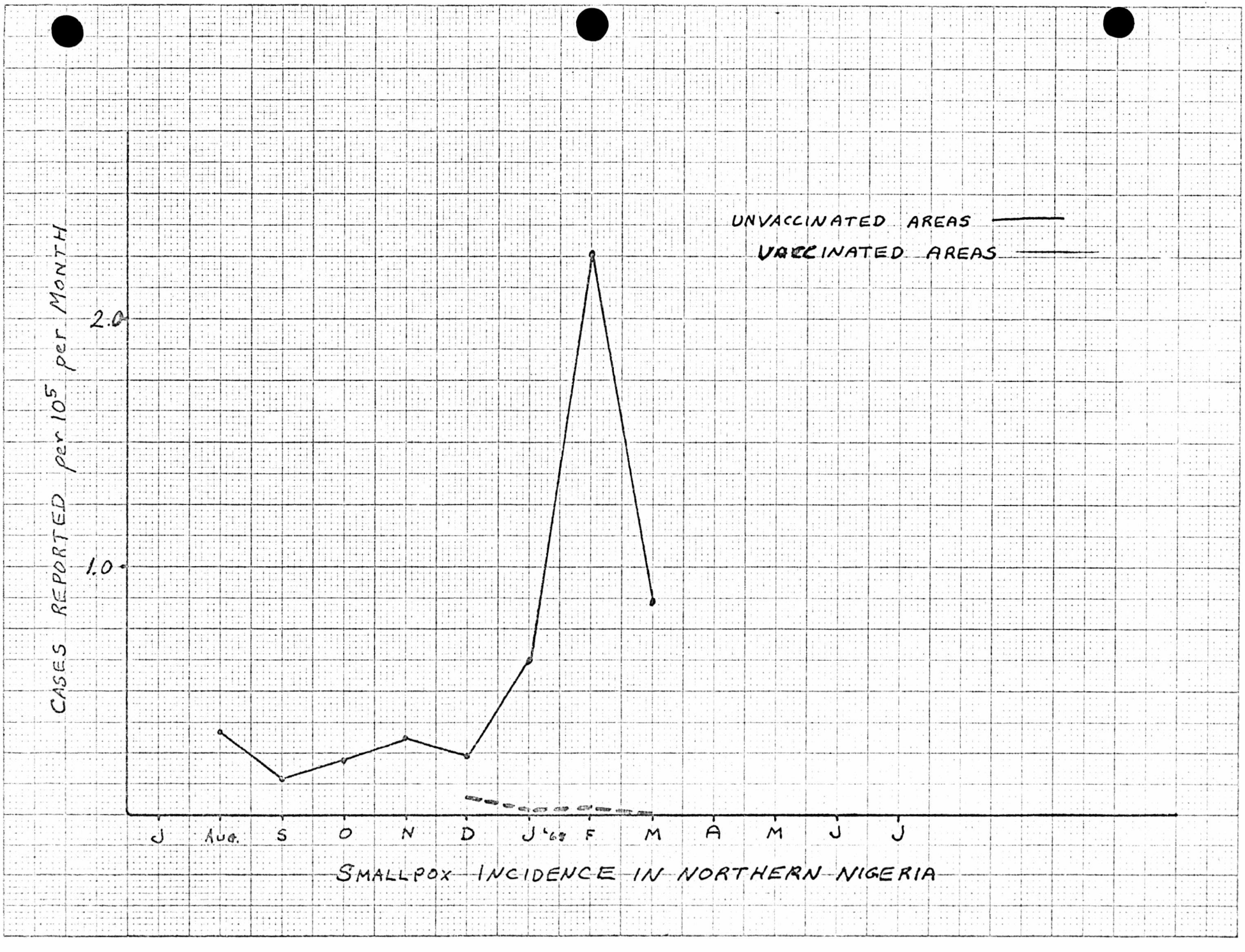
FIGURE 3

K&E 10 X 10 TO ½ INCH 46 1470
7½ X 10 INCHES MADE IN U.S.A.
KEUFFEL & ESSER CO.



MONTHLY CASE REPORTS PER 100,000, DAHOMEY 1967-68

FIGURE 4



SMALLPOX INCIDENCE IN NORTHERN NIGERIA

FIGURE 5

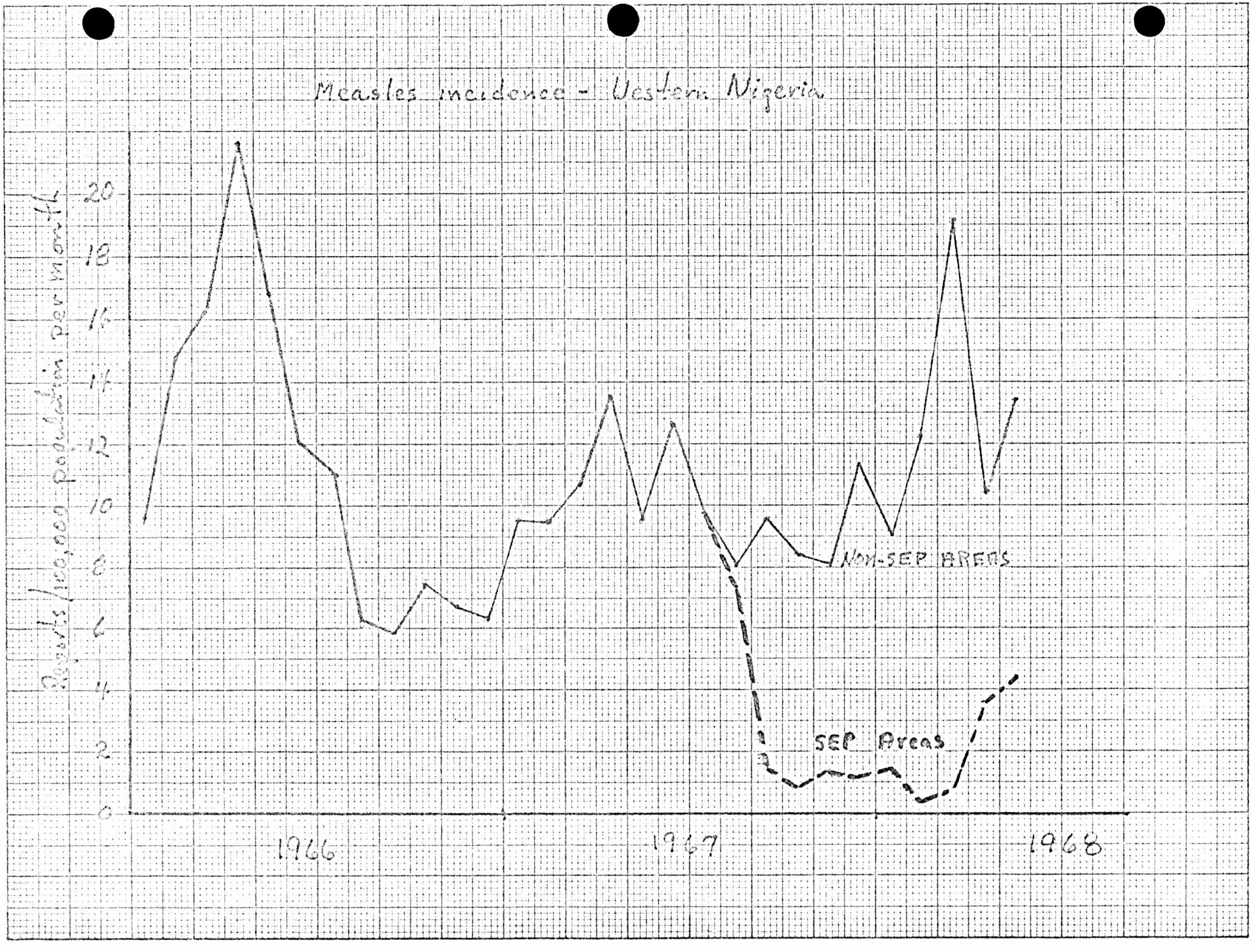


FIGURE 6.

K+E 10 X 10 TO ½ INCH 46 1470
7½ X 10 INCHES MADE IN U.S.A.
KEUFFEL & ESSER CO.

Measles Incidence - Dahomey
Measles reports per 100,000 population
120
110
100
90
80
70
60
50
40
30
20
10
0
J F M A M J J A S O N D J F M A
1967
1968
Non Vaccinated areas
SEP Vaccinated areas

FIGURE 7

Training Program

DEPARTMENTAL HISTORY

THE JOHNSON YEARS

TRAINING PROGRAM

NATIONAL COMMUNICABLE DISEASE CENTER

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Appendix

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Exhibit II - Table of Organization - Training Program - December 1967

Exhibit III - Table of Organization - Training Program - Proposed

Exhibit IV - Summary of Positions and Budgets by Fiscal Years

Exhibit V - Training Program - Selected Accomplishments

Training Program Functions

Short History of the Training Branch 1942 - 1945

TRAINING PROGRAM -- NATIONAL COMMUNICABLE DISEASE CENTER AND THE LYNDON B. JOHNSON YEARS

INTRODUCTION

NCDC's Training Program started as a principal activity of the Malaria Control in War Areas program of 1942-1946. This program experienced a great shortage of trained personnel and had an annual personnel turnover of approximately 60 percent. It was imperative that quality training services be provided initially for the teams of personnel assigned by states to malaria eradication and later to similar teams of health-oriented personnel assigned by the states to *Aedes aegypti* eradication programs and to murine typhus control programs.

At the start of Fiscal Year 1947, by the direction of the late Dr. Joseph W. Mountin, the MCWA program was given much broader responsibilities for providing national leadership, direction, and services for nearly all the communicable disease programs and problems; the name of the organization was changed to the Communicable Disease Center. The training activity was also a principal program of the newly formed CDC. The training services were expanded to include courses for sanitarians, nurses, physicians, and other members of the public health team, as well as for the vector-borne disease control specialists. Training programs for the vector-borne disease control specialists were continued and a number of CDC public health field training centers were established throughout the nation in cooperation with state and local health departments. The initial courses and field training provided through these centers attracted multidiscipline public health attendance. Soon, however, the field centers were being utilized almost

exclusively for training environmental health and vector control specialists to meet the demands of state and local health departments for staffing their organizations in these categories after the manpower shortages of the war years. The headquarters for the Training Branch, in addition to providing support services for the field training centers and routine courses on vector control and environmental health at CDC in Atlanta, provided services for multidiscipline public health personnel and designed pilot presentations of unidiscipline courses for nurses, physicians, veterinarians, and other members of the health professions. In conjunction with these teaching programs, a wealth of resources was developed or acquired at the Training Branch headquarters and made available to assist the states in developing their training services. These resources included film productions (motion picture and still), literature teaching and reference aids, consultative services and instruction on training methodology, library services, evaluation and records services, entomological collections, exhibits, and training equipment. Concurrent with these accomplishments was the development of a highly trained staff of training specialists, training officers, and training program administrators. (See Short History of the Training Branch 1942-1955 for more detailed information.)

By 1955, the backlog of needs for the training services provided through the field training centers was reduced sufficiently to allow the consolidation of these activities and the start of the phasing out or turnover to state operation of these field training centers. The PHS training specialists from the centers were assigned to headquarters, state health departments, and later to PHS Regional Offices. By the close of FY 1962, the Training

Branch had relinquished control of the last of the Branch administered field training courses. As of this writing, the activities of the former field training centers are being continued through at least three state health departments and four universities. From 1955 through 1957, emphasis in the Training Branch was placed upon preparing some of the staff for assignments as Regional Training Consultants; designing mobility into the services offered through the headquarters sections; developing further the training methods program and the special training services for nurses, physicians, and other health professions; expanding the audiovisual production activities; and providing direct services in conjunction with an extensive training activity on Civil Defense that was implemented cooperatively by CDC's Training Branch and the training staff of the Robert A. Taft Sanitary Engineering Center.

One outstanding example of how the Training Branch headquarters met the need for mobility during this period was the development and utilization of a Mobile Milk Pasteurization Training Unit. Courses on prevention of milk-borne disease were presented virtually all across the country through utilization of pasteurization equipment that was mounted in a semi-trailer truck. The mounted equipment was operated during the courses to teach the students instrumentation tests and adjustments, and provided them an opportunity to execute testing procedures and make equipment adjustments.

In FY 1957, training funds from the General Health Services, Bureau of State Services program that had financed some of the Training Branch services for states were used to establish a position of Regional Training Consultant in each of the PHS Regional Offices. The staff of the Training Branch headquarters

worked with the Regional Training Consultants to provide cooperative state-federal training that in turn resulted in organization and implementation of improved health training programs by state personnel. Headquarters provided consultation on organizing training, and special courses on training methodology for state personnel. At the same time, high level courses on certain aspects of communicable disease prevention and control were provided both at headquarters and in the field to strengthen the communicable disease control programs of the states. During this period, the Regional Training Consultants were encouraged to provide services for Regional Office programs other than those of CDC. This was justified because the Regional Training Consultant positions were funded with General Health Services money. It worked out quite well because Training Branch headquarters was having increasing difficulties in meeting the volume of requests for services that were stimulated by the Regional staff. It soon became evident, however, that most of the other PHS Programs had not developed training resources comparable to those of CDC. Consequently, it was more time consuming and difficult to develop training activities and services to support programs other than those of CDC.

In 1959, PHS's newly created Division of Health Mobilization contracted with Training Branch for state-line training services for medical and ancillary personnel. A Health Mobilization Training Section was instituted and staffed. It introduced a series of training programs in response to needs occasioned by increasing world tensions.

In FY 1961, the Bureau of State Services reorganized, and at the start of FY 1962, certain CDC activities became the responsibility of other

organizations within the Bureau. Included in the transfers from Training Branch were responsibilities for general environmental health training, training on hygiene of housing, and the regional training consultant positions. Unfortunately, unanticipated priority pressures precluded adequate administration and funding for most of the transferred activities so they disappeared over a period of four to five years.

The Audiovisual Section of the Training Branch became CDC's Audiovisual Branch in July 1962. Later it became the Medical Audiovisual Facility of the PHS and was placed administratively under the National Library of Medicine. In 1962 the training methods activities were transferred from the Office of the Chief, Training Branch, to a new section entitled Development and Consultation Services Section. This title was soon changed to Training Methods Development Section.

