

Gamma Globulin in a Poliomyelitis Outbreak In Montgomery, Alabama, 1953

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MONTGOMERY, the capital of the State of Alabama, is located in the County of Montgomery. Together they have a population of approximately 140,000, with the city accounting for 110,000 and the rural areas accounting for the balance. A well-organized county health department serves the health needs of the combined area.

This was the setting for the first mass use of gamma globulin under the 1953 national allocation plan in an attempt to stop a threatened epidemic of poliomyelitis. Early in 1953, cases of poliomyelitis were recognized in Montgomery, but there was no indication of serious trouble until the month of June brought reports

of 55 cases to add to the 30 cases already recorded. Earlier experience in Alabama revealed that 15 percent of the cases normally occurred prior to July 1, so that the area readily met the criterion of a projected rate of 300 cases per 100,000 population by the end of the year.

Request that Montgomery and Montgomery County be permitted to use gamma globulin came from Dr. A. H. Graham, the county health officer, and his board of health, consisting of five of the leading physicians in the city. With the assurance that 250,000 cc. of gamma globulin could be made available, it was decided on Friday, June 26, 1953, to attempt the task of mass injections. Past experience in conducting mass surveys for tuberculosis and mass blood tests for syphilis led to the belief that a mass gamma globulin inoculation program could be undertaken.

It was felt that not only did the situation demand immediate action but that the program should be finished by July 4. Accordingly, the period June 30–July 3 was selected for actual injections. The combined resources of the Montgomery County Health Department and the Alabama State Health Department were merged into one unit, which functioned as such, and assignments were given to key personnel.

Calling the Alert

Some of the steps taken and the reasoning behind them are summarized as follows:

Dr. Gill, the State health officer of Alabama, took his doctorates in medicine and in public health at the University of Toronto. He joined the Alabama Department of Public Health as epidemiologist in 1925 and became director of the bureau of preventable diseases in 1928. During the war, he served as medical director of the Alabama Selective Service. In addition to holding an associate professorship in public health at the University of Alabama, Dr. Gill is chairman of the Committee of Epidemiologists, Association of State and Territorial Health Officers, and associate editor of the Journal of the Medical Association of the State of Alabama.

On p. 1025, another facet of administering gamma globulin on a mass basis is described in detail.



Flow chart of typical gamma globulin administration procedures used in Montgomery, Ala., mass inoculation program. Clinics were held in the public schools; 800 volunteer workers were recruited. AT ENTRANCE. 1 clerk assigns clinic numbers to families, who are asked to be seated in the school auditorium and to leave 1 seat between each family to prevent contagion. AUDITORIUM. 1 clerk calls families by number, in turn.

A mass meeting of physicians was called for the night of June 26. It was attended by almost every physician in the area. The response was unanimous, and the physicians agreed to work on any schedule assigned to them. It was agreed that inoculations should be performed only by physicians since the possibility of accidents and reactions could not be overlooked. Not once did the pressure of private practice prevent the complete staffing of all clinics. The furnishing of lollipops at each clinic was suggested by one physician and was carried out by the physicians themselves.

Nurses were needed in numbers at least equal to physicians. Since it was early apparent that sufficient local nurses were not available, the director of nursing for the Alabama State Department of Health was made responsible for procuring additional nurses to assist in the clinics. Fifty county health nurses from all over the State were ready for duty in Montgomery by Monday morning, June 29. Many brought their own scales since weighing was on the list of musts.

Volunteer Groups

An unknown number of volunteers were needed, and the responsibility of obtaining and assigning them to duty was a formidable task. The parent-teachers' association was requested to take on this responsibility because their organization cut across all social and economic lines and because schoolhouses were to be used as clinic points. Between Saturday morning,

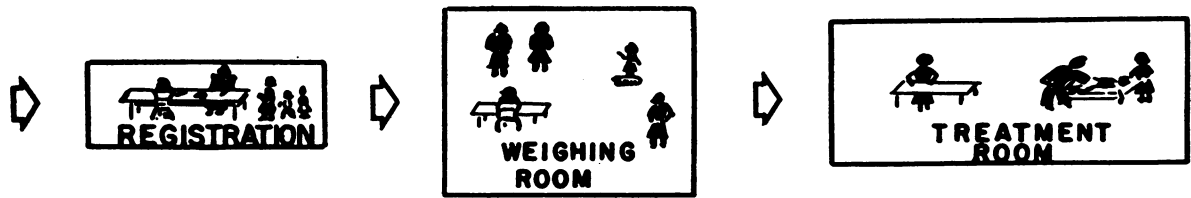
June 27, and Monday morning, June 29, 600 of the eventual 800 volunteers were recruited and brought to a mass meeting at the city hall where already-appointed team captains enlisted the numbers each needed and began the assignment of work hours and particular tasks.

Throughout the mass program, all matters pertaining to volunteers were referred to the PTA organization, which saw to it that enough people were on duty at each clinic. Their members obtained lunches for the workers who were unable to leave at mealtime. They made arrangements with the police and fire departments, the sheriff's office, the transportation companies—anything that could be handled by a nonprofessional staff was done and done expeditiously.

Technical details of syringe and needle sterilization—as needed originally and as needed for re-use—were handled by the laboratory staff of the State health department. Cleaning syringes and autoclaving ran far into the nights.

Medical Corpsmen

Montgomery has two Air Force posts, at Maxwell and Gunter Air Force Bases. Because neither field could obtain globulin supplies through Service channels promptly, both were included in the overall planning. Not only did the posts do their own inoculating, but they also furnished physicians and nurses for the city clinics. Another and extremely valuable contribution was made by a large number of



REGISTRATION. 2 clerks handle details of registering children. **WEIGHING ROOM.** 4 clerks are busy: 1 weighs the child; 1 records the weight and the amount of gamma globulin dosage; 1 escorts the family to the treatment room; and 1 maintains an even flow of patients. **TREATMENT ROOM.** Of the 10–15 aides, 4–6 remove pants, 4–6 stain buttocks, and 2–3 wash syringes.

medical corpsmen who proved adept at handling the unruly few and who gave assurance to many of the timid.

