REGIONAL PROJECT OFFICE AND FIELD MONTHLY REPORT NO. 4

May 12, 1967

RPO personnel were engaged in a number of activities, during April. Rafe Henderson made the rounds of the OCEAC countries between April 3 and 17, and has dispatched a detailed report to Atlanta and to the field shortly after his return. George Lythcott participated in one day of a two day (April 4-5) seminar in Accra sponsored by the MOH and several departments at Legon University entitled "Children - our most valuable crop." He served as a resource person on the section on immunization procedures. At Bernie Challenor's request, a two hour conference was also held with Dr. Grant (MOH) to iron out a problem created through program mis-information which had reached Dr. Grant.

The RPO was amply represented at the April 13, 14, 15 conference of the National Nigeria Smallpox Measles Program. Rothstein, Robbins, Shoemaker and Lythcott all participated actively in what was an excellent "working" meeting in which much meaningful practical information was exchanged as each Region's experiences, so far in the program, were related. The program agenda plus papers read and miscellaneous handouts have been passed on to Atlanta. All the NCDC smallpox personnel from the Regions participated actively except Dave Thompson who remained in the East in deference to Eastern SMP business.

Don Eddins joined the field (RPO and North) for a very meaningful consultative program visit, detailed in the RPO copy of his preliminary trip report to the Chief, SEP. See also remarks under Statistician's report.

George Lythcott spent ten days in Mali as planned between April 17 and 27, traveling with Pat, Jay, Dr. Fanfona, (the Malian who will soon replace Dr. Sow as Chef des Grandes Endémies), and a movie camera crew (producer, camera men, etc.) provided by USIS/Bamako after consultation with USIS/W. The movie crew took ample and appropriate footage for the purpose of creating a propaganda film for use in the Mali SMP.

The trip covered the great flood plain area northeast of Bamako and included as principal cities, Segou, Koutiala, San, Mopti, Djenne, Tenenkou, Macina, Niafunké and Timbuktu, an area where nearly 1-1/2 million Malians live including more than 400,000 nomads. The travel pattern and habits of the nomads, plus the difficult seasonally influenced terrain will create the major problems in programming this area for vaccination. A preliminary report of this trip has been sent to Atlanta and a detailed plan for executing this program (probably beginning January 1968) is being prepared for distribution by Pat, Jay, Dr. Fanfona and the Malian MOH.

There was finally resolution of the problem to which Stan Foster, Nat Rothstein and the RPO had for some time addressed themselves: The Permanent Secretary of Health has officially directed the senior laboratory officer that production of lanolated vaccine at Yaba should be stopped "forthwith", and that such vaccine already produced (on hand) be issued only to centers where there are adequate storage facilities and where its potency can be monitored. Freeze dried vaccine only, either that supplied by the SMP or produced in Yaba will be used in the program, in the future. There had been repeated indications under field use, that the lanolated vaccine left a great deal to be desired from the point of view of potency.

Plans are being made for a Regional Meeting in Lagos for all SMP personnel June 19-22 (inclusive). A headquarters delegation (Millar, Gelfand, Griggs confirmed) will participate and Bill Watson (Executive Officer NCDC) has tentatively agreed to lead discussions on career development. A tentative program agenda and requests for individual participation is being circulated to Atlanta and to the field. Every effort is being made to make it a meaningful experience for all.

At the end of the month we received the information that Rafe Henderson had been recruited to head a team (EPI and SEP, NCDC) to answer India's request for assistance in their smallpox epidemic. Original plans called for activity in Bombay and New Delhi where cases (and deaths) were mounting. Rafe left on May 1, and is expected to be away from the RPO for 6-8 weeks.

The following section represents the activities of the RPO specialists, as presented in memo's to the Chief, RPO. All have been reproduced in part with an occasional editorial comment.

HEALTH EDUCATION SECTION

Gordon was a participant at the National Conference on Smallpox Eradication and Measles Control which was held in Lagos from April 13 through 15. As a member of the sub-committee on Health Education, he was involved in discussions concerned with health education problems encountered in the national program thus far as well as developing recommendations concerned with future conduct of health education activities. Content of the discussions included formation and function of health education committees at all levels from the national to village level; health education materials; role of voluntary agencies; involvement of schools including curriculum development and seminars for teachers on smallpox eradication and measles control; preparation of a health education guide for SMP; and research needs and opportunities.