Functions and Purpose

The documented function of the Training Branch at the beginning of the Johnson years was as follows: "The Training Branch is responsible for developing, conducting, and directing a nationwide program of continuing education on communicable disease control for members of the practicing health professions. Emphasis is placed on the need for states to establish their own training programs, with CDC assistance as required and with consultation services available on a continuing basis. To achieve this end and to meet present needs, courses are presented both at headquarters and in the field to serve public health workers from State and local health departments, other state agencies, medical associations and foreign

countries. Other CDC branches contribute to the program by conducting courses and demonstrations in their own special areas and by providing to the Training Branch the services of instructors drawn from their own specialized staff. To facilitate instruction, the branch produces and distributes printed training materials and training aids. New and varied teaching methods are also developed and adapted for use in reaching each of the heterogenous groups included in the public health team. This area, as well as new course development, is being expanded in FY 1964. The Branch also furnishes technical support to academic institutions."*

The official documented functions for the Training Program in July 1968 are: "(1) Conducts a program of continuing education for the practicing health professions on methods and techniques of disease prevention and control; (2) Establishes demonstrations in cooperation with state and local health departments to serve as community models in teaching disease control and prevention; (3) Promotes the establishment, maintenance and improvement of state and other health training programs; (4) Provides communicable disease control training and consultation in natural disasters and epidemics; (5) Devises, develops, and demonstrates advanced training methodologies through the above activities; (6) Develops and promotes comprehensive methods of community evaluations, neighborhood remedial action, and motivation of health behavior; (7) Coordinates the Center's training activities; and (8) Develops and imparts through continuing education

*--CDC Organizational Unit Work Program and Budget Projects - Fiscal Year 1964, USDHEW, PHS, CDC.

and demonstrations, training in technical skills, educational methods, community evaluation techniques, and health behavior motivation."

Training Program provides services on the broader aspects of communicable disease prevention and control, and on training development and methodology. The other Programs of NCDC provide training services that are usually limited in scope to their respective program's specialty.

The purpose of National Communicable Disease Center Training has remained the same throughout the Johnson years. It is:

"..To assist the states in developing and improving programs in the area of communicable disease control.

..To provide training and various other services which are not available to the states through their own resources.

..To provide training assistance and services to other organizational units of the Public Health Service and to other federal agencies that are engaged in activities related to public health.

..To develop and produce training aids and to stimulate use of these aids in public health training activities.**

Also see Exhibit V for functional statements of the Office of the Program Chief, the Sections and the Units.

**--National Communicable Disease Center Training Bulletin, January 1, 1968 to June 30, 1969, DHEW, PHS.

I. ORGANIZATIONAL CHANGES

A. On November 22, 1963, the table of organization for the Training Branch was composed of the Office of the Chief, including Program Management Services and Special Training Services, and five sections: Community Services Training Section, Development and Consultation Services Section (later changed to Training Methods Development Section), Health Mobilization Training Section, Health Services Training Section, and Vector Control Training Section. (See Exhibit I.)

B. The following organizational changes have taken place since November 22, 1963:

1. To consolidate teaching services for specific professional health personnel, the seminar services activities that had been developed in the Training Methods Development Section, and the activities of the Health Services Training Section, were assigned to a new section called the Health Professions Training Section. This section, organized in January 1964, included the Office of the Chief, a Health Services Training Unit and a Seminar Services Unit. Later a Nurse Training Activity was included under the Health Services Training Unit. The majority of the Training Branch unidiscipline courses for nurses, physicians, and veterinarians; services for professional organizations; and, certain multidiscipline training on epidemiology were thereby assigned to a single section. Specific training activities on control of hospital-associated infections and responsibility for professional assistance in

development of the NCDC Teaching Aids Library were also assigned this section between January 1964 and July 1968.

2. A change in program direction on behalf of the PHS Division of Health Mobilization resulted in the termination of the contract for CDC to provide state-line courses for medical and auxiliary personnel. The Health Mobilization Training Section was disbanded as of June 30, 1964. Personnel of this section were assigned to other activities within the Training Program.

3. The Special Training Services Unit of the Office of the Chief, Training Branch, provided publication services for all of the Branch and training services primarily for visitors to CDC from other countries. The chief of this service died suddenly in the spring of 1964. Because of the increasing number of visitors from other countries, and the Center's increasing involvement in international activities, the Office of the Center Chief decided that it should undertake responsibility for visitors from other countries; therefore, at the end of FY 1964, that part of the Special Training Services Unit activity was transferred to a newly created International Affairs Office in the Office of the Chief, CDC. A Publications Activity Unit was then established in the Office of the Chief, Training Branch in order that the highly important publications services could continue to be provided throughout the Branch.

4. In FY 1964, the Community Services Training Section was reorganized and at the start of FY 1965, for improved alignment of personnel and activities, an assistant section chief was appointed and three units designated. They are: Food-borne Disease Unit, Teaching Reference Community Unit, and Special Projects Unit. The Food-borne disease unit was organized to provide courses and services concerning that subject. The Teaching Reference Community Unit was organized to promote the utilization of special teaching reference materials and guides prepared by the Section, to teach courses utilizing these materials, and to teach other courses on subjects related to administration, disease control in institutions, and general epidemiology. The Special Projects Unit was organized primarily to develop and administer an extensive home-study program.

5. During FY 1964 and 1965, several representatives from the Branch worked for AID on a study for the establishment of a National Medical Center Project for the government of Liberia. The Branch, through the Deputy Chief, then administered the development of the project. Three positions were filled during FY 1966, and eleven more in FY 1967. These positions were in Monrovia, Liberia. This was a cooperative project between CDC, other segments of the PHS, AID, and the Liberian government. At the end of FY 1967, in conjunction with a reorganization of the PHS, the Branch's responsibility for this project was transferred from CDC to the PHS, Bureau of Health Services, Indian Health Program.

6. In August of 1966, the State Aids Section of the former Technology Branch, CDC, was added to Training Branch. In keeping with a change in emphasis and program direction, it was renamed the Community Disease Control Demonstrations. Because its work is basically a training activity, it was appropriate that it become a part of the Training Branch.

7. With the reorganization of the PHS and CDC in 1967-1968, the name of the Communicable Disease Center was changed to National Communicable Disease Center, and the name of the Training Branch was changed to Training Program.

8. In July 1968, the Vector Control Services Training Section was transferred from Training Program to the Training Section of the *Aedes aegypti* Eradication Program. This was done to prevent duplication of services and to consolidate CDC training on vector control. Because the present Training Program originated as the vector control training of the Malaria Control in War Areas program of 1942-1946, the transfer of vector control training from the Training Program was the end of an era.

C. At the start of FY 1969, the Training Program was composed of the Office of the Chief, including a Program Management Office and a Publications Activity, and four sections: Community Disease Control Demonstration Section, Community Services Training Section, Health Professions Training Section, and Training Methods Development Section. (See Exhibit II)

Proposed changes in organization to take place in FY 1969 would change the present Training and Communications Aid Unit to a section to be named Educational Media and Consultation Services Section. This section would have four units: Classroom Activity Unit, Creative Arts Unit, Photographic Unit, and Technical Services Unit. The Training Methods Development Section would add a unit entitled Training Resources Unit. (See Exhibit III)

II. PERSONNEL AND STAFF CHANGES

A. Employment on November 22, 1963 was 70 persons. (See Exhibit IV for employment by FY.)

B. Present employment is 116 persons.

C. Top Officials during the Johnson Years were:

Donald S. Martin, M.D., Medical Director

Chief of Training Program 1956 until his retirement June 30, 1968.

John H. Ackerman, M.D., Medical Director

Deputy Chief of Training Program 1964 to present.

Acting Chief of Training Program, December 1967 to present.

Former Chief of Health Services Training Unit.

Joseph E. Borches (*)

Chief, Special Training Services Section

E. Stanley Hunter, Administrative Officer

Program Management Officer, Office of the Chief

Carl P. W. Ellsworth, Technical Writer-Editor

Chief, Publications Activity, Office of the Chief

Reuel H. Waldrop, Sanitarian Director

Chief, Community Disease Control Demonstrations

(*)-deceased

Warren S. Dobson, Sanitarian Director

Assistant Chief, Community Disease Control Demonstrations

Coordinator of Field Activities, Office of the Chief, 1965-1966

Chief, Health Mobilization Training Section 1962-1964

Richard F. Clapp, Sanitarian Director

Chief, Community Services Training Section

C. Bradley Bridges, Sanitarian Director

Assistant Chief, Community Services Training Section

Alfred R. Kinney, Jr. Educational Specialist (supervisory)

Chief, Training Methods Development Section

Robert E. Bates, Jr., Educational Specialist (supervisory)

(*) Chief, Educational Media and Consultation Services Section

Arthur E. Kaye, Sanitarian Director

Chief, Health Professions Training Section

J. Richard Gorham, Ph.D., Senior Scientist

Acting Chief, Vector Control Services Training Section, 1966

Paul L. Rice, Ph.D., Scientist Director

Assistant Chief, Vector Control Services Training Section 1964-1966

Harold G. Scott, Ph.D., Senior Scientist

Chief, Vector Control Services Training Section 1963-1966

(*)--Proposed FY 1969

III. PROGRAM CHANGES

Some of the program changes concurrent with organizational changes previously delineated in this report might bear repetition under this heading. Administrative responsibility for the training of visitors from other countries to NCDC was transferred to the Office of the Center Chief. Courses and training services provided on a reimbursable basis for the PHS Division of Health Mobilization were discontinued. Development and administrative services in conjunction with a National Medical Center for Liberia were delegated to another Bureau within the PHS. Primary responsibility for training on vector control has been transferred to another program in NCDC. The Community Disease Control Demonstrations have become a part of the Training Program.

The Training Methods Development Section has had a major role in providing consultation on design and equipment for the Center's training facilities. These facilities are recognized throughout the country as outstanding models of training installations. Over the past 5½ years the Training Methods Development Section has been delegated increasing responsibilities, and is currently in charge of the Center's training facilities. This includes design of the facilities, installation of equipment, scheduling the facilities, maintaining and arranging equipment, and operating projection, television, and other automated and specialized equipment.

Contemporary teaching methodology has been employed in the development of educational materials. In 1964, the Instructive Communications Unit was

established within the Training Methods Development Section to develop programmed instruction (self-instruction) materials. Over 18 lessons of instruction have since been prepared. The total distribution of these lessons exceeds 73,000 copies. (See Exhibit VI - Selected Accomplishments.) Some of the lessons have been printed in foreign languages and are being utilized in support of health programs in many remote areas of the world. Two of these lessons were cited at the National Society for Programmed Instruction annual convention in 1966 as being among the top six lessons available in the entire field of programmed instruction.

The Community Services Training Section developed and refined a Teaching Reference Community that is being utilized by schools, universities, and inservice training personnel in health agencies all across the nation. This extensive set of reference materials is used by instructors to present many and varied teaching exercises. The Community Services Training Section has also developed and instituted a homestudy program. The first lessons were completed in FY 1966. Five courses made up of seventy-one lessons are now available. Over 1,800 individuals have completed correspondence courses that are being offered by this Section.

The Office of the Program Chief has responded to a special request from teachers of preventive medicine. At a conference on Medical Education in National Defense, the teachers requested teaching materials on some of the less common diseases in the United States. Over the past five years, a Teaching Aids Library of kits containing 35 mm slides, reprints and references

has been prepared. Seven volumes, each on a specific disease, have been released. One of each volume has been sent to nearly all medical schools in the United States. Three additional volumes are in development.

Other program changes include steady expansion of the Training Methods training, development of new courses by all the Sections to meet training needs occasioned by new and different programs and problems, and a steady trend away from technical training and toward training for administrative, supervisory and professional personnel.

IV. OPERATING METHODS

A. Grants

Generally not applicable to our training operations. Some of our trainees may be funded through grant sources while in attendance at Training Program courses. Occasionally the Training Program has assisted State Health Agencies or Universities with courses that are partially funded with grant moneys. The Training Program has not administered any grants.

B. Direct Operations

Approximately 90% of our activities are direct operations with Communicable Disease Assistance - Training of Public Health Workers budgeted funds. (See Exhibit IV.)

C. Relations with States

Approximately two-thirds of our training courses, seminars, etc. are provided at field locations in cosponsorship with state and local health agencies, educational institutions and/or professional organizations.

In many areas the homestudy courses of the Community Services Training Section are publicized and their utilization is encouraged and coordinated by state health department or large local health department.

All training-demonstration projects of the Communicable Disease Control Demonstrations are initiated with the concurrence and cooperation of the State Health Department concerned. In addition, after training,

State Health Department personnel participate as a resource for all projects and are intimately involved with the expansion of the principles of the training-demonstration program to other health units within the state.

D. Headquarters and Field

With the exception of the Communicable Disease Control Demonstrations, our operations are based at headquarters, but we often seek the services of our NCDC representatives in the Regional Offices for assistance in planning and implementing training activities in the field.

The headquarters staff for the Communicable Disease Control Demonstrations is responsibile for providing program direction, administrative, medical, and statistical support to the field personnel. The actual program operations of the training-demonstrations are carried out in the field (local health department level) where projects in 60 communities in 26 states are currently being developed.

Some services are being provided outside the United States in cooperation with AID, WHO, and PAHO. The services are provided by headquarters-based personnel. One of the communicable disease control demonstrations is located in Mexico.

V. INTERAGENCY RELATIONS

A. Other Federal Agencies

The Training Program has had frequent occasion to jointly sponsor, or provide on contract, training services for other parts of the PHS. Examples are disaster preparedness courses for the PHS, Division of Health Mobilization; courses on control of infections in hospitals with the PHS, Division of Hospital and Medical Facilities; courses on environmental aspects of nursing homes for the PHS, Nursing Home Program; special training services for the PHS, Office of Comprehensive Health Planning. Courses on interviewing technique have been provided under contract with the Health Referral Section of the Public Health Administration Branch, Division of Community Health Services, PHS.

Personnel from other federal agencies attend many of the headquarters and field courses that are offered. In FY 1966, for example, 931 individuals from other federal agencies were enrolled in NCDC training activities. Included were a number of personnel representing the military services.

Assistance is currently being given to the National Aeronautics and Space Agency in design and implementation of training for scientist astronauts.

The Community Services Training Section is cooperating with the U.S. Department of Agriculture and the Food and Drug Administration to provide training on food-borne disease control.

Communicable Disease Control Demonstrations personnel are working with Office of Economic Opportunity and Model Cities representatives in several communities.

B. International Agencies

Through the efforts of the Pan American Health Organization, Communicable Disease Control Demonstrations personnel are working with Mexican Health authorities on the establishment of demonstration projects in Agua Prieta and Tecate, Mexico.

The Training Methods Development Section has assisted the World Health Organization with two international workshops on teaching methods for the worldwide malaria eradication program.

Information about assistance in development of a National Medical Center in Liberia has been presented in other sections of this report. This assistance was provided through a PAS-AID contract.

Special training through AID has been provided for physicians and paramedical personnel in India. In FY 1966, one of the Training Methods Development Staff presented three weeks of instruction on use and maintenance of Jet Injectors.