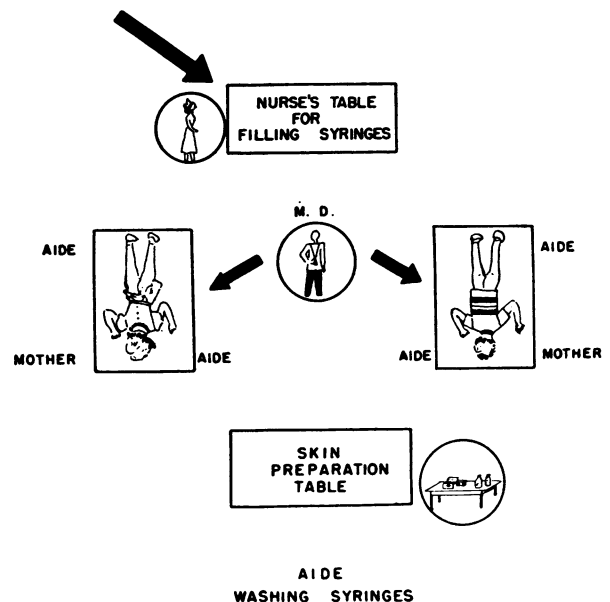
Public relations was an important consideration. Montgomery has 2 daily papers, a weekly paper, 6 radio stations, and 1 television station. In addition, the national news agencies, the newspapers from surrounding cities, national magazines and national radio, newsreel, and television companies were all intensely interested in the progress of the program. The offer of the Governor to utilize the facilities of the State's public relations bureau was gratefully accepted, and, insofar as possible, all releases were made through that agency. Montgomery citizens had been reaching a stage of severe apprehension, but the full coverage given by all agencies and the knowledge that something was being attempted served to allay hysteria and led to an intelligent support of plans.

The thousand and one details of planning clinics, procuring equipment and supplies, training personnel, and seeing that everything functioned smoothly was the task of Dr. W. H. Y. Smith, director of the bureau of preventable diseases in the State health department, and his staff of trained workers. The staff members who had been conducting X-ray surveys or blood tests applied the same techniques to handling the organization and the unification of diverse groups into a functioning whole. After the first hour, clinics operated smoothly, efficiently, and with a minimum of trouble. A

central headquarters with a battery of telephones was the nerve center of the mass inoculation program.

Almost 33,000 Inoculations

The details of actual administration were not too difficult. Twelve schools in the city and six in the county were chosen. All were open from



TREATMENT ROOM DIAGRAM. Chart shows arrangement of tables for inoculation teams, Montgomery, Ala. Usually, several physicians were on duty, each working with a separate table arrangement.

8 a. m. to 4 p. m., and a number were held open from 6 to 8 p. m. to accommodate working parents.

To avoid overcrowding it was necessary to allocate family groups to separate days. The Montgomery telephone directory, when divided into quarters, indicated that families might be similarly divided according to their surnames. Thus, all whose family names began with the letters A-F were asked to come on Tuesday, June 30, G-L the next day, M-R the third day, and the balance on the last day, Friday, July 3. Actually, of course, the first day was the heaviest, partly because some families were leaving town over the Fourth of July.

The general flow of clinic procedures and the arrangements for a treatment room are shown in the charts. In actual practice, sev-

eral physicians were frequently on duty, each with the setup shown. The arrangements for registration, weighing, and figuring the dosage of gamma globulin were sufficient, however, to prevent any delays in this part of the program.

During the 4-day period, June 30-July 3, 32,948 children, 9 years or under, received a gamma globulin dosage of 0.14 cc. per pound of body weight. Because the 1950 census had reported about 30,000 children at that time in this age group, we believe that the coverage approached 100 percent. The average dosage was about 6 cc. so that the supply of gamma globulin available was ample for this group.

The successful completion of a major undertaking on short notice is a tribute to the citizens of the community and to the staffs of the combined health departments.

Excerpta Medica Adds New Cancer Section

A new section on cancer, containing abstracts from medical journals of the world covering cancer and related fields, has been added to *Excerpta Medica*. Forming section XVI of the internationally known abstracting service, volume 1, No. 1 of the new periodical is dated July 1953.

Publication of a section devoted entirely to cancer has been under consideration for some time by editors of *Excerpta Medica*. Abstracts of all articles appearing in the international medical press concerning cancer previously were divided in the 15 sections of *Excerpta Medica*. Now this medical literature will be available to physicians in a single volume. The project was made possible through the aid of grants from the National Cancer Institute of the Public Health Service and the American Cancer Society.

The section on cancer carries 25 classifications. Abstracts of 424 articles falling into 14 of these classifications appear in the first issue. It will be published monthly and will contain 700 to 800 pages of abstracts a year. An index of authors will appear each month, and a classified subject and authors' index will appear annually.

The new publication is published in Amsterdam, as are other sections of *Excerpta Medica*, and has an editorial board composed of 32 members in addition to the two chief editors, Dr. R. van Dam and Dr. W. van Westering of the Netherlands. Twenty-two members of the editorial board are in America. Nine of the other members are divided evenly among nine western European countries, and one member is in India. National Cancer Institute members of the board include Dr. John R. Heller, director, Drs. Raymond F. Kaiser, Ross C. MacCardle, and R. R. Spencer, the last a former director of the National Cancer Institute, now retired.