Gordon spent four very profitable days (April 26-29) in Monrovia, Liberia. Although the primary reason for the trip was to discuss Voice of America involvement in SMP publicity, he also spent some time with USIS Liberia, Dr. Hans Mayer, and visited the local Chrysler dealer (at the request of Bill Shoemaker) to determine their capability for providing spare parts for SMP vehicles.

Voice of America is anxious to give SMP the fullest coverage possible through spot announcements, field interviews, and even programs dealing with different aspects of the project such as superstitions, facts and fallacies about smallpox and measles, etc. The Regional Project Office, however, needs to develop a mechanism to assure a continuous flow of information to VOA which can be broadcast. USIS Liberia has agreed to participate in planning an auspicious kickoff of the Liberian program after July 1 and use their good offices to reach appropriate media outlets to assure regular coverage of the national SMP program.

Stan Foster and Gordon met with Stuart Olsen, Information Officer, and Bill Pfender, Assistant Information Officer, USIS Nigeria, to plan the appropriate publicity on the occasion of the millionth person to be vaccinated against smallpox in Nigeria with the jet injector. A ceremony is planned for May 10 at the John Street Health Center when one of the people in the crowd to be vaccinated will be selected as the fortunate person. It is expected that Ambassador Mathews and Mr. Ogundipe, Deputy Permanent Secretary, Ministry of Health, will be on hand for the festivities and present the "winner" with an appropriate certificate.

Gordon continued to work on the preparation of a manual concerned with health education approaches in the smallpox eradication and measles control program. This should be completed in time for the June regional meeting.

While enroute from Accra to Brazzaville, Miss Leonie Martin, Health Education Consultant, Africa Regional Office, WHO, had a 24 hour layover in Lagos and Gordon was able to spend some three hours with her discussing our mutual interest in smallpox eradication. Because of our nebulous relationship with AFRO, this meeting must be termed "unofficial."

Sometime during the next couple of weeks, Gordon plans to make routine visits to Togo, Dahomey, Ivory Coast, Upper Volta, and Niger. Not only is he interested in finding out what is being done in each country, but he is particularly anxious to visit each USIS mission to determine to what degree they can assist with SMP publicity.

LABORATORY SECTION

All phases of laboratory activity as described in previous reports have been continued -- but, at a decreased pace, due to delayed arrivals of sheep and embryonated eggs from the North, limiting vaccine production as well as potency testing of previously harvested pulps. The average percentage of non-fertile eggs has increased to more than 50 percent with the last shipment.

As a result of previous requests, the services of a veterinarian have been obtained on a part-time basis. Dr. Oyairo, stationed at the Ikoyi Veterinary clinic will be checking incoming sheep prior to vaccination and will return the following week to autopsy the carcasses.

There has been no change in the status of the Diagnostic laboratory, although the resident engineer is now in the process of equilibrating the walk-in incubator. A request hasbeen submitted to the Chairman of the West African Council for Medical Research for permission to draw expendable equipment from the existing stores at WACMAR.

To date, scab material from smallpox cases have been received only from the Northern Region of Nigeria. Nat would like to remind all field personnel that he expects specimens from all areas where smallpox outbreaks are occurring. He is in a position to hold and prepare these for future processing. Specimen vials, etc., should have reached the field during early May.

Nat presented a brief commentary on the Smallpox Diagnostic Laboratory at the National Meeting of the Smallpox Measles Contingent for Nigeria, held in Lagos, April 13-15, 1967.

Dr. A. S. Outschoorn, Chief Medical Officer, Biological Standardization, WHO, Geneva, visited the Smallpox Vaccine Production Laboratory. A request was made for the International Vaccine and anti-Serum Standards.

Mr. R. Binnerts, General Manager, Exports, Connaught Laboratories, Toronto, Canada, paid a 5 day visit to the Smallpox Laboratories, affording the opportunity for Nat to repay the kindness shown him during his visit to Toronto last Summer.

EQUIPMENT SECTION

Bill attended the National Meeting of the Nigerian program and participated in discussion on commodity and mechanical problems. He has planned for the arrival of 70 trucks (May 7) and arranged with a local agency to do the post delivery inspection in the shortest possible time. The local administration assures him that the vehicles will clear customs in 3-7 days (we will see!).

The problem with the gas tank switch has been resolved and it will be further modified so that the valve can be operated from inside the cab.

A trip was made to Togo to effect removal and repair of the rear axle of Andy's truck. Repairs could not be made since spare parts for differentials and axles were not included in the spares at the RPO, an oversight that has been corrected through communication with Atlanta.

Arrival schedules of commodity documents have improved considerably (e.g. arrived two weeks ahead of ship with 70 trucks), and it looks as if a formula for solving this knotty problem has been reached.