Several of the Training Program staff have served as consultants to WHO for specific short-term assignments in other countries.

The Health Professions Training Section will provide a physician to coordinate a special course being held in Argentina in early FY 1969.

The course is on Zoonotic Epidemiology and is sponsored by NCDC's Foreign Quarantine Program, PAHO, and the Government of Argentina.

C. Federal-State-Local Partnership

(See Section IV-C.)

VI. LEGISLATIVE RELATIONS

A. Studies, Investigations

None.

B. Financial Support

90 Percent Appropriation -- Communicable Disease Assistance -- Training of Public Health Workers.

10 Percent Reimbursables.

(See Exhibit IV.)

VII. EXTERNAL RELATIONS

A. Public Advisory Committees

None

B. Cooperation With Voluntary Agencies

In providing training services and with the training-demonstrations, there are frequent occasions for cooperation with voluntary agencies. Representatives from voluntary agencies (Red Cross, TB Association, etc.) frequently attend courses or seminars provided by the Center. The CDC seminars on tuberculosis held in 1963 and 1964 were often cosponsored by state and local tuberculosis associations. Voluntary agency personnel are often involved in planning and cosponsoring courses, seminars and demonstrations that are presented at the community level.

C. Cooperation with Professional Organizations

Many of the NCDC Seminars and some of the Training Program courses are provided through or in cooperation with professional organizations. The pattern for such cooperative activities has been for NCDC to establish liaison with the national organization and to seek cooperation on specific projects from state or local affiliates through the parent organization. Some of the professional groups that we are working cooperatively with in such manner are:

The American Medical Association

The American Public Health Association

The American Academy of General Practice

The American Academy of Pediatrics

The American College of Chest Physicians

The National Association of Sanitarians

The National Veterinary Medical Association

The International Association of Milk and Food Sanitarians

The American Hospital Association

The National Society for Programmed Instruction

The American Society for Training Directors

A number of our staff are members of one or several of the professional organizations listed above and contribute services through committee assignments and official offices.

VIII. CHANGES IN CHARACTER OR EMPHASIS

At the Program level, several definite changes are taking place. The Program is, as are other components of the Center, becoming more involved in international activities, and greater emphasis is being placed upon utilization of contemporary training methodologies. An increasing proportion of the training conducted by the Program staff is cosponsored with other NCDC Programs or organizations outside of NCDC. The training is aimed more at professionally qualified personnel than in the past. The excellent teaching facilities at NCDC are being equipped with electronically controlled devices to encourage flexibility in instruction and to assure maximum utilization of instruction time.

In an effort to meet the ever-expanding needs for training, emphasis is also being placed upon development of materials that others can use to teach or that the student can use himself. Examples of these materials are correspondence courses, programmed instruction, teaching reference community materials, a teaching aids library, open-ended films, and teaching problems on overhead transparencies or 2 x 2 slides.

Changes are also taking place at the section level.

Community Services Training Section has shifted from technical training for sanitarians to training in communicable disease control through proper management of the environment. Its courses, with the exception of the correspondence courses, are directed at the supervisory-level professional

sanitarian. Emphasis is being placed on courses that will have direct bearing on current communicable disease problems. Courses on Control and Prevention of Food-Borne Disease and courses on Disease Outbreak Investigation are examples, as are specialized courses to prepare the sanitarian for his new role in control of institutional environments. Greater emphasis is also placed on consultation for instructors who are using the Teaching Reference Community materials and on further development of these materials and the correspondence courses.

The Communicable Disease Control Demonstrations started initially in the 1950's as vector-control demonstrations incorporating environmental improvement. At that time, the objectivewas to train state and local health workers in the identification of vectors, and vector-borne disease problems in selected communities, and to organize these communities to cope with their problems. Since the early 1960's, the Demonstrations' objectives have been to train community health workers to identify <u>all</u> infectious disease problems by socio-economic strata and to organize, train, motivate, and utilize all residents of selected high disease rate neighborhoods to continually improve their health knowledge, attitudes, and habits, and to utilize health services -- resulting in the reduction or eradication of infectious disease. Today the efforts are being focused even more directly on health-depressed families in neighborhoods of high disease prevalence. Following is a quote from the FY 1968 annual report of the Demonstrations:

"Community Disease Control Demonstrations of Training Program emphasized the objective of promoting, training, and motivating community health workers to train, organize, utilize, and motivate all health depressed families in high disease prevalence neighborhoods to continually improve their health knowledge, attitudes, and habits, resulting in the reduction or eradication of infectious disease and certain other health problems."

The Health Professions Training Section is placing greater emphasis on continuing education services for professional personnel who are difficult to reach through the more conventional educational programs. It also emphasizes the design of new courses to meet the needs of existing communicable disease programs and problems. The NCDC seminar services, which provide information on infectious diseases for meetings of physicians in private practice, are examples. These services are promoted through such organizations as the American Medical Association, The American Academy of Pediatrics, the American Academy of General Practice, etc. Special courses have also been designed and implemented to support Center assistance in the control and prevention of hospital-associated infections. In 1965, a course on infections control was developed for administrative and supervisory personnel from hospitals. In 1968, a special course was offered for nurses from hospitals who are in charge of surveillance of hospital-associated infections at their respective institutions. Emphasis is also being placed upon providing more advanced and in-depth training on epidemiology. In 1968, the Section's first three-week advanced course was presented for nurse disease investigators and nurse educators. Requests for consultation on training and education,

and for consultation on medical and technical matters pertaining to subjects presented through the Section's courses are on the increase. Major responsibility for the NCDC Teaching Aid Library will be a function of the Section starting in FY 1969; the activities of the teaching loan library maintained by the Section have increased.

Several major changes in character or emphasis have taken place in the Training Methods Development Section. This Section has more than doubled in area of delegated responsibility, personnel, and budget since 1963. (See Exhibit IV - Personnel and Budget.) It now engages in international health activities including training and consultation on training. Beneficiaries have included the WHO Malaria Eradication program, and organizations in Logos, Nigeria and at Manila, Philippine Islands. Courses and demonstrations have also been presented by personnel of this Section at Monroevia, Liberia and in India. Considerable emphasis has been placed on the development of programmed instruction materials and capability to produce these materials. (See Exhibit V - Selected Accomplishments.) Notable among these materials is a program for training microscopists in the identification of malaria parasites. This program was developed in cooperation with AID, the NCDC Malaria Program, and the NCDC Laboratory Program.

During the past year, the Training Methods Development Section started a pilot study of Computer Assisted Instruction in cooperation with Florida State University. A program for computer assisted training has been designed and is now being tested. The Section is now responsible for

all audiovisual requirements of the Center; during FY 1969 this function may be placed in a newly created section. Other activities reflecting change in character are the training services now provided for the Section for the Manned Spacecraft Center of NASA, and exploration (with D.O.D. and Office of Education) of the retrieval of reference materials related to training methods. The number and variety of courses on training methodology and related subjects have also increased markedly over the past several years.

IX. LEGISLATIVE HISTORY

A. Laws Affecting Program

1. Legislation pertaining to reorganization of DHEW and the PHS does affect our activities. With reorganization, certain responsibilities and functions may be added or taken from NCDC, affecting the Training Program either directly or indirectly. Several instances of such changes are given in the Introduction and in Section I. of "Organizational Changes."

2. Appropriations and continuing resolutions in lieu of appropriations have a direct affect on the Training Program.

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Tuberculosis Program

TUBERCULOSIS PROGRAM

TUBERCULOSIS CONTROL IN THE

UNITED STATES - 1963 - 1968

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Task Force on Tuberculosis Control

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American Thoracic Society - Chemoprophylaxis for Prevention of TB

Report of NTA Committee on Cooperation with Federal Agencies

Report of First Annual National Tuberculosis Conference

American Thoracic Society - Infectiousness of Tuberculosis

Report of the Ad Hoc Advisory Committee on Surveillance Reporting of Tuberculosis

The Role of the Public Health Nurse in the National Tuberculosis Programme in India

NTA-PHS Joint Staff Meeting - May 4-5, 1966

NTA/PHS Joint Staff Meeting - November 15-16, 1966

Report of the NTA Conference on Tuberculosis Followup and Supervision - February 16-19, 1965

Special Tuberculosis Projects - June 1967

OVERVIEW OF FEDERAL ROLE

History

The early history of effort toward control of tuberculosis on a federal level was not encouraging. In 1917 the Kent Bill, which was amended to provide for a division of tuberculosis in the United States Public Health Service, failed to pass, as did similar bills introduced in the next session of Congress.

With the increased interest in tuberculosis, as governments began to shoulder the institutional burden, the monies involved grew in proportion. The total public appropriations by 1910 had reached more than $9,000,000 annually, of which over $4,000,000 came from the states, almost an equal amount from municipalities, and about $1,000,000 from the National Government for Federal hospitals. By way of contrast, in 1963 it was estimated by the "Task Force on Tuberculosis Control" that the annual hospital cost for tuberculosis was $335,800,000. Annual expenditures available in 1962 for various activities out of the hospital that could be used for tuberculosis programs were: State and local governments $32,500,000, Tuberculosis associations $8,000,000, Federal grants to the states $4,500,000.

An estimated $20,800,000 in additional funds were needed annually to implement an increased effort that would bring about more rapid progress against tuberculosis. The overall cost of tuberculosis to the nation's economy is estimated to be one billion dollars each year. The direct cost is around $600 million, for research, hospital care, control activities by federal, state and local health agencies, compensation and private physicians

services; the indirect cost (due to loss of income from death and disease caused by tuberculosis) is estimated at over $400 million.

Tuberculosis Control Division Established

There were no significant developments until soon after "Pearl Harbor" when the Surgeon General, Dr. Thomas Parran (1892-1968), established a small tuberculosis control section in the States Relation Division of the Bureau of State Services. In 1944 the Public Health Service Act authorized establishment of a tuberculosis control program. It placed upon the Public Health Service the responsibility of administering grants-in-aid to state health departments, and of conducting demonstrations and research in tuberculosis. On July 6, 1944 the Surgeon General established a Tuberculosis Control Division in the Bureau of State Services of the Public Health Service and it was approved on the same day by the Federal Security Administrator. Senior Surgeon Herman E. Hilleboe (1906-) who had been in charge of the Public Health Service emergency tuberculosis program since 1942 was appointed chief of the new Division with rank of Medical Director, in which capacity he served until 1946. Beginning in 1944 casefinding was one of the cardinal activities of the Public Health Service in tuberculosis control.

The role of the Tuberculosis Program of the United States Public Health Service, since 1960 a branch of the National Communicable Disease Center in Atlanta, Georgia, has been to exercise leadership in improving tuberculosis control efforts throughout the nation, conduct long-term research investigations, provide professional assistance and promote educational programs, stimulate other organizations and groups to participate in various

anti-tuberculosis programs, and to give the American public a comprehensive view of the tuberculosis problem as it relates to the nation's health.

Tuberculosis Control Grants Authorized

The Public Health Service provides supplemental fiscal support to state and local health departments for tuberculosis control activities through formula and special project grants-in-aid. Assistance is also given by Tuberculosis Program consultants with the development of tuberculosis programs when such help is requested. The Tuberculosis Control Grant was first authorized by Section 314(b) of the Public Health Service Act, approved July 1, 1944, to assist states in establishing and maintaining adequate measures for the prevention, treatment and control of tuberculosis. In order to focus greater attention on the need for casefinding, Congress, in the 1955 Appropriation Act (P.L. 83-472), directed that Federal formula grants and state and local matching funds be used for direct expenses of prevention and casefinding activities. The use of these grant funds was further restricted in fiscal year 1965 to be in keeping with the recommendations of the Surgeon General's Task Force on Tuberculosis Control.

Public Law 87-290, approved September 22, 1961, provided for project grants for tuberculosis control. It was proposed in the fiscal year 1962 that special project grants be used almost exclusively for improving services to known tuberculosis patients outside of hospitals. Casefinding activities under this authority were to be limited to examination of contacts and diagnosis of suspects known to health departments. See Public Law 89-749, 89th Congress, S.3008, November 3, 1966 (Comprehensive Health Planning and Public Health Services Amendments of 1966).

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Task Force Outlines 10 Year Program

In December 1963, the Surgeon General's Task Force completed its report which contained recommendations for a ten year plan to raise the level of nationwide tuberculosis control services through greater Federal participation by means of increased formula and project grants to the States. The activities recommended were for services to unhospitalized active cases, inactive cases, and contacts to new active cases; identification of persons at risk through tuberculin testing of school children and hospital admission X-ray programs; and continuing periodic examination as well as prophylactic treatment of persons at risk of developing tuberculosis. In 1967 there were 82 Special Tuberculosis Projects in operation. The federal appropriations for tuberculosis control had reached $3,000,000 for Formula Grants, and $14,950,000 for Special Tuberculosis Project Grants.

The influence of these activities by the Federal Government is difficult to assess with precision, but there is ample evidence that control of tuberculosis is being improved, and that there is a resurgence of interest in this disease. One criterion is the number of professional and ancillary personnel added to already established health department tuberculosis programs and supported directly through Special Tuberculosis Project grants. On July 1, 1968 there were 2,290 approved positions available to these projects, including 135 physicians, 35 Public Health Service Medical Officers and 80 Public Health Advisors, 667 nurses, 683 clerical personnel, and other persons in a variety of positions augmenting the regular staff assigned to tuberculosis control work in health departments.

Federal Financing At All-Time High

As mentioned above, since 1963 one of the most important contributions to the control of tuberculosis in this country was the federal special tuberculosis grants and formula grants to the states. Tuberculosis formula grant funds are allocated among the states using a formula which, as provided by law, takes into consideration the population, financial need, and extent of the tuberculosis problem in the various states. By administrative determination, 20 percent of the funds is allotted on the basis of population weighted by the reciprocal of per capita income, and 80 percent measured by tuberculosis morbidity and mortality and evaluation of program needs. Special project grants are allocated to states and other political subdivisions depending upon the "magnitude" of the problem.

APPROPRIATIONS FOR TUBERCULOSIS CONTROL, 1961-1968
Formula Grants and Project Grants

Fiscal Year	APPROPRIATION	
	Formula Grants (a)	Project Grants (b)
1961 ...	$4,000,000	...
1962 ...	3,500,000	500,000
1963 ...	3,250,000	1,250,000
1964 ...	2,900,000	1,606,000
1965 ...	3,000,000	5,000,000
1966 ...	3,000,000	9,700,000
1967 ...	3,000,000	14,950,000
1968 ...	3,000,000*	18,545,996*

*Estimated

(a) Formula Grants: As required in the annual Appropriation Acts beginning with fiscal year 1955, the expenditure of tuberculosis grant funds must be matched by expenditure of an equal amount of state and local funds. These grant funds are allocated to the 50 states, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands. (b) Special Project Grants: Any state or, with approval of the state health authority, any county, health district, or other political subdivision of a state may apply for a project grant.

National Effort Improves

With increased monies made available by the federal government to supplement state and local tuberculosis programs the quantity and quality of the national effort improved. Application of the products of research to the daily activities of health departments has had a measurable effect on the delivery of modern antituberculosis treatment and prevention.

The following table, for the expanding tuberculosis project areas reflects the trend. A greater proportion of active cases now receive care under clinic auspices or by private physicians on an outpatient basis.

ACTIVE CASES ON TUBERCULOSIS REGISTERS
RECEIVING SUPPLEMENTAL FEDERAL GRANT FUNDS (a)
1961 - 1967

Reports as of this Date	Total Cases on Registers	Active Cases on Registers (End of Period)					
		Total Active		Hospitalized for TB		Active at Home	
		Cases	Percent (b)	Cases	Percent (c)	Cases	Percent (c)
Dec. 1961	18,649	7,559	40.5	3,873	51.2	3,686	48.8
June 1962	25,483	8,877	34.8	4,842	54.5	4,035	45.5
Dec. 1962	38,173	13,055	34.2	6,908	52.9	6,147	47.1
June 1963	40,447	13,992	34.6	7,661	54.8	6,331	45.2
Dec. 1963	46,476	13,992	30.1	7,764	55.5	6,228	44.5
June 1964	52,615	14,478	29.4	8,438	54.5	7,040	45.5
Dec. 1964	94,603	23,007	24.3	11,394	49.5	11,613	50.5
June 1965	118,695	29,095	24.5	13,977	48.0	15,118	52.0
Dec. 1965	166,829	36,986	22.2	17,606	47.6	19,380	52.4
June 1966	186,714	40,857	21.9	19,081	46.7	21,776	53.3
Dec. 1966	211,168	48,210	22.8	18,893	39.2	29,317	60.8
June 1967	212,618	46,249	21.8	18,572	40.2	27,677	59.8
Dec. 1967	263,110	55,336	21.0	20,878	37.7	34,458	62.3

(a) Dec. 1967 Tuberculosis Programs for which expanding and supplemental register data was submitted. All figures are as of last day of period (i.e., June 30, Dec. 31).
(b) Percent active cases of total cases on registers.
(c) Percent hospitalized for TB and "at home" cases of total active cases.
Note: Included in active at home cases are identified primary and extra-pulmonary active cases (Dec. 1962 = 495, Dec. 1963 = 401, June 1964 = 352, Dec. 1964 = 593, June 1965 = 1,218, Dec. 1965 = 1,435, June 1966 = 2,160, Dec. 1966 = 4,829, June 1967 = 4,506, Dec. 1967 = 5,451.

Control Efforts Prior to Report

Historically, state, county, and local health agencies, charged with the responsibility of protecting the well-being of the citizens of their communities from tuberculosis, formed a loose network that served as the tuberculosis control system of the United States. The introduction of specific antituberculosis drugs in the early 1950's presented the needed opportunity for this control system to better discharge its responsibility be responding to required changes. At this time the system was divided into two functional components--the finding of tuberculosis cases and their treatment. Organized case finding was carried out largely through the efforts of local public health agencies which received supplemental assistance from the State and Federal levels. Special tuberculosis hospitals provided a means of isolating the active infectious case and means of "arresting" the disease through the long term supportive rest therapy, surgical treatment, and rehabilitative service.

Antituberculosis Drugs Initiate Change

The introduction of specific antituberculosis drugs initiated major changes which are still in progress. Recovery from tuberculosis became expected, instead of it being a chronic relapsing disease. The death rate dropped sharply. Hospital stay was markedly shortened - from one - three years to a few months since drugs render the patient noncontagious and permit healing to occur; however, the drug to be effective has to be continued for about two years. To grasp the full potential of the antituberculosis drugs, the tuberculosis control system had to assure continuity of treatment outside of the hospital.

System Poorly Prepared

Because of the previous functional separation of services, the tuberculosis control system was poorly prepared to meet the increased need for out-of-hospital patient services in this community. Due to deemphasis of tuberculosis training by medical schools and schools of nursing, there was a lack of qualified trained workers. Available community out-of-hospital facilities were insufficient. Frequently, the services available within the community were inaccessible and unacceptable to those people with the greatest need for tuberculosis services. Although it had been known for many years that tuberculosis was a communicable disease, and therefore no respecter of political boundary or socio-economic group, services were frequently restricted by the patient's ability to pay and his residency status.

Research Productive

The research efforts of the Federal tuberculosis program continued to be productive. Many of the newer antituberculosis drugs were evaluated for effectiveness and their best use within a therapeutic course.

The tuberculin test was being evaluated to improve its specificity. It was found that 80 percent of the new cases being reported annually were coming from people infected with the tuberculosis germs in the past--frequently several years in the past. The drug, isoniazid, was being evaluated to determine if tuberculosis could be prevented when administered to people who had been infected in the past, and continue to offer great promise of providing a greater opportunity to control tuberculosis.

The studies in progress evaluating BCG, the tuberculosis vaccine, offered little promise of being a major tuberculosis control weapon in the United States since the epidemiologic conditions no longer fit.

In the fifteen years prior to 1964, the tuberculosis control system of the United States had not yet responded adequately to the opportunities to control tuberculosis which became available with antituberculosis drugs. Improved out-of-hospital services were still needed. This required more manpower trained in the new tuberculosis control techniques and methods, and more facilities in the communities without restriction of means or residency, if the opportunity for markedly less future tuberculosis was to become a reality in a short time.

It was against this background that the task force called by the Surgeon General of the United States Public Health Service made its recommendations calling for greater Federal participation. The recommendation contained in The Future of Tuberculosis Control provided a ten-year plan to markedly reduce new cases of tuberculosis through a unified course of action of Federal, state, and local participation.

Goal: Elimination of Mycobacterium Tuberculosis

The ambitious goal of the tuberculosis control system is the eventual elimination of Mycobacterium Tuberculosis, the germ of human tuberculosis. The immediate objectives of the tuberculosis control effort are concerned with eliminating the spread of the germ and maintaining this status until the last person who has been infected with the germ has died or until the development of a drug or vaccine which kills the germ in its resting phase.

If the infected group is identified and treated, there is great promise of reaching the immediate objective. If all spread of the tuberculosis germs were to cease, at least 75 to 100 years would be required to reach the goal of eradication of the tuberculosis germ since some of the 25 million United States citizens estimated to have been infected are quite young. However, a marked reduction of the anticipated disease can be expected when the tuberculosis control system uniformly applies existing medical knowledge. The period of communicability of the active case can be reduced. The added risk which our infected citizens have can be minimized. The risk of being infected of our younger citizens is being decreased. Since the opportunity exists to accomplish these objectives, the implementation of the task force recommendations became the challenge of the Federal tuberculosis control efforts. The protection of the well-being of our citizens from tuberculosis through a unified tuberculosis control effort became the challenge in November 1964.

Recommendation

The Task Force Report was a comprehensive review of the status of tuberculosis control in the United States in late 1963. The report carefully documented the problem and outlined specific action for improvement. Its major recommendations are found on Pages 19 and 20 of attachment.

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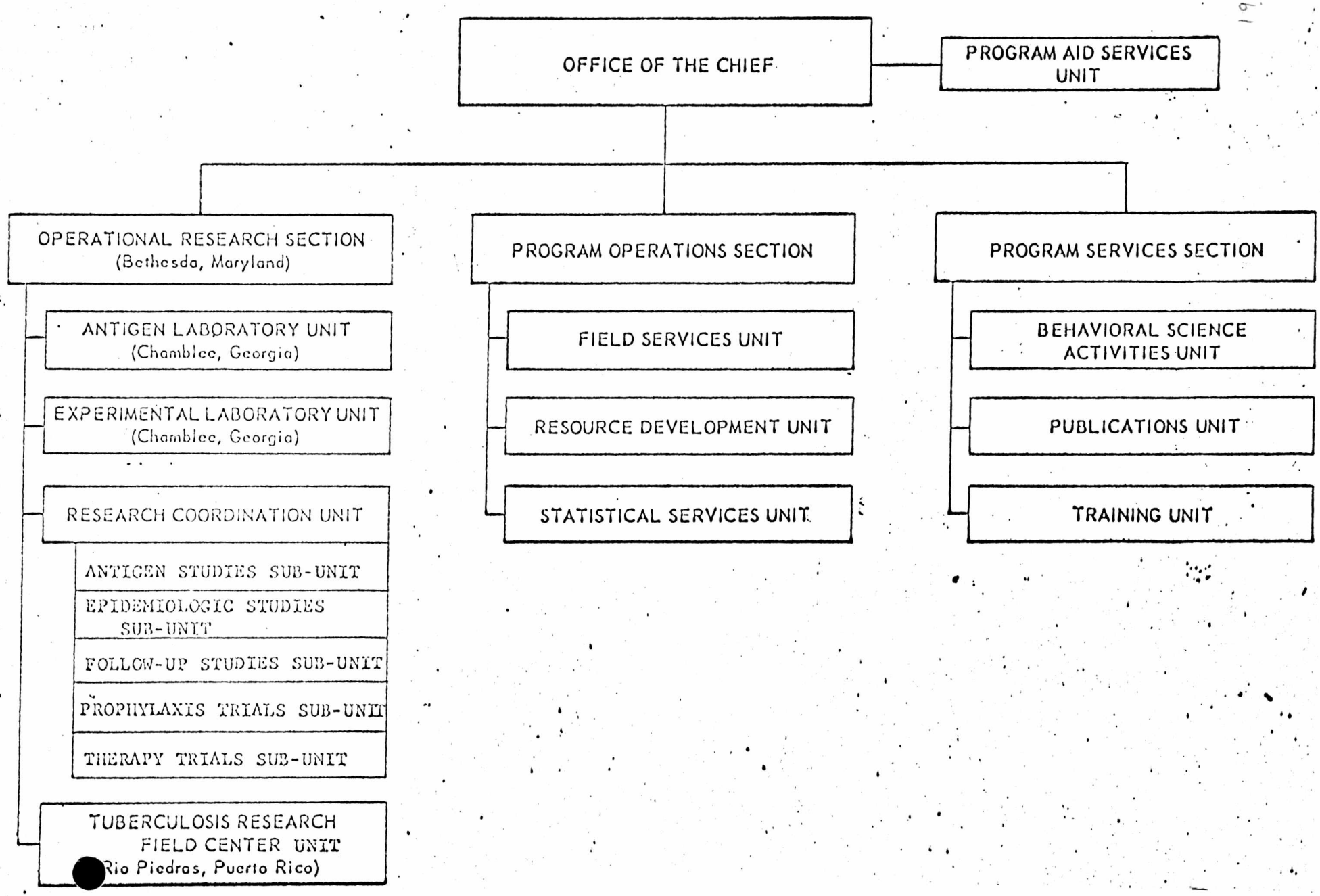
Implementation

Implementation of the Task Force recommendations was the primary goal of the Tuberculosis Program during the period 1963-1968. These guidelines have become the blueprint for program direction and are expected to influence the course of tuberculosis control in the United States for many years to come.

In 1964 the Tuberculosis Program developed an organizational structure specifically geared for implementation of these recommendations. (Figure)

Each organizational unit was delegated responsibility for carrying out certain portions of the Task Force recommendations. Details of how these sections worked toward achieving these Task Force facts are in the following special reports.

HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
Bureau of Disease Prevention and Environmental Control
National Communicable Disease Center
Tuberculosis Program



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TRAINING IN TUBERCULOSIS

Introduction

In the decade prior to 1963, few physicians considered tuberculosis a "popular" disease. The tuberculosis death rate had been greatly reduced from 1930. Effective chemotherapy had been introduced and undergraduates in medical schools believed that tuberculosis was no longer to be considered a major problem. Consequently, there was little desire to dedicate medical careers to research or practice in a field that many felt would soon no longer exist.

As a result of this condition, medical schools failed to produce educators and practitioners well versed in current tuberculosis concepts. Manpower needs became critical.

The utilization of chemotherapy, with the attendant decrease in mortality, led the physicians of the community to believe that tuberculosis no longer necessitated major study. The practice of referring all tuberculosis to special facilities resulted in lessened emphasis in accurate diagnosis, contact investigation, and follow up. The medical community had forgotten that there was a human element involved that would complicate treatment and control. Although chemotherapy provided an answer, it still requires a long period of cooperative patient participation. Generally, tuberculosis control practices were out of step with modern tuberculosis knowledge which resulted in breaks in the continuity of care. Infection was not being treated and in some instances active disease went untreated.

These factors combined to seriously restrict the reduction of cases of tuberculosis. By 1962 there were 53,315 new cases reported, and the reduction from 1961 was less than 1%.

The Task Force Report

The Task Force was established to determine why so little progress had been made in the control of tuberculosis and to recommend effective methods to remedy the situation. They conducted a study of the problem, and in December of 1963 published their findings and recommendations in a report to the Surgeon General.

It was the determination of the Task Force that training methods had to be established to both increase and preserve professional competence in tuberculosis control.

The Task Force recommended that clinical fellowships be established at schools of medicine to ensure the replacement of competent teaching faculty. They also recommended that new teaching methods be devised to improve undergraduate curricula in tuberculosis.

In order to preserve professional competence in the control of tuberculosis it was suggested that refresher courses for physicians and nurses be established. This would include short courses, workshops and symposia. In addition, courses would have to be developed for non-professionals, such as clerks or aides, who were working with tuberculosis records.

Above all, the Task Force felt that we were to concern ourselves less with research in developing new basic knowledge, and concern ourselves more with the fundamental programs of providing present knowledge to the medical community through training.

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Training in Tuberculosis - The Beginning

To meet the recommendations of the Task Force report the Tuberculosis Program intensified its training efforts by providing more courses for a variety of professional and non-professional personnel.

In 1963 a three-week course in "Clinical Management and Control of Tuberculosis" was established at National Jewish Hospital in Denver, Colorado. This course was directed toward physicians and nurses who were in positions to influence and direct programs in their own health community. The goal of the course was to provide instruction in the most current methods of diagnosis, treatment and control. National Jewish Hospital was chosen as the location because the expertise in tuberculosis knowledge was concentrated in this area. Fitzsimons Army Hospital, National Jewish itself, and a well-regarded city health department combined to provide faculty and experience necessary for the success of the course.

During this same period a nursing workshop was also held in Denver, Colorado. The workshop was directed toward public health nurses working in tuberculosis control activities throughout the United States. These nurses were not at the level of management that the three-week course involved, but were directly involved in interaction with the patient. Along with instruction in methods of tuberculosis control (diagnosis, treatment, etc.) stress was placed on patient management, casefinding, patient counseling and contact investigation. Although this course was only for four days, the workshop required problem-solving in each of these categories simulating the types of concerns they would face in their own health community.