Other details have been passed directly to Atlanta.

STATISTICS SECTION

Hillard spent most of the month of April with Don Eddins assisting the Northern Nigeria SMP personnel in setting up and carrying out an urban and rural assessment survey in Kano province. The remainder of the month was spent doing statiscal housekeeping in the office and in discussions with Don, on general aspects of assessment guidelines and other statiscal matters.

The trip to the North provided several meaningful experiences: (1) It provided the opportunity for experience in designing and planning a survey for this type population and area, (2) it gave Don and Hillard a first hand picture of the unique problems to be met in carrying out assessment in such an area, (3) it provided a proving ground to test and adapt to the available personnel who will serve as interviewers, and (4) Hillard saw his first case of smallpox.

Some problems worthy of note encountered during the surveys are as follows:

1. Poor communications between province representatives, district chief and village chiefs.
2. A lack of enthusiasm and interest in assessment, due at least in part to a lack of knowledge of the principles involved.
3. A shortage of literate persons to train as assessors.
4. A shortage of equipment and supplies for use by the assessors.
5. Inadequate transportation for the assessment teams.

Hillard advises that as a result of his discussions with Don, a summary of assessment techniques of different types (areas) will be formulated and passed to the field. He further advises that meaningful discussions were held, with Don, and tables and forms devised, aimed at coordinating the field-RPO-Atlanta statistical effort.

Smallpox and measles morbidity and mortality reports received from the field for the month (4 week reporting period) of March have been much more complete than for previous reporting periods. There are, however, improvements to be made. Measles morbidity and mortality as well as vaccination data have been so spotty that presentation of such data is without meaning except to show lack of reporting. Smallpox data for the year 1967 is reasonably complete and is shown in Table I which follows.

COUNTRY REPORTS (Month of March)

C.A.R.: Neil Ewen who for some time has had travel en brousse curtailed due to general host country restrictions and /or red tape, writes that in the forseeable future (after April 15) he will be able to travel into the interior unescorted. He lists this as the major accomplishment for the month of March.

Being completely frustrated by having teams in the field and being unable to supervise or move with them directly, and with really little or no knowledge of what they are actually doing, Neil has been unable to promptly supply needed data in almost every category of his monthly report, and adds that considering the realities of his (CAR) program, nearly all the info requested in the monthly report is not available to him until after 3-4 months. The "monthly reporting form" is on the agenda of the June Regional Meeting for joint Hdq.-RPO-Field "open" discussion.

Nearly 25,000 smallpox vaccination (with no cases) were accomplished in March to bring the 1967 total to 80,000. Six thousand measles vaccinations were done giving a 1967 total of 18,000 vaccinations. Activities begun in January have continued in Sector III during March. A "quick and dirty" look by the Medecin-Chef of Sector III in villages 1 to 2 days (?) after vaccination revealed a "take" rate of 80.5 percent. Also on the basis of figures gleaned from the Medecin-Chef's "notebook" related to measles vaccinations by age groups, Neil came up with some rather distressing figures - of 904 children vaccinated against measles, more than one-third were six years old! Neil obviously looks forward to getting into the field to collect first hand information.
A map of the C.A.R., with sectors identified for future reference is attached (Atlanta only).

Chad: Russ and Bernie in Chad have joined the smallpox action! Two cases of smallpox (mother and baby with onset symptoms 3-18 and 3-31), in a Ft. Lamy Hospital were seen by them, confirmed by laboratory tests (locally) and appropriate surveillance instituted. At the time of their report (April 14), no subsequent cases had occurred (see description of outbreak detailed on Attachment A1 thru A4 of this report).

The report rather jubilantly adds, "justification for our existence in Chad has been made and it is now known that there is someone interested in the epidemiology of smallpox cases!" A reason also was provided the SMP to contact, and utilize for the first time the services of the local virus diagnostic facility (Fancha Veterinary Laboratory). Chad's comments with regard to the laboratory have been passed on to Nat Rothstein.

Investigation of these cases also brought to light the fact that immunization certificates are not required to enter Chad via ferry on the Chari River. Apparently ditto in Northern Cameroon, since the initial case traveled from Nigeria through Cameroon without being vaccinated or having a valid certificate of vaccination.

In this regard, a work-shop is planned as part of the upcoming Regional Meeting program to map out strategy and approaches to the several obvious "borders" for control, as well as dialogue on the subject in general.