Along with the courses and this workshop in 1963 we held two symposia for physicians who were not able to attend the three-week course at National Jewish Hospital. One was held in Massachusetts, the other in Pennsylvania. To some extent, these areas were chosen because travel to and from Denver from the eastern United States as well as the duration of the course combined to eliminate many physicians from taking time out of their practice. In addition, many especially felt that tuberculosis itself was no longer considered a serious problem. The symposia were held to present the highlights of the National Jewish Hospital course in a basic, concise manner. And if the physicians could not come to Denver, we would hold our symposia in an area where they would be able to attend. It was felt that after completion of the symposium, those physicians in areas with a high rate of active cases of tuberculosis would recognize the need for more specific information while other physicians had at least gained the fundamental current knowledge of tuberculosis.

Training in Tuberculosis - Development

In 1964 and 1965 popularity grew with the National Jewish Hospital course and in keeping with the Task Force recommendations, the course was offered more frequently - from twice a year in 1963 to four times a year in 1964. By this time, more physicians and nurses were becoming aware of the course and with an increase in the number of courses held, physicians and nurses were given more opportunity to choose the best time of the year to leave their practices. The course was also opened to laboratory personnel. We sought to increase their desire to gain greater understanding of their role in the control of tuberculosis. It was becoming apparent that

our training was at least becoming popular. We were training more people more often. (Table I, Page 20)

In the nursing workshops, the same phenomena occurred. Another workshop was held at Denver in February, 1964. In 1965, we held one in Atlanta to alleviate some of the need in that area for trained public health nurses to have a working knowledge of tuberculosis control. The move to Atlanta proved successful, so the workshops, like the symposia, moved around the country. (Table II,Page 21) Our objectives remained the same and experience was improving the format of the instruction.

The symposia were equally effective. In 1964 and 1965, we had a total of eight symposia in different areas of the country, and we trained a total of 874 physicians for these two years. (Table III, Page 22)

Training in Tuberculosis - Expansion

By the end of 1965, all facets of training had intensified. There was a greater number of people who sought training. At the same time, the number of courses offered at Denver was reaching capacity. The number of participants attending each course was necessarily limited. To reduce the pressure at Denver, two things were done: (1) the course was reduced from three weeks to two weeks, and (2) a duplicate course was established at Battey State Hospital in Rome, Georgia. Three weeks of instruction hindered the attendance of many physicians who would have otherwise participated. Travel to and from Denver from the eastern United States was to difficult for many. Battey was chosen for much the same reasons Denver was originally selected. It was a tuberculosis research hospital, expert faculty was available and it was near the National Communicable

Disease Center in Atlanta. In its first year, nine courses were held in Rome, Georgia, with a total attendance of 235 physicians, nurses and laboratory personnel. (Table IV, page 23)

In June 1966 the Training Unit was reorganized by the Tuberculosis Program to plan, direct, and evaluate all training activities in tuberculosis. The Program itself could no longer handle the rapid growth in training activities. At the same time it had become necessary to combine records on previously trained medical personnel and to establish continuing priorities for training where the need was greatest. By September of 1966 the Training Unit had developed still another training course. In accordance with the Task Force recommendations, a workshop was established for clerical personnel working in tuberculosis control. This course was similar in format to the nursing workshops with emphasis placed on tuberculosis records systems and case registers. The first workshop was held in Birmingham, Alabama with a total of 60 participants. These workshops were necessarily limited in number to promote close interaction between faculty and attendees and because there were wide variances in record procedures among different geographical areas. Since 1966 a total of 243 participants have attended four clerical workshops throughout the United States.

Training in Tuberculosis - Related Activities

In accordance with the recommendations of the Task Force, the Tuberculosis Clinical Associate Program was established in 1965 to insure the continuity and expansion of tuberculosis teaching proficiency in medical schools. Clinical Associate positions are instituted in medical schools where there are strong Departments of Pulmonary Disease and

Tuberculosis. To date, 15 Clinical Associate positions have been provided throughout the country.

In addition to regularly scheduled training activities, the Tuberculosis Program held One Day Seminars on Tuberculosis directed toward laboratory technicians, nurses, medical technicians, sanitary officers, social workers, and health educators. These seminars briefly highlighted the technical aspects of tuberculosis disease as well as the role of medical personnel in the health community. The last sponsored seminar was held in Bayamon, Puerto Rico in April, 1965.

To promote international exchange in training courses and to assist border states in their tuberculosis control programs, a training course on Laboratory Techniques was held at Juarez, Mexico in January, 1968. Representing participants from the United States and Mexico, the ten-day course emphasized clinical and laboratory techniques, and the function of the laboratory in the control of tuberculosis. This course was the first of its type to be developed by the Training Unit and its success indicates that future courses of this nature will be encouraged.

As we continue to identify the needs for training in tuberculosis, we also attempt to maintain maximum flexibility in order to meet those needs.

Training in Tuberculosis - Present versus Future

The purpose and basic knowledge content of the Tuberculosis Program's training courses remain basically unchanged. We are continuously improving the procedures for each course as we gain experience. To date, a total of nearly 6,000 medical and para-medical personnel have been trained in tuberculosis through our courses. (Table V, page 24)

We are now turning our attention to developing objective bases for all of our decision-making in training. Health manpower surveys are beginning to provide pertinent data regarding who should be trained, where they are located, and what areas of training are crucial. Our experience has led us to believe that if training is aimed at enabling an individual to perform his job function more effectively, then the training experience should simulate as closely as possible the job experience. To do this, it is necessary to identify the specific tasks that compose the job by asking ourselves what we want those trained to do rather than what we want them to know. Therefore, our training courses are being restructured to emphasize involvement and simulation techniques that will teach the participants how to use their knowledge in their jobs. Continuous evaluation of courses, periodic review of objectives, research and re-examination of manpower needs, and identification of appropriate methods of meeting these needs are now being undertaken.

To promote the objectives for training in tuberculosis, we will utilize the latest technological advances in education (programmed instruction, computer-assisted instruction, community closed-circuit television networks, etc.) and maintain the highest level of teaching expertise.

Although training needs remain crucial, we believe that through implementation of present programs and continuous evaluation, we will successfully meet this challenge and attain our established objectives.

TABLE I

Comparison of 1963 number of courses and participants to 1964 and 1965 courses and participants at National Jewish Hospital, Denver, Colorado:

1963

MAY	6	physicians	5	nurses
SEPTEMBER	7	physicians	8	nurses
	13		13	

1964 & 1965

JANUARY	11	physicians	11	nurses	2	laboratory
JULY	14	"	10	nurses	3	laboratory
NOVEMBER	18	"	11	"	3	"
JANUARY	10	"	13	"	3	"
FEBRUARY	11	"	12	"	3	"
MAY	18	"	14	"	3	"
JULY	26	"	17	"	4	"
OCTOBER	16	"	15	"	5	"
	124	physicians	103	nurses	26	laboratory

TABLE II

Locations, dates and number of participants in nursing workshops for 1964 and 1965.

Denver, Colorado	February 17 - 21, 1964	36 participants
Atlanta, Georgia	April 5 - 9, 1965	30 participants
Tucson, Arizona	March 22 - 26, 1965	41 participants
Philadelphia, Pennsylvania	May 17 - 21, 1965	46 participants
Kansas City, Missouri	December 6 - 10, 1965	44 participants
	TOTAL PARTICIPANTS:	197 participants

TABLE III

Symposia participants for 1964 and 1965:

February 26 - 28, 1964	Denver, Colorado	100 participants
January 27 - 29, 1965	Jersey City, New Jersey	87 participants
February 8 - 10, 1965	Salt Lake City, Utah	100 participants
February 24 - 26, 1965	Milwaukee, Wisconsin	121 participants
March 3 - 5, 1965	Lexington, Kentucky	89 participants
April 29 - 30, 1965	Bayamon, Puerto Rico	85 participants
September 17 - 19, 1965	Anchorage, Alaska	162 participants
November 15 - 18, 1965	Tucson, Arizona	130 participants

TABLE IV

Battey State Hospital, Rome, Georgia. Courses and participants, 1966:

	Physicians	Nurses	Laboratory
January	7	7	3
February	9	11	1
March	10	12	3
April	13	11	3
June	15	17	3
September	11	14	4
October	7	15	1
November	16	15	2
December	11	10	4

Total participants, 1966: 235

TABLE V

Total number of attendees for each scheduled course:

National Jewish Hospital	629 attendees
Battey State Hospital	582 attendees
Symposia	3,159 attendees
Nursing Workshops	1,021 attendees
Clerical Workshops	243 attendees

RESEARCH

Objectives Defined

In mid-1963 the objectives of the research arm of the Tuberculosis Program, National Communicable Disease Center, were defined as the constant reformulation of concepts concerning the dynamics and interaction of tuberculosis and the measures taken to control it. Activity was to be directed towards the widening of knowledge in the three areas essential to the public health control of tuberculosis: definition of risk, effects of preventive measures, and consequences of treatment. The resources of the research section were to be brought to bear on those problems, with a continuous focusing and re-focusing on different aspects as new knowledge in one area illuminated some aspect of another problem.

At this period the research section had reached an important milestone in public health control of tuberculosis. Isoniazid chemoprophylaxis had been proved effective in populations considered at greatest risk of developing tuberculosis and was included along with the areas of detection, diagnosis and therapy for expanding investigations. The conduct of the prophylaxis trials also broadened the section's resources, as developed through cooperative projects, in which non-federal hospitals, health departments, schools, institutions, and community groups contribute their resources to section-directed projects.

Risk Factors Studied

In late 1963 the resources of the section were directed first to defining risk; the risk of initial infection and the risk of infection progressing to clinically evident disease. To answer more of the

questions of risk, the section studied (1) the level and trend of new infections in the United States through skin-testing 100,000 naval recruits annually with mycobacterial and fungal antigens, along with the testing of selected population groups, (2) the differentiation and geographic distribution of reactors to mycobacterial and fungal antigens, (3) the consequences of "atypical" infections on the course of tuberculous infections, (4) factors associated with risk of new infections and risk of disease among the infected, and (5) relation of fungal infections simulating tuberculosis to environmental factors.

Answers to questions related to the prevention of tuberculosis were being sought by means of: (1) continuing observation of 250,000 participants in controlled BCG vaccination trials carried out in Puerto Rico and Muscogee County, Georgia; (2) continuing observation of 70,000 participants in eight controlled prophylaxis trials; (3) a cooperative controlled isoniazid prophylaxis trial among 5000 participants with inactive tuberculosis; (4) an isoniazid "saturation" trial in an area of high incidence; and (5) experimental studies at the Tuberculosis Research Laboratory, Chamblee, Georgia, to determine the effect of varying dose and duration of isoniazid prophylaxis on guinea pigs.

Treatment Effectiveness

The treatment of tuberculosis in 1963 had reached a very effective level in terms of immediate response to therapy. Of each 100 patients, ten were anticipated as immediate or delayed treatment failures. Research was directed to finding (1) optimum regimens of successful treatment drugs, (2) the lower limits and dosages and

durations necessary for effective therapy, (3) incidence and significance of primary and acquired drug resistance, (4) effective new drugs through evaluations of pilot studies conducted by collaborating investigators and on guinea pig experiments in the Experimental Laboratory, and (5) the characteristics of treatment failures from analysis of material accumulated in the first ten therapy trials.

In addition of the Prophylaxis and Therapy Trials, the Multiple Skin Testing Program and the Experimental Laboratory, Chamblee, Georgia, the sources of primary data in 1963 included also the Tuberculosis Research Facilities of Muscogee County, Georgia, and Rio Piedras, Puerto Rico, and the Biologics Preparation Laboratory, Chamblee, Georgia, which prepared and standardized new antigens, diluted and distributed antigens for use by the Experimental Laboratory, for Section field studies, for cooperating agencies, and for foreign collaborators.

A review of the years since November, 1963, points up the accomplishments, trends, changes, and epidemiologic bonuses of the tuberculosis research program. The published results and papers presented at national and international meetings are one measure of the scope and direction of the work. The evidence of the translation of these findings into tuberculosis control policy and procedures is another.

Navy Recruits Study

By 1968 the results of the skin-test studies among 625,000 navy recruits and other selected populations had provided public health officials and doctors with a better way of distinguishing the tuberculous infected from the uninfected than had previously been available.

Preliminary results of a study of tuberculosis morbidity among Navy recruits provided compelling evidence in support of using another mycobacterial antigen --- such as PPD-B --- simultaneously with PPD-S tuberculin for differentiating infection with M. tuberculosis and infection with nontuberculous mycobacteria.

The advantage of the dual test technique is that it permits setting a low size limit (say 5 or 6 mm) for defining tuberculin reactions, thus including essentially all tuberculous infected in the reactor group; but at the same time it provides a way to identify among the reactors those whose response to tuberculin was a cross reaction resulting from a nontuberculous infection. Today, the companion antigen for dual testing with PPD-S is PPD-B, which serves as a broad-spectrum antigen for a variety of mycobacterial infections. But one day we may find that other PPD antigens may be more useful in different geographic areas, depending on the predominant mycobacterial infections in the particular locality. (Attachment #1)

The extensive data and observations from the cooperative Navy Recruit Program have been consolidated into a monograph designed to provide present and future epidemiologists a reliable reference point for tuberculin sensitivity and tuberculous infection in a representative sample of one age group during the years 1958 - 1964.

Prophylaxis Widely Accepted

By 1968 the evidence from the prophylaxis trials and continued observation of the participants had resulted in widespread acceptance in the United States, and growing acceptance in Europe, of isoniazid as a

prophylactic measure in the control of tuberculosis. This acceptance changed the direction of prophylactic research from determination of efficacy to optimum period of isoniazid administration. During the process of finding eligible participants for a controlled duration trial among cooperating city and county health departments, the change in attitude towards the use of the drug reflected the impact that isoniazid prophylaxis had made in the past five years. In 1963, in recruiting for the trial among inactive cases of tuberculosis, health departments accepted the placebo regimen, but showed reluctance for the large-scale use of isoniazid. By 1968, health departments found the placebo regimen unacceptable, and desired to enter all participants on isoniazid. Not only was the change of attitude evident, but the widespread use of isoniazid in treatment and prophylaxis by local agencies made it difficult to find eligible, untreated participants for a duration study.

The acceptance of chemoprophylaxis for the prevention of tuberculosis was underscored more heavily when an Ad Hoc Committee of the American Thoracic Society issued a strong statement in September, 1967, supporting chemoprophylaxis. To quote from this statement - "A substantial and growing body of scientific data testifies to the value of antituberculosis drugs in prevention of clinical tuberculosis. The extensive trials by the U. S. Public Health Service show a consistent reduction of morbidity in treated groups; it seems reasonable to expect that chemoprophylaxis can reduce future morbidity from tuberculosis in high risk groups by some 50 to 75 per cent." (Attachment #2)

Another demonstration of the value of chemoprophylaxis was made at the meeting of the International Union Against Tuberculosis in October, 1965, when the section presented an epidemiological model translated into mathematical terms. This model projected and compared the effects of the present methods of tuberculosis control with two methods of prevention; BCG vaccination of the uninfected and isoniazid prophylaxis of the infected. It demonstrated that present methods of detection and control would, over a period of 15 years, result in a very slight reduction of the total tuberculosis case load. In view of the belief among many of the Union members that BCG vaccination is the most effective method for preventing tuberculosis, the mathematical model, based on the large-scale, long term investigations of the section, was able to show clearly that isoniazid prophylaxis would have greater impact in reducing the number of tuberculosis cases.

Optimum Drug Regimen Established

The concern of the Research Section for more effective drugs and treatment regimens was productive in the years since 1963. The cooperative therapy trials established an optimum drug regimen for the treatment of tuberculosis, depending on the extent and stage of disease in the patient on admission to a hospital. This has resulted in a decrease in the number of months required for sputum conversion and consequently a decrease in the period of hospitalization. Results indicate that even far-advanced cavitary cases have a 95 per cent likelihood of sputum conversion within 5 months when given alternating drug combinations.

The cooperative trials established the effectiveness and safety of ethambutol as an adjuvant drug, and on the basis of these findings, the Food and Drug Administration released ethambutol from the investigative drug category. Ethambutol fills a definite need as a substitute for PAS, a drug poorly tolerated by patients, but which has been the only companion drug for isoniazid and streptomycin since first introduced in the late nineteen-forties.

Treatment failures which were considered hopeless in 1963 were benefited by a successful cooperative trial of a group of second line drugs in the retreatment of tuberculosis.

In contrast to the prevailing concern in 1963 that tubercle bacilli were becoming resistant to chemotherapeutic drugs, the continuing drug resistance surveys carried out by the section have established that there has been no increase in the prevalence of drug resistant organisms among previously untreated patients. Although these results have been widely accepted in the United States and Europe, the section continues to make progress in establishing the results of drug sensitivity testing by two different methods, anticipating that a single standard method, acceptable in both the United States and Europe, will evolve.

Research Status in 1968

By 1968 the Experimental Laboratory (formerly the Tuberculosis Research Laboratory) had completed and published the results of extensive investigations which demonstrated that infections with atypical mycobacteria can modify the course of subsequent tuberculous infection, delay the onset of tuberculosis or have a BCG-like effect. These

findings, supported by the preliminary results of the Navy Skin-Test Program, explain many of the striking and controversial differences obtained in BCG trials carried out in the United States and in other parts of the world.

The Antigen Laboratory (formerly the Biologics Preparation Laboratory) has expanded its activities beyond developing and supplying antigens for the research program and collaborators only. Antigens have been prepared and supplied this past year for a nation-wide school testing program, and are now available to all state and city health departments for their use, and to foreign collaborators.

The Puerto Rico Tuberculosis Field Research Center still serves as an important source of primary data in many of the continuing projects, but the Tuberculosis Research Facility of Muscogee County, Georgia, has been discontinued. Follow-up of Muscogee County participants in various studies continues from the headquarters office.

The long-term observation of participants in the various trials and studies of the selection has resulted in an accumulation of basic data for epidemiologic research that is increasingly valuable in providing those epidemiologic bonuses which can change the direction of research programs and provide epidemiologic data frequently not anticipated in the original projects. It is quite possible, for example, that information coming out of extended observation of a large "placebo-treated" population with defined tuberculin and roentgenographic status will be at least as significant as knowledge of the long-term effect of isoniazid prophylaxis.

Section staff members are currently serving as project officers and consultants for two tuberculosis projects in India, both financed under PL 480. One of these projects is a pilot study for a tuberculosis prevention trial, the other an investigation of atypical mycobacteria.

TECHNICAL SERVICES

Consultation

The Office of the Chief of the Tuberculosis Program provides general technical direction to tuberculosis control activities carried out through the Public Health Service regional organization.

Tuberculosis Program staff members evaluate and analyze tuberculosis programs and special tuberculosis project grants in terms of established program objectives. They participate in the administration of tuberculosis programs and special projects through consultation to State and local tuberculosis programs.

As of June 30, 1968, consultation was being provided to 83 projects in 49 States, District of Columbia, Puerto Rico, Virgin Islands and Guam. Technical assistance is given in determining local program needs based on assessment of the total program and present day concepts of tuberculosis control. The staff participates with the regional office in evaluation of proposed and existing tuberculosis programs and special project applications.

The procedure for review of special project applications and preparation of the Project Review Committee recommendations allows several staff members to share in the provision of consultation to the region and to the special project applicant. The project application is read by all review committee members. One staff member is assigned responsibility for primary written review of the application which is available to all members before the Review Committee meeting. The concensus of the group is prepared as a memorandum of recommendations which is sent to the regional office.

The effective documentation of the Tuberculosis situation and program

planning in each of the 83 special projects are specific results of technical consultation by the Tuberculosis Program staff. Significant accomplishments are evident in the improvement of tuberculosis program plans included in continuation applications of special project grants submitted for review.

Meetings and Conferences

Several conferences and meetings involving the Tuberculosis Program have been held since 1963. These meetings have resulted in the rapid conversion of many research findings into effective operating procedures.

The following includes some of these conferences and a brief account of the impact they have had on program operations:

AD HOC COMMITTEE ON BCG - 1966. Use of BCG vaccination in the United States has been debated for several decades. In 1966, an international panel of tuberculosis specialists, reviewed epidemiologic information relating to the status of tuberculosis in this country, as well as field trials of BCG not only in the United States, but also in Great Britian and other countries. They were fully cognizant of the past positions in the Public Health Service as well as the current views in other countires and of the World Health Organization. In view of the favorable epidemiologic, medical, and socioeconomic conditions prevailing in this country, and the effectiveness of chemoprophylaxis, the panel of experts concluded that there is no indication for the use of BCG on a group or community basis in the United States. The recommendations of this committee were approved by the Surgeon General of the U. S. Public Health Service.

NATIONAL TUBERCULOSIS ASSOCIATION COMMITTEE ON COOPERATION WITH FEDERAL AGENCIES - January 9, 1967. This committee sponsored by the National Association meets periodically for the interchange of information.

The January meeting was for discussion of the implications for tuberculosis control of the Public Law 89-749, the Comprehensive Health Planning and Public Health Service Amendments of 1966.

The report to the NTA Board of Directors, February 3 and 4, 1967 is attached.

TUBERCULOSIS INFORMATION EXCHANGE SEMINAR Sponsored by the National Tuberculosis Association and the Tuberculosis Program - Washington, D. C. - March 16-17, 1967. This was a most significant meeting of representatives responsible for Tuberculosis Programs in Federal Agencies. Represented were the Army, Navy, Air Force, Veterans Administration, Public Health Service, Civil Service Commission, Department of Labor, and the Peace Corps.

There was great variation in the programs presented and some genuine concern for the need of uniformity was expressed by the group.

TUBERCULOSIS CONTROLLERS MEETING NATIONAL COMMUNICABLE DISEASE CENTER - 1967. Identification and treatment of tuberculosis infection was the main subject of a two day meeting sponsored by the Tuberculosis Program. Tuberculosis Control Directors of State and Big City Health Departments; Tuberculosis Program Medical Officers, Nurses and Advisors attended the first annual meeting at the National Communicable Disease Center, June 13 and 14, 1967.

Group discussions were held on five major aspects of the tuberculosis program. The group agreed to endorse the recommendation of the Public Health Service and its Tuberculosis Control Advisory Committee that a program to identify and treat Tuberculosis infection be incorporated into the nationwide tuberculosis control program. A report on the meeting is attached. (Attachment 5)

AD HOC COMMITTEE OF THE NATIONAL TUBERCULOSIS ASSOCIATION COMMITTEE FOR THE GUIDANCE OF THE TUBERCULOSIS PROGRAM.

Chemoprophylaxis for the Prevention of Tuberculosis

In September 1967 the statement on prophylaxis was published by the American Thoracic Society. Dr. Alfonso H. Holguin and Mrs. Shirley H. Ferebee of the Tuberculosis Program were members of this Ad Hoc Committee. The committee concluded the following which is an excerpt from the statement: "The extensive trials conducted by the United States Public Health Service show a consistent reduction of morbidity in treated group; it seems reasonable to expect that chemoprophylaxis can reduce future morbidity from tuberculosis in high risk gropus by some 50 to 75 percent. The extensive use of chemoprophylaxis now would likely reduce by 300,000 the total number of cases in the United States in the next 15 years." (Attachment 2)

The conversion of these research findings into operation has had a marked impact on health department activities and on the health of the people they serve.

AD HOC COMMITTEE ON TREATMENT OF TUBERCULOSIS PATIENTS IN GENERAL HOSPITALS.

Infectiousness of Tuberculosis

Dr. Sidney H. Dressler of the Tuberculosis Program was a member of the

committee which prepared this most significant statement regarding methods for breaking the chain of transmission of bacilli from person to person. Following is an excerpt from the statement:

"Ever since the demonstration of a bacillus as the cause of tuberculosis there has existed a strong and universal fear of the disease as being highly contagious. Along with this an elaborate system of precautions to protect the healthy individual from infection has developed...Breaking the chain of transmission of bacilli from person to person has two aspects, namely, (1) prevention of contamination of the air and (2) elimination of contamination once it has occurred. Simple, inexpensive procedures can accomplish both these objectives. (Attachment 6)

TUBERCULOSIS CONTROLLERS MEETING - National Communicable Disease Center - 1968. Approximately 300 tuberculosis control officials from the State and large city helath departments met at the NCDC on April 3 and 4, 1968.

This year's conference focused on three major areas: relapse cases of tuberculosis; surveillance reporting of tuberculosis; and current research data concerning the identification of mycobacterial infection using comparative testing techniques and the intermittent therapy trials.

A report of an Ad Hoc Committee on surveillance reporting on tuberculosis was presented. The report of the March 6, 1968 committee meeting was presented by Dr. John L. Isbister, Chairman. (Attachment 7) Dr. Stefan Grzybowski of the Department of Medicine, University of British Columbia presented his experience and data relative to the relapse rates according to adequacy of previous treatment. Dr. Ole Horwitz, who is the Director of the Danish Tuberculosis Index, presented pre-

viously unpublished data relating to relapse and discussed the reporting of "cured" cases of tuberculosis as practiced in Denmark and its implications for evaluating program performance.

International Activities

The Tuberculosis Program has been involved in several International meetings and has provided consultation which has influenced worldwide programs, especially those in underdeveloped countries with high incidence of disease.

Following are some of these meetings and names of participants from the Tuberculosis Program:

XVII INTERNATIONAL TUBERCULOSIS CONFERENCE - Rome, Italy - September 24-28, 1963 - Mrs. Shirley H. Ferebee of the Tuberculosis Program participated in a Medical Panel on the Results of the Major Trials on Chemoprophylaxis of Tuberculosis in Different Countries.

Mrs. Ferebee's presentation of United States Public Health Service Trials of Isoniazid Prophylaxis was a significant contribution. There has been increased worldwide acceptance of the use of prophylaxis in conjunction with other control measures, as essential to ultimate eradication.

SHORT TERM ASSIGNMENT TO WORLD HEALTH ORGANIZATION PROJECT: INDIA 103 - February to May 1965. Merilys E. Porter of the Tuberculosis Program provided consultation to the World Health Organization specifically to develop a guide for the most efficient utilization of nursing services by those concerned with tuberculosis control in India. (Attachment 8)

UNITED STATES - MEXICO BORDER CONFERENCE ON TUBERCULOSIS - Tucson, Arizona - November 15-18, 1965. Planning meetings for this most significant meeting were held in Atlanta on July 8, and in Mexico City July 21-23, 1965.

Subjects considered for discussion at the conference were: (1) Approach to tuberculosis control in the United States, (2) Approach to tuberculosis control in Mexico, (3) Methodology of training, (4) Ambulatory chemotherapy, (5) Contemporary laboratory procedures in mycobacteriology.

Decisions were made that: (1) The conference would be a discussion of common problems rather than a teaching conference with one country telling another country how to do it. (2) Support would be given by the Public Health Service, the Pan American Health Organization, and the Mexican Health Ministry.

The staff of the Pima County Health Department, Tucson, Arizona were responsible for the smooth functioning of the entire conference. Many important facets of tuberculosis control were discussed and good communication was established between the groups from the United States and Mexico. This communication is continuing.

XVIII INTERNATIONAL TUBERCULOSIS CONFERENCE - Munich, Germany, October 5-9, 1965. Dr. Sidney H. Dressler, Special Assistant Chief of the Tuberculosis Program, participated in a Plenary Session on the Cost of Tuberculosis in Different Countries.

Dr. Dressler presented a paper on the Task Force Report and the Cost of Tuberculosis in the United States.

MEETING ON TUBERCULOSIS IN THE MEXICO - UNITED STATES BORDER STATES - Atlanta, Georgia - March 22-23, 1967. The purpose of this meeting was to exchange information and discuss informally the tuberculosis situation on both sides of the border, control programs, problem areas, and possible approaches of the solution of these problems.

Among the recommendations from this meeting was a proposal that an evaluation study be made from which a demonstration of a complete Tuberculosis Program in a community such as Juarez - El Paso would be carried out.

Another proposal was for a technical course for laboratory personnel which the Pan American Health Organization organized and presented in January 1968.

XIX INTERNATIONAL TUBERCULOSIS CONFERENCE - Amsterdam, The Netherlands, October 3-7, 1967. At this conference Mrs. Shirley Ferebee presented a paper on the Long-Term Effects of Isoniazid Prophylaxis.

This was a report of findings after observation of more than 70,000 persons for an average of seven and one-half years following a one-year course of daily isoniazid or placebo. The reduction in cases among the isoniazid group as compared with the placebo group was 62 percent.

BI-NATION MEETING - El Paso, Texas - July 13-14, 1967, and BI-NATION WORKSHOP IN TUBERCULOSIS - Juarez, Mexico - January 10-19, 1968. A Bi-national meeting was held in El Paso, Texas, July 13-14, 1967 to discuss the organization and development of a training course for laboratory personnel working in the field of tuberculosis. The United States - Mexico training course on laboratory techniques in Tuberculosis held in January 1968 was most successful. Miss Annie L. Vestal, Mycobacteriologist Consultant, participated in the planning sessions and as a faculty leader for the course.