Problems of consequence in Chad at the moment revolve around a continuous shortage of gasoline (logistical rather than funding) in Fort Lamy and throughout the country. This limits excursions into the bush to those of utmost importance.

Plans for next month include observing 2 or 3 teams in the bush (gasoline permiting) and if more smallpox cases are found, a shift to epidemiology and surveillance in the appropriate areas.

Description of Outbreak: On 3/24/67 a woman was admitted to the hospital in Fort Lamy with a presumptive diagnosis of smallpox. First symptoms occurred on March 18, and earliest rash March 21 with a generalized vesicular eruption by March 24. Russ and Bernie were notified by telephone and went immediately to see the patient. Samples of the lesions were acquired and taken to the laboratory for CAM tests. The patient had never been vaccinated.

The next morning, everyone in the contagious disease ward was vaccinated for smallpox. The same morning and the afternoon following 1,200 vaccinations were done in the village quarter from where the patient had come. The Chef du Quartier was advised to notify the SMP at once if further rashes occurred.

On 3/31/67, the one year old son of the patient developed a smallpox like eruption. He had been confined to the hospital along with the rest of the family when the original case came in. The baby had never been previously vaccinated. The baby died on 4/4/67, of causes probably not related to smallpox, according to the report.

The original patient is Nigerian from Mokoua and had been traveling for 1-3 months along the following route: Mokoua to Bida to Kaduna to Zaria to Kano to Yerouza (arrived about 23 February and spent 10 days) to Fort Foureau. The patient arrived in Fort Foureau about March 1, and spent 10 days there sleeping out, but always in same spot. No contact with a known case was elicited. The patient crossed the ferry to Fort Lamy on March 10, with (as mentioned) no vaccination certificate. Headache and fever began March 15. See Attachments A1 through A4 for executed case investigation forms and for executed surveillance report on mother and child.

Dahomey: Dahomey reports that the MOH has finally agreed to combine smallpox and measles activities and have the teams operate as a single unit. This will create the flexibility in operation and administration in their program that Bernie and Jean have insisted they need to make more realistic the goal of entire population coverage within the specified 2-3 year attack phase.

Four vaccination teams (5 infirmiers, 1 driver) and one assessment team (3 infirmiers, 1 driver) have been selected and trained. The program is planned to begin in Cotonou (8-10 days X 5 teams) about April 10 and proceed to Porto Novo, Ouidah and then the entire southern region of Dahomey.

Forty-eight (48) cases of smallpox occurred in Dahomey in March, all in the south (Allada, Athieme, Cotonou, Bopa, Ouidah, Abomey) with 10 deaths. The necessity for developing mechanisms (by the RPO, Atlanta and the field), operational certainly by the beginning of the next epidemic season for retrieving detailed information on outbreaks and epidemics of smallpox, has been discussed with Bernie and Jean.

A clear need for engendering an active and personal interest for the SMP at high ministry level (Minister, Director of Public Health), is cited by the Dahomey SMP, as a real problem. Clearly, involvement of a properly motivated and active AID man and, of course, ditto the Ambassador would be helpful in this general regard. Ways and means are being discussed with the RPO.

Ghana: After an unexpected delay, following the successful International Trade Fair Exhibition (Feb. 1-19), Ghana's teams began work in their "pilot" project. The area selected (Shai-Ga-Adangbe-Tema) includes a mostly rural coastal area about 40 miles East of Accra, and (traveling West) merges insensibly with the city of Accra. The Shai area has been completed, and the teams are now in the Adangbe area. The plan is to vaccinate these districts during the "small" rains and to move into Accra and finish the pilot area during the "big" rains (July).

Jim Lewis reports that in addition to the (teams) let-down following the Trade Fair effort, a four week delay in beginning the pilot program was due to difficulty in housing the teams (and families) in the operational area, since except for one or two, members of the teams came from regions of Ghana outside the Accra-Tema area. The situation is at least temporarily relieved, and vaccinations in the 300,000 population area (including Accra) is proceeding as scheduled. He has high praise for the health education effort with regard to the program, which, during the past four months, has been coordinated by Gordon Robbins, working with some excellent local and consulting personnel in Accra.

Jim anticipates a problem following the pilot project, with what he fears will be the MOH decision for the organization of the attack phase of the program. The RPO has been aware for some time that the MOH would prefer (on the basis of their rich past experience with medical field (mobile) units operations) to operate on a decentralized basis with a single team working in each of 8 administrative regions into which the country is divided. During the past several months Bernie Challenor and the RPO, individually and collectively have attempted to negotiate this problem

with the MOH (info previously passed to Atlanta). While the position argued by the MOH has some palpable faults especially from the poiht of view of providing adequate team and general program supervision, and requiring additional local personnel and vehicles, it also has some excellent practical (to say nothing of political) considerations to recommend it. The RPO and Jim are in close touch on this point, as the negotiating continues.