UNITED STATES - MEXICO BORDER PUBLIC HEALTH ASSOCIATION.

XXVI ANNUAL MEETING - Tampico, Tamaulipos - April 15-19, 1968.

Dr. Alfonso H. Holguin presented a paper on the Current Status of Tuberculosis Control, and its future implications as part of the Special Public Health Services Section.

The Tuberculosis Control Advisory Committee

The Public Health Services Tuberculosis Program recognizes the valuable contribution to program direction made by the Tuberculosis Control Advisory Committee. The committee consists of experts in the field of tuberculosis and in public health outside the Public Health Service.

The support of this committee and their suggestions for implementation of the Task Force Recommendations have had a great influence on Tuberculosis Program activities.

Following are the dates of significant committee meetings and the actions taken:

TUBERCULOSIS CONTROL ADVISORY COMMITTEE MEETING - March 25, 1963.

Topic of discussion was a statement on eradication by the National Tuberculosis Association Committee for the Guidance of the Tuberculosis Program. This statement had been referred to the Surgeon General of the Public Health Service for determination as to how the National Tuberculosis Association and the Public Health Service could best assist with the implementation of the eradication program.

The following report of the Tuberculosis Advisory Committee was sent to the Surgeon General of the Public Health Service:

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"The Tuberculosis Control Advisory Committee has studied the statement on tuberculosis eradication of the Committee for the Guidance of the Tuberculosis Program of the National Tuberculosis Association, approves the statement, and recommends that it be referred also to the proper committee of the Association of State and Territorial Health Officers."

Later in the year, Dr. Luther L. Terry, Surgeon General of the Public Health Service, asked seven men representing public health, medical education, and practice, and the public to serve on a Task Force on Tuberculosis. Dr. John D. Porterfield, Coordinator of Medical and Health Sciences at the University of California, was appointed chairman. When Dr. Terry invited the members to serve, he asked them to consider the present unsatisfactory situation in tuberculosis and to recommend steps the Public Health Service might take to remedy it.

The committee submitted their recommendations in the form of a Task Force Report entitled "The Future of Tuberculosis Control." These recommendations were sent to the Congress of the United States. Congress responded to the recommendations of the Task Force and made appropriations to implement the nationwide effort.

TUBERCULOSIS CONTROL ADVISORY COMMITTEE MEETING - November 30, 1964.

A. Implementation of many of the Surgeon General's Task Force Report recommendations were reviewed. Broad areas reviewed included:

1. Training and Information Activities.

2. Development in Laboratory Practices.

3. Developments in the Tuberculosis Program Research Section.

B. Detailed review of Representative Tuberculosis Special Project Grant Applications.

Dr. Edward T. Blumquist, Chief of the Tuberculosis Program clarified the purposes of the special project grants. The committee's support was solicited to help clarify these areas throughout the States.

TUBERCULOSIS CONTROL ADVISORY COMMITTEE MEETING - May 10, 1967.

Dr. Alfonso H. Holguin, Chief of the Tuberculosis Program, as Chairman, brought many items before the committee for comment and approval.

Approval was given for the following activities which are becoming integral parts of the Tuberculosis Program.

a. Surveillance reporting.

This will enable frequent review and analysis of the total burden of tuberculosis. This type of reporting has been initiated in selected areas.

b. Identification and Treatment of Tuberculosis Infection.

The committee concluded that tuberculosis infection should be treated and that such a program should be launched in an orderly, feasible fashion. The recommendation was to tuberculin test and treat. It was the general consensus of the group that the Public Health Service should furnish standardized tuberculin antigens to state and local health departments.

There was discussion at this Advisory Committee meeting of the possible effects of the Comprehensive Health Planning Act 89-749 on Tuberculosis grants. It was agreed that the tuberculosis problem has been identified

and as a result we can expect States to be assertive. It was noted that advisory councils at State levels will have considerable influence on State agencies.

TUBERCULOSIS CONTROL ADVISORY COMMITTEE MEETING - March 22, 1968. This meeting provided an opportunity for review and exchange of ideas before two important meetings. These meetings were the Second Annual National Tuberculosis Conference held in Atlanta, April 3 and 4, and the annual meeting of Tuberculosis Controllers and Sanatorium Directors held in Houston on May 19 in conjunction with the annual NTA meeting. Significant items discussed included:

a. Chemoprophylaxis.

The Advisory Committee recommended that the Public Health Service prepare a brief statement summarizing its position on chemoprophylaxis and other current trends in tuberculosis control.

b. Infectiousness of Tuberculosis.

The committee agreed that the NTRDA-ATS statement, "Infectiousness of Tuberculosis" has served to focus attention on current knowledge of principles of airborn transmission of tubercle bacilli.

The committee felt there should be more research on such factors as ultraviolet light, the rapidity with which a patient becomes non-infectious with chemotherapy, and the importance of isolation.

c. Research.

Mrs. Ferebee reported on:

1. Continuing work on skin test antigens to distinguish between specific tuberculosis infection and other mycobacterial infections.

2. New chemoprophylaxis trials for old inactive cases. In these double blind trials patients will receive pills for one year, however, some will receive INH for only three months, some for six months, and placebo for the remainder of the year.

d. Surveillance.

The results of the March 6 Ad Hoc Committee on Surveillance Reporting of Tuberculosis were reviewed.

This reporting system, which was approved by the Advisory Committee in 1967, should measure the full impact of tuberculosis in the country. Field trials are being carried out at present.

The Tuberculosis Control Advisory Committee shares the concern on the part of the Tuberculosis Program in the elimination of the availability of young physicians for assignment as Public Health Service Medical Officers to the Tuberculosis Programs of the State and local health departments.

National Tuberculosis Association - Public Health Service.

N.T.A. (NTRDA) - P.H.S. JOINT STAFF MEETINGS.

(The National Tuberculosis Association recently changed its name to the National Tuberculosis and Respiratory Disease Association.)

The voluntary association cooperates with the federal agency in planning for and implementing program activities.

The National Tuberculosis Association and the Public Health Service feel it is essential to have joint staff meetings for interchange of ideas and determining program emphasis. These meetings are held at least twice a year, with additional meetings called if indicated for specific purposes.

Staff members from both agencies are committee members on several standing and Ad Hoc committees. These committee meetings allow for frequent communication and specifically assist in definition of the role the N.T.A. can plan in improving tuberculosis control programs.

Attachments 9 and 10 are examples of agenda and minutes of N.T.A. - P.H.S. Joint Staff meetings.

TUBERCULOSIS CONTROL OFFICERS AND SANATORIUM DIRECTORS MEETING - National Tuberculosis Association Annual Meeting. This annual program is presented by the Tuberculosis Program and the Tuberculosis Control Program of the host city for the annual N.T.A. meeting. Tuberculosis controllers and their staff have come to look forward to this meeting which is usually held on Sunday before the annual Tuberculosis Association meeting.

The Tuberculosis Program presents a review of the Status of Tuberculosis Control activities at these meetings. Periods for discussion and questions are provided.

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To indicate an example of program agenda the items of discussion at the May 19, 1968 meeting in Houston, Texas included:

1. Public Law 89-749, Comprehensive Health.
2. Research on Ethambutol.
3. Current National Tuberculosis Data.
4. Skin Testing with PPD-S and PPD-B.
5. Tuberculosis in Immigrants.
6. Panel Discussion - Continuity of Care.

N.T.A. CONFERENCE AND COMMITTEES. Following are examples of N.T.A. sponsored meetings:

a) N.T.A. Conference on Tuberculosis Follow-up and Supervision, Chicago, Illinois, February 16-19, 1965.

This was a most important conference called the National Tuberculosis Association in which the Tuberculosis Program participated.

These conference members gave recognization to the fact that caseholding had become as important as casefinding. The recommendations of this conference are attached. (Attachment //) The emphasis in this conference was on effective outpatient clinic services.

One result of this conference has been the preparation of a Chest Clinic manual by an Ad Hoc committee. This manual is now being distributed by the local constitutents of the N.T.A. (NTRDA)

b) N.T.A. Committee on International Affairs - February 3, 1965 and June 2, 1965.

The minutes of the meeting held in New York City in February and in Chicago, Illinois in June are examples of the mutual interests and concern by health workers in tuberculosis worldwide.

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Many significant items are discussed and important plans made at these meetings. Of primary interest is the planning for the International Union Against Tuberculosis (IUAI) meeting to be held in the United States in 1969. Much time and effort has gone into plans for this meeting which will have worldwide significance.

MANAGEMENT SERVICES

TB Program Funding and Legal Authority

Through the 1950's and early 1960's congressional appropriations for TB maintained a fairly set pattern of approximately $6,000,000 per year. During these same years the nationwide case rate and morbidity for TB declined yearly but at a slow pace. A Task Force was convened in 1963 to study the problem and this group recommended sharp increases in appropriations and thus more services to the public in an attempt to hasten the decline of the TB problem. This group of experts comprising the Task Force significantly influenced the upward trend of appropriations through 1968. They recommended funding of project and formula grants that would total $25,000,000, and $4,200,000 respectively per annum within three years after the Task Force report. Congress stayed fairly close to these recommendations but a change in health planning and method of appropriation has slowed the original plan. In addition to project and formula grants Congress appropriates direct operating money for Tuberculosis. An explanation and funding pattern of these three categories follows:

PROJECT GRANTS - Any state or, with approval of the state health authority, any county, city, health district or other political subdivision could apply for a project grant through FY 1967. Specific authority for Tuberculosis project grants was voted by Congress September 22, 1961 (Public Law 87-290) and activities under these grants were limited to improvement of TB services to individuals not cared for in a hospital setting. Actual appropriations by Congress for project grants commenced in FY 1962 with $500,000 being specified. Steady increases over the next six years brought

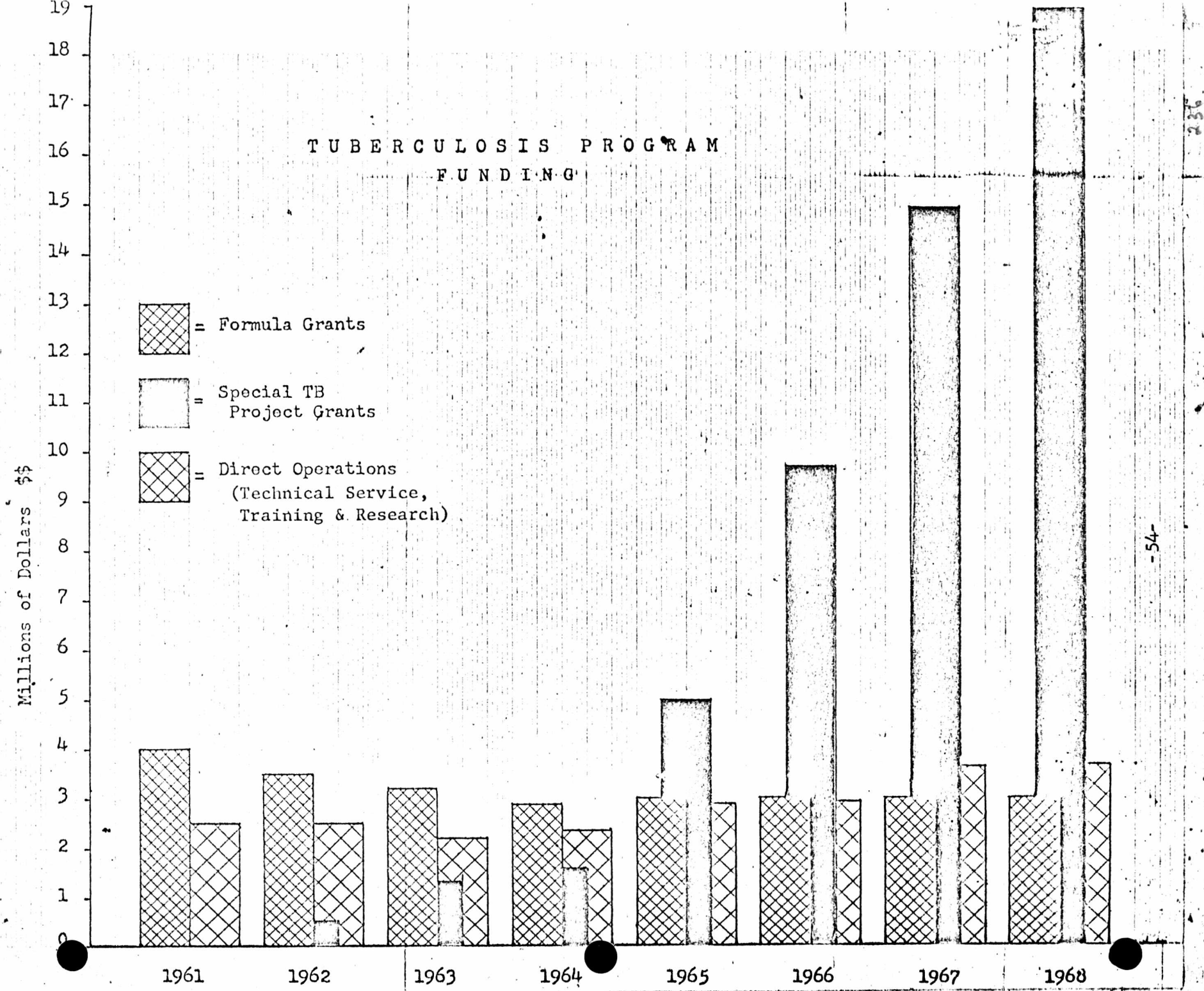
the actual grant approval amount for FY 1968 to $18,545,996. However, as indicated above, FY 1968 requires some explanation due to a change of granting authority. Public Law 87-749 approved by Congress November 3, 1966, abolished separate TB grant appropriations and lumped it with other health project grants under the title - "Comprehensive Health Planning and Public Health Service Amendments." Actual implementation of this law began in FY 1968 and it was under this new procedure that $18,545,466 in grants was approved for TB in 1968. Another change under this law was that any state or local agency or any non-profit organization in the United States is eligible to apply for a comprehensive grant.

FORMULA GRANTS - This second type of grant is allocated to all states based on a formula set by law. Variables of the formula include population, financial need and the extent of the TB problem. Over the last six years, through FY 1967, this amount has been maintained at close to $3,000,000 per annum. Formula grants also fell under the new authority of Public Law 87-749 "Comprehensive Health Planning and Public Health Service Amendments" commencing in FY 1968. Due to this change an exact amount for Tuberculosis in FY 1968 is not known to our office but we estimate approximately the same as previous years of $3,000,000.