In addition to the 2 cases of smallpox reported earlier this year (January) two more cases were reported in March (see detailed report attached). Four (4) other cases apparently occurred later in March in Oda in the Volta region (mid-Eastern Ghana), and are thought to be unrelated. No detailed info has been submitted to the RPO on these cases at this writing.

Since Ghana is a non-endemic country for smallpox, each case becomes of major interest and should involve prompt reporting and detailed investigation. This point has been discussed with Jim by recent letter, and the overall problems extant in many countries preventing the prompt notification and detailed investigation of outbreaks and epidemics will be discussed as part of the agenda of the upcoming regional meeting.

Ivory Coast: No major program problems or changes have been reported by Bob Hogan. Areas of vaccination are included in the accompanying map (for Atlanta only). Of interest have been two cases of smallpox which were reported from Agnibilekrou in mid-Eastern Ivory Coast along the Ghanian border. These two cases were suspected of having been imported from the vicinity of Gaoua in Southern Upper Volta. A full report of the investigation will be included with next month's report. The fact that a delay of over a month occured between the time that the first case was recognized locally (Feb. 4) and when it was reported to the health authorities in Abidjan, and that a delay of over a month and a half occured from the time of local recognition to the time that the SMP was informed has given Bob the opportunity to request that a certain tightening of the general surveillance system be instituted.

Bob and Chris D'Amanda have made one field trip to Man to observe the SGE measles vaccination teams, and Bob later visited Korhogo to see the Institute d'Hygiene smallpox teams in operation, in addition to going to Agnibilekrou to look into the reported smallpox cases.

As will be seen from the accompanying graph (Atlanta copy only), Bob has been concerned that aside from the lack of an epidemic peak in 1966, there still seems to be a close resemblance of the May-Dec. curves in spite of the fact that an estimated two thirds of the susceptible population had been vaccinated between late 1965 and early 1966. Several possible explanations exist for this picture, and Bob is looking into it further.

Mali: Vaccinations are proceeding in the region of Bamako. Approximately one half of the region has been completed, and the more difficult northern area will be done between April and June, in addition to the cercle of Macina (see Attachment B1). Following the recent field trip to inspect the area, the decision was made to postpone the vaccination of the Mopti area (mentioned in the February report) until next year.

Pat and Jay obtained travel permits in mid-March, and have been active in making team inspection visits and smallpox case investigations since then. Pat has submitted a description for some 11 cases (1 death) he investigated in Koutiala which he felt represented a multifocal outbreak in an area endemic for smallpox. Koutiala is apparantly an important staging post for travel both to Ivory Coast and Upper Volta. In addition it falls on an important route used to carry fish from Mopti through San and on down to Abidjan and northern Ghana. Plans are in progress to complete a mass vaccination campaign in the city begun in March.

Control of a small number of take rates has revealed the existance of some discouragingly low percentages following both jet and m-p vaccination, but more pronounced with m-p. Although good village turn out is being achieved through the help of the political party, the occurence of these low take rates may mean that the effective vaccination coverage is not highly satisfactory. The amount of

data collected so far makes it difficult to judge how widespread this phenomena is amongst the teams. This is being investigated further by Pat and Jay.

Niger: Don and Tony are pleased with the development of better contacts and coordination with WHO and their local MOH, in the latter regard, weekly meetings are now being held with significant top level MOH personnel, participating in the program. Communications with the teams in the field, previously reported as difficult if not impossible, have improved. Fielding of an assessment team now appears to be in the cards, since a chronic shortage of gasoline has at least been temporarily relieved. A long range "master plan" for vaccinating the entire country has been prepared, and we are advised, will be included in the next monthly report from Niger.

Pressures are being applied (AID/OO and Vinnel) to put 3MP vehicular spare parts into a common pool for all AID vehicles (and programs) in Niger. Don and Tony are resisting and have been advised of RPO concurrence in their position. Problems with the C-80 continue (as with Mauritania, etc.) and the RPO has sent several alternative suggestions (including the experiences of other field programs) ad interim while we research the adaptability of a new fridge-freezer model currently on field trial in Mauritania. As soon as another model is available from the supplier (Lagos) it will be shipped to Tony for field testing.

From the point of view of surveillance data, Don and Tony presented a form this month listing (1) sectors, (2) number of reporting units in each, (3) number of reports expected from each unit, and (4) the number of actual unit reports received. If this reporting form were also returned to the reporting units after completion, it may well have a positive effect on those reporting units who are defaulting.

Don and Tony suggest that provision for an assessment team(s) should be written into all ProAgs in future. This omission in Niger has caused them endless cajoling and arguments. Since this represents a "substantive" amendment to our present ProAgs, it probably represents a long, cumbersome procedure. This is good advice, however, for future ProAgs in new country programs.

Togo: The Togo program continues with vaccinations in the north of the country. In March they completed the Northwest-circonscription area (Dapango), reaching a 9 percent level of total estimated population of Togo. Dapango, Mango and Kande are three circonscriptions making up the Savane (one of the four political regions of Togo). See attached map (copy Atlanta only). This is also one of the four circonscriptions not covered in the 1965-66 measles campaign. The teams vaccinated children for measles up to 7 years. In northern Togo where, unlike the reported pattern in the rest of West Africa, it is reputed that there is a high incidence of measles in the older age groups. Thirty percent of the total vaccinees thereby received measles vaccine. This has been discussed by recent letter with Andy and Bernie, and perhaps this apparent measles susceptibility in older children in Togo should be documented.

Three (3) cases of smallpox were reported from the Plateau regions (the political region located just north of the coastal (Maritime) region). These cases could not be investigated since Andy finds himself in the frustrating position of being completely without wheels with his axle-housing broken. Shoemaker is on top of this, meanwhile, Andy is using a battered borrowed jeep for local travel pending NCDC/AID/W approval to rent a vehicle. No vehicles are available from the Embassy/AID complex.

Major problems in Togo revolve around (1) the MOH demonstrated unwillingness or inability to provide funds for repairs to the vehicles and other auxiliary equipment, and (2) the continuing problem with developing an assessment team and scheme. Basically, new personnel for the assessment team will have to be recruited since those originally picked for assessment have been shifted to active vaccination teams to replace recalcitrant team members who were fired. Andy reports, incidentally, that esprit-de-corps improved as a result of the shuffle, and that WHO assistance may be necessary to relieve (1) above. Vis-a-vis posters, where again local cost deficits create a problem for the Togo program, Andy's attention has been directed to a recent memo to the field on poster procurement from Gordon Robbins, a device already in use in some countries.

Gambia, Senegal and Mauritania: Vaccinations through the auspices of our program still have not gotten under way in either Senegal, Mauritania or the Gambia. With lots of mail from Tom (D), Tom (L) and Bob, however, relating to the facts of program life in that part of the world, and beaucoups facts, figures and insights on smallpox/measles and population data, and despite their multiple frustrations in planning and negotiating, postponements in training schedules, fridge-freezer problems, etc., etc., the total overview is "go" and a start in at least one of the countries is imminent. Its still nip and tuck which of the three will get its campaign going first, but it could be the Gambia where what it lacks in personnel resources and overall funds, is made up for by enthusiasm, organization and co-operation.

Gambia: Despite the fact that putting the SMP campaign in operation will dislocate certain other health services and force closure of some dispensaries, the MOH has, because of their belief in the worth of measles vaccination, and because the government has committed itself, worked out a plan of operations.

This position taken by the Senior Health Inspector (administratively responsible for the deployment of all health personnel in the Gambia) is worthy of special mention and appropriate follow-up. He feels that the Gambia can ill afford to turn down any program for fear it will jeopardize other future negotiations with the same agency. At the same time, with the multiplicity of International Health Organizations, it is nearly impossible for them or the Gambia to coordinate all the various schemes so that a rational plan for provision of local personnel and costs can either be provided out of the local health budget or by some special grant-in-aid mechanism. He, therefore, deplores the practice of international organizations providing "everything" but local costs.

The program will operate using two trucks, two drivers and three (two-man) vaccinating teams. Three tally clerks will be hired as day-labourers. A compound to compound foot approach will be adopted, which in the twenty years of Gambian experience, has been productive of 90-100 percent coverage, as opposed to 50 percent coverage when attempts have been made to assemble entire villages. Again, because of lack of personnel, there is no provision for an assessment team, and other sources of personnel recruitment are being considered. Team training is scheduled to begin in mid-May.

The program situation in Senegal and Mauritania remains about the same. In the case of Senegal interminable delays, etc., continue and in Mauritania problems with funding are still encumbering. It is felt that WHO money will be in hand by October. Meanwhile, Tom will make do using his own vehicle for vaccinating.