DIRECT OPERATIONS - Technical services, training and research are included in this category. Commencing with FY 1968, monies for these activities are specified in a separate line item in the National Communicable Disease Center's congressional appropriation. Previous to 1968, these

monies were included under the separate appropriation for TB control. Since FY 1962 the amount for this category has risen from $2,493,000 for FY 1962 to a high of $3,657,000 for FY 1968.

The trend of appropriations for Tuberculosis is indicated on the following chart for the years FY 1961 through FY 1968.


TUBERCULOSIS PROGRAM
FUNDING
= Formula Grants
= Special TB Project Grants
= Direct Operations (Technical Service, Training & Research)
Millions of Dollars $$
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16
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1961
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1963
1964
1965
1966
1967
1968

Field Services - Personnel

One of the Recommendations (III D.) made by the Surgeon General's Task Force was to assign to the States a cadre of trained personnel to work in tuberculosis control. The Recommendation was made because of an awareness that States were unable to individually successfully recruit people with special skills and experiences to assist in selected control activities.

Implementation of this Recommendation was rapidly accomplished; by December 1964 thirty-two administrative, nursing, and medical assignees were performing control activities. The type of assignments which qualified to meet a military obligation for physicians was redefined in 1967 with the result that the number of Medical Officers assigned to States declined to 42 on July 1, 1968.

The validity of the Recommendation is reflected in the number of individual requests by States for assigned personnel, which reached a total of 150 by 1968.

The influence of implementation is measured partly by the effectiveness with which the management personnel have performed the very responsible duties given to them; the improvement in the quantity and quality of nursing services provided at the local level to tuberculosis patients, contacts, and suspects; and by the increasing numbers of patients who are being seen in clinics by physicians.

A Central Records Service Available

The Task Force report on The Future of Tuberculosis Control, published in 1963, recommended a central records service using automatic data processing techniques. To control this long-term disease, in which many people must receive periodic service in some cases for a lifetime, useful and dynamic records are a necessity.

Since 1963 the Tuberculosis Program of the U.S. Public Health Service has developed and implemented a tuberculosis central records service. This new management tool provides computer techniques to local health departments for improving patient services and providing continuity of medical care. This service also provides frequent current reports to state and local health departments for program direction and it provides intelligence at the national level for planning, evaluation, and epidemiologic studies. Other stimuli to the development of the automated system were the shortcomings of existing manual record systems when trying to follow-up on millions of mobile people. Modern tuberculosis control now requires long-term records on many types of persons: active cases, inactives, contacts, and those at special risk.

The Tuberculosis Record Service now being implemented in the United States by the Tuberculosis Program of the National Communicable Disease Center will hopefully accomplish the task of helping to improve the nation's health by use of computer techniques in care and program management.

Employment Levels - Tuberculosis Program

The Tuberculosis Program on November 22, 1963 had 207 employees. Due to a re-emphasis on TB control, as initiated by the Task Force, the employment total reached 371 on June 30, 1968. These totals include all categories of personnel. (Permanent, temporary, WAE and consultants.)

TUBERCULOSIS CONTROL 1963 - 1968 - AN EVALUATION

Impact of Federal Participation

What has been the impact of the increased Federal participation in supporting the tuberculosis control efforts of State and local health agencies?

A renewed interest and concern are manifest in official and voluntary agencies dealing with tuberculosis and public attention is again drawn to this disease. A new sense of urgency and unity of purpose is occurring as a result of the acceptance of practical recommendations.

One measure of the expanded National effort to increase and upgrade the services provided to tuberculosis patients, their families and their communities since November 1963 is illustrated by the number of health workers added through Federal grants. By 1968 more than 2200 workers had been added. (Table I, Page 60). Federal grant supplementation had been added to agencies providing out-of-hospital services to more than 80 percent of the estimated 320,000 persons on tuberculosis registers known to require service (Attachment 12, p. 6) The increased availability of out-of-hospital services is reflected by increasing proportion of cases cared for in their communities (Attachment 12 "Special Tuberculosis Projects," page 8). Needed services are being provided to more people (Attachment 12 page 7).

Many areas of the country have initiated youth centered programs to prevent future tuberculosis. Tuberculin testing of school children, school teachers, and employees, and other adults frequently associated with children has been started to detect those persons who are infected so they

may be treated. This will further limit the spread of the tuberculosis germ to our younger generation. This child-centered program has been expanding annually.

Two nationwide indices reflect gains being recorded for the United States through the intensification of tuberculosis control efforts. There has been a marked reduction in tuberculosis case rates and death rates since 1963. The number of new active cases reported in 1963 was 54,042 but by 1967 this had been reduced to 46,000 for the year. Whereas in 1963 there were 9,311 deaths attributed to tuberculosis, in 1967 the total was 6,500 tuberculosis deaths. Relapse cases of tuberculosis were also declining.

Although major strides have been made in tuberculosis control since 1964, the records show there is no room for complacency. Improvements in performance are being made but tuberculosis control still falls short of optimal performance. One index of performance is the percentage of active cases in their communities reported to be on drug therapy. At the beginning of 1968 this was only 60 percent, and minimal standard performance is accepted as 90 percent. Only 29 percent of contacts of infectious active cases were started on preventive treatment, and optimally this should be increased. These two performance indices indicate further improvements must be made in providing out-of-hospital services which are accessible and acceptable to the persons requiring them. The level of support for Federal participation has not kept pace with the level recommended which has delayed and reduced potential gains against tuberculosis.

TABLE I

PERSONNEL, SPECIAL TUBERCULOSIS PROJECTS

CATEGORIES of POSITIONS	Code	APPROVED POSITIONS * February, 1966 Positions	Percent	July, 1968 Positions	Percent
Clerical	(8)	372	26.6	683	29.8
Clinical Assistants	(11)	17	1.2	34	1.5
Direct Assistance	(16)	74	5.3	123(a)	5.4
Field Services	(24)	280	20.0	269	11.7
Laboratory	(32)	63	4.5	102	4.4
Machine Operators	(40)	10	0.7	18	0.8
Nurses	(48)	364	26.0	667	29.1
Nurses Assistants	(50)	16	1.2	27	1.2
Other Positions	(56)	..	...	2	0.1
Pharmacists	(58)	2	0.2	1	**
Physicians	(64)	84	6.0	135	5.9
Project Administrators	(72)	46	3.3	54	2.4
Records	(74)	10	0.7	37	1.6
Statisticians	(76)	15	1.1	22	1.0
X-Ray	(80)	45	3.2	116	5.1
Total Positions		1,398	100.0	2,290	100.0

*Currently, on any given day about 80 percent of the approved positions are actually filled.

(a) As of July, 1968 includes 35 Medical Officers and 80 Public Health Advisors.

** Less than 0.05 percent.

Prospects for the Future

The opportunity to protect the well being of the citizens of the United States in their communities from tuberculosis is greater now than ever before. Much has been initiated which can serve as a solid foundation to build upon. Our scientific and medical knowledge, though not complete, is sufficiently advanced so that we can now intervene with appropriate drugs in both infection and disease due to Mycobacterium tuberculosis, and we can expect good results. The problems lie with the willingness of the tuberculosis control system to be changed to fully apply what is known. The use of antituberculosis drugs is difficult because of the requirement of long term administration for success. The discovery of effective drugs requiring a short period of cooperation from the patient or the infected person would result in improved acceptance by both the health team and the person placed on chemotherapy. No likely drug candidates are presently available; however, this should not be discouraging. This presents another challenge and the opportunity to learn how to assist the patient to complete long term therapy, if the health team is willing to learn.

The opportunity for markedly reducing future tuberculosis is great since an improvement of the tuberculosis control system has been initiated and there have already been encouraging results. Unfortunately, in the past, encouraging results from a health program directed at the control of communicable diseases has resulted in the development of apathy. What is presented as an opportunity may be bypassed or assigned to lesser priority, only to result in the deterioration of the initiated foundation. We can

lose what has been gained if the persistence and the encouragement to further improve the gain is lessened. Can we afford the course of holding our ground with the Mycobacterium tuberculosis? Our past experience has demonstrated this to be a dangerous alternative. This course has resulted in the spread of the germ into the younger generation and the persistence of tuberculosis.

The tuberculosis control system offers another possible opportunity. In many respects, this system is a microscopic view of the entire health system. The historical trends of the tuberculosis control system seem to serve as a model for the whole health system. In the early phase there was the development of a hospital system to remove the patient from his home and his community into the controlled environment of the hospital. The case detection segment of the system was added when techniques and methods provided by X-ray improved.

Thoracic surgery developed in an attempt to improve the outcome of disease and initial results appeared encouraging even though the risk involved with surgery was high. During this period of moderate success with supportive treatment and surgical intervention, it was observed that patients frequently left the hospital without medical advice. This can be interpreted as a dissatisfaction of many patients with the system of treatment which had evolved. Then specific chemotherapy was introduced. The patient began to feel well in a shorter period, and could not understand or accept prolonged hospitalization as the only means of taking chemotherapy. To meet the objective of completing two years of therapy,

service in the community close to the patient and delivered to him in an acceptable manner is needed.

If what has been learned from this experience in tuberculosis control has a broader meaning, it is that the hospital is not the hub of health care. We must develop a health care system within the community which is easily accessible to those requiring service, and the service must be acceptable to those served. The restrictions of concentrating patient treatment and management within the controlled environment of the hospital is not acceptable, so the functions of hospitalization must be clearly specified as to its part of the health care system; the other parts must also be specified. The purpose of the health care team should be oriented to health maintenance with prevention of illness receiving more emphasis. In tuberculosis control we can no longer be satisfied with watchful waiting when we are able to prevent disease.

Venereal Disease Program

VENEREAL DISEASE PROGRAM

Background

Federal participation in civilian venereal disease control activities began officially in 1918 with the passage of the Chamberlain-Kahn Act. This legislation created the Venereal Disease Division of the Public Health Service and authorized a grant-in-aid program for venereal disease control. This was the first Federal grant-in-aid program in the field of public health.

Between 1918 and 1962 significant advances were made in the knowledge of the venereal diseases, particularly in the area of diagnosis and treatment and by both success and failure in the effort to control syphilis. An excellent discussion of syphilis control during this period is presented in Odin W. Anderson's Syphilis and Society.[1]

The most serious set back in the control of syphilis resulted from the over-optimism which followed the introduction and wide spread use of penicillin in the treatment of these diseases in the 40's and 50's. The wide application of this drug was followed by substantial decreases in reported cases of syphilis and it was assumed that the drug alone would eliminate this disease. By 1955, appropriations for venereal disease control had dropped to $3.0 million from $17.3 million in 1949, and reported cases of early syphilis had declined from 106,539 (1947) to 6,516 (1955).[2]

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[1] Anderson, Odin W., Syphilis and Society - Problems in Control in the United States, 1912-1964: Health Services Foundation, U. of Chicago, Research Series #22.

[2] VD Fact Sheet - 1967, U.S. Dept. of Health, Education, and Welfare, PHS, (Twenty-Fourth Revision).

Early syphilis cases continued to decline into 1957 then began to increase steadily. By 1961 early syphilis cases totaled 17,781. A task force on syphilis control was appointed by Surgeon General Terry and the recommendations of this group provided the guidelines for syphilis control activities since that time.[1]

1963 - 1969

By November 1963, the Venereal Disease Program (then called the Venereal Disease Branch) had begun implementing the task force recommendations. In addition to a direct appropriation to the Venereal Disease Program for research and for the headquarters operation, increased venereal disease project grants were awarded to States to carry out these recommendations.

One unique characteristic of these grants is the procedure of hiring, training, and assigning "in-lieu-of-cash" to the grantees, a cadre of well-equipped college graduates to carry out syphilis control activities. This provides an efficient and highly consistent approach to syphilis control programs nationwide, and permits the assignment of manpower to areas on the basis of need.

Since November 1963, the most significant change in the operation of venereal disease control activities came with the passage of the Partnership for Health Legislation by the 89th Congress. This legislation eliminated categorical grants in such fields of public

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[1] The Eradication of Syphilis (Task Force Report), U.S. Dept. of Health, Education, and Welfare, PHS, Reprinted December 1964.

health as venereal disease control and sought, in their place, to encourage State and local governments to set their own priorities in public health. Federal grants are now available to assist State and local governments in carrying out any health activities in an approved comprehensive health plan. While the full impact of this legislation will not be felt for several years it is anticipated that the venereal diseases will receive a high priority and continue to receive substantial funding from the Federal government. Venereal disease control activities have been funded at approximately the same level through FY 1968 as they were prior to the enactment of the Comprehensive Health legislation.

Significant progress has been made since 1963 in the eradication of syphilis. The rates of increase of primary and secondary syphilis were slowed and in FY 1966 a decline of 3.3% from 1965 was achieved.[1] In 1967 there was a 6.2% decline from FY 1966 and in 1968 a 4.3% (provisional) decline from 1967.

Approximately one-third of the appropriation for direct operations of venereal disease control activities (now a line item in the Communicable Disease Appropriation) has been for research activities by the Venereal Disease Research Laboratory. This laboratory has developed many of the standard diagnostic tests for the venereal diseases.

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[1] VD Fact Sheet, op cit, p. 1.

The development of the Thayer-Martin selective culture medium was a breakthrough in the diagnosis of gonorrhea and provided a foundation for the development of gonorrhea control methods. Significant progress is being made toward the development of a serologic test for gonorrhea. In addition, the laboratory is currently working toward the development of a vaccine for syphilis and toward the refinement of diagnostic tests.

Most venereal disease control resources have historically been directed toward syphilis, since it is the more debilitating of the two most prevalent diseases - gonorrhea and syphilis - and because sufficient knowledge about gonorrhea did not exist to implement programs which would control this disease. While success in stemming the rise of syphilis was being achieved in 1965-1968, gonorrhea continued to increase at a significant rate.[1] By 1968 there were more cases of gonorrhea reported in the United States than any other communicable disease except scarlet fever and streptococcal sore throat. The breakthrough in the diagnosis of this disease (Thayer-Martin culture medium) provided a foundation for the development of control methods and in FY 1968 Congress appropriated $500,000 specifically for the purpose of conducting pilot studies to develop methods of gonorrhea control which could be applied nationwide. These studies are in progress.

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[1] VD Fact Sheet, op cit, p. 1.

Summary

After November 1963, reported cases of primary and secondary syphilis declined for the first time since 1956.[1] This was achieved through a cooperative effort between the States, cities, and the Federal government in implementing the task force recommendations, an integral part of which was the support provided through Federal grant-in-aid programs. Most important is the commitment of continued support by the Federal government in the face of declining rates of syphilis to avoid a recurrence of the failures of the 1950's. Improvements in the diagnosis of gonorrhea and the appropriation of funds for the development of gonorrhea control methods placed the Venereal Disease Program in a position of leadership in the control of this disease.

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[1] VD Fact Sheet, op cit, p. 1.

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