Nigeria: The Nigerian program is currently two months behind schedule because of the delay in the delivery of commodities especially transport. The Ministries of Health in both the Eastern and Western Regions have made available other vehicles so as to allow the program to proceed in low gear.

In Eastern Nigeria the rural pilot project in Abakaliki was completed and the coverage rate was assessed at 88 percent. Although the official date for the start of the attack phase is still July 1, the program is progressing as in the attack phase.

In Mid-Western Nigeria the pilot program continues in a very sparsely populated rural area where the population of 50,000 is scattered in small camps and villages of 50-500. Since villagers will not travel to adjoining villages for vaccination, team output has been limited to 900 vaccinations per day. A split shift with vaccinations from 6-9 AM and 4-8 PM will be tried in an attempt to increase the team output to 1500 per day for rural areas. This area is not typical for the Mid-West so that team output in more densely populated areas should be considerably higher.

In Northern Nigeria a second pilot project was completed. This project was located in Southern Zaria in an area inaccessible to vehicle. Teams used foot and bicycles for transport. Subsequent assessment revealed a coverage in excess of 85 percent. It was noted that there were more primary takes than in the first pilot project in Zaria City. A two day conference was held in Zaria with 75 health personnel representing all the provinces of Northern Nigeria. The participants including Medical

Officers, Community Nurses, and Health Inspectors were briefed on the program plan for the North and participated fully in discussions. Three areas that were taken into special consideration were the vaccination of purdah women, health education of illiterate groups, and vaccination of leprosy cases.

In Western Nigeria the pilot project was completed and plans were developed for the mass campaign. Two jet injector teams assisted in the investigation and control of an epidemic of smallpox in the Ekiti area. A report of this outbreak which included over 75 known cases of smallpox has previously been submitted. 66,780 people were vaccinated by the jet injection teams in about 25 team days.

The Federal program devoted most of its efforts to the development of a program for the National Meeting of all Nigerian SMP personnel early in April.

Problems encountered during reporting period:

1. The delay in the delivery of commodities especially transport has slowed program schedules.

2. The quality of the trucks especially the roof racks, the tire mounts, and the switch to reserve gas tank is poor.

3. Office space has not been made available on a permanent occupiable basis in Lagos, Ibadan, and Kaduna. This certainly has interfered with the development of a smooth program operation.

4. U.S. personnel have devoted a good part of their time to routine clerical work. The program agreement did not clearly define responsibilities in this area and qualified personnel especially in the North are limited. Provision of one local hire clerical person for each region would be of considerable assistance.

5. The pilot projects have shown that our planning for transport needs was inadequate. The teams are transported by truck but no provision has been made for transport in inaccessible areas where bicycles or camels need to be used. Transport is needed for the advance man who provides health education and for the assessors. The Hondas when and if they arrive will only partially answer this need. Bicycles with their low upkeep and relatively low danger are probably the best accessory transport. They can be carried across rivers which is a definite advantage.

There has been a definite increase in the incidence of smallpox during the first twelve weeks of 1967, representing a 35 percent increase over 1966 and an 85 percent increase over the mean for 1961-1966. A majority of cases continue to occur in the Northern Region. Efforts are currently in progress to obtain age sex data from representative areas.

During April all pilot projects except Lagos will be completed. Also during April there will be a meeting of all Nigerian SMP personnel (U.S. and counterpart) to discuss the training and pilot projects and the plans for the attack phase.

Cameroon, GABON Upper Volta: No March monthly report received at RPO by May 15.

TABLE I

[1]Reported Smallpox Cases for JAN-MAR 1967 in 16 WEST AFRICAN Countries By Month Or 4-Week period.

COUNTRY BY REGION	I JANUARY	II FEBRUARY	III MARCH	CUMULATIVE TOTAL THRU 1966	CUMULATIVE TOTAL THRU MAR 1967
A. OCCGE	168	579	333	2055	1077
DAHOMEY	45	177	[2]48	[5]490	270
IVORY COAST	0	0	[3]2	0	[3]2
MALI	0	1	7	[5]285	8
MAURITANIA	0	0	0	[5]7	0
NIGER	106	385	273	[5]995	737
SENEGAL	0	0	0	0	-
TOGO	8	43	3	[5]200	54
UPPER VOLTA	9	[4]-	-	[5]75	9
B. OCEAC	1	0	2	5	3
CAMEROUN	1	-	-	[5]3	1
C.A.R.	0	0	0	0	0
CHAD	0	0	2	0	2
GABON	0	0	0	0	0
CONGO (B)	0	0	0	[5]2	0
C. ANGLOPHONE	370	842	942	4965	2157
GAMBIA	0	0	0	0	3
GHANA	2	-	2	[5]13	4
NIGERIA	370	842	940	4952	2152
FEDERAL	0	1	2	93	3
EAST	65	82	107	109	254
MIDWEST	6	13	3	134	22
WEST	12	109	51	250	172
NORTH	287	637	777	4366	1701
TOTAL	541	1421	1277	7025	3239

[1]Reports made to RPO by SEP/MC personnel unless otherwise noted.
[2]Reports from South Dahomey Only.
[3]Provisional data.
[4]No report made.
[5]WHO Epid. Reports.

Memorandum

To: Dr. George Lythcott
Director, RPO

From: Dr. Bernard Challenor
Medical Officer, SMP

Subject: Outbreak of Smallpox in Accra, Ghana - March 1967

On March 9, 1967 a 22 year old male shoemaker's apprentice was admitted to Korle Bu Hospital, Accra, with what appeared to be early eruptive smallpox. Even though the patient was a citizen of Togo he had resided for the previous 3 years in Ghana and had not traveled out of the country since the early part of 1966. On March 5th he developed an illness characterized by fever, chills, headache and severe backache. Three days later, on March 8th, these symptoms abated and a generalized rash appeared. He was admitted to Korle Bu Hospital the following day and then transferred to the contagious disease hospital at Weija on March 10th.

The patient was seen by several consultants and the Senior Medical Officer of Health, Accra Region, between March 10-14th and felt to have a typical case of smallpox. The rash was described as being centrifugal in character, most marked on the face, hands, and forearms, and was said to have shown a typical orderly progression from papules to vesicles to pustules during the first week of hospitalization. All the lesions on any given part of the body were in the same stage of development at any one time. Samples from the lesions were taken by Dr. Ababio, Virologist, NIH-Korle Bu Hospital on March 16th and were said to be positive for smallpox by gel diffusion and regular microscopic examination. No embryonated egg cultures were performed. However, samples were apparently sent to Germany later on for confirmation by electron microscopy and embryonated egg innoculation.

The patient denied having come into contact with any relatives or visitors from outside of Ghana during the weeks prior to his illness. The only person he could recall who had a rash similar to his own was his supervisor and employer who he said was still at home recuperating from a similar illness. The patient had never in his life been vaccinated.

Investigation of the patient's employer brought forth the second reported case, a 33 year old male, also a shoemaker, who first developed symptoms on or about February 8th. A generalized rash had appeared 3-4 days later. This 2nd patient was a citizen of Dahomey who had lived in Ghana since birth and had not traveled out of the country in 3 years. Apart from a brief visit to a pharmacist on February 19th, the patient had remained in hiding for the duration of his illness. When he was discovered his rash was in a late desquamating stage, but many "seeds" were present deeply imbedded in the palms and soles. He was hospitalized on March 16th. His prodromal symptoms and distribution of rash were said to have been similar to that of the first case. The second patient also had never been vaccinated.

Search for the source of illness of the second case was not fruitful since he denied having come into contact with persons showing a similar rash, and denied having had contact with any African from surrounding countries who were visiting his neighborhood during the weeks prior to his illness. His case was more than a month old when the investigation began.

A total of 30 primary contacts of the first reported case were identified, and 113 of the second but earlier case. Out of these primary contacts, a total of 143 in all, forty one had never been vaccinated. Most of them were said to be native born Ghanians. No subsequent cases have been identified to date among these primary contacts or among others living in the same neighborhood. No other cases, in addition, have appeared in the rest of Accra.

Vaccination of contacts of the two cases began on March 10th. Ten vaccination centers were set up in the area where the cases occurred and 1750 vaccinations performed during the following 4 days. Four hundred fifty nine of these vaccinations were primary, and the remainder were revaccinations. The homes of the two identified patients were disinfected with formalin solution and the mattresses and bedding destroyed.

The neighborhood where the cases occurred is one of the most overcrowded and poverty stricken in the entire Accra area. It is a section of the city where immigrants from Togo, Dahomey, and Nigeria are frequently found. One housing compound was found to contain more than 70 individuals living in 9 rooms. Surveillance of the area is still in progress to detect any new cases of smallpox, or any unvaccinated persons who were missed when the vaccination first began. No report has yet been returned on the laboratory samples sent abroad from the first discovered case.

ATTACHMENT B1