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MEMORANDUM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
CENTER FOR DISEASE CONTROL

TO: William H. Foege, M.D.
Director, Center for Disease Control (CDC)
Through: Philip S. Brachman, M.D.
Director, Bureau of Epidemiology (BE)

DATE: March 3, 1980

FROM: Richard S. Monteith, M.P.H.
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SUBJECT: Foreign Trip Report (AID/RSSA): Initial Assessment of Ministry of Health Logistics System, Guatemala, January 21-27, 1980

SUMMARY
I. PLACES, DATES, AND PURPOSE OF TRAVEL
II. PRINCIPAL CONTACTS
III. INITIAL ASSESSMENT OF THE GUATEMALA MINISTRY OF HEALTH LOGISTICS SYSTEM
A. Background
B. Findings
C. Implications
IV. FOLLOW-UP WITH APROFAM

SUMMARY

An initial assessment of the Guatemalan Ministry of Health (MOH) logistics system was conducted by consultants from FPED/CDC. Our attention focused on the Droguería Nacional, the supply organization that supports type B health centers and health posts. The problem areas identified and discussed with officials of the Droguería Nacional were the following:

- The budget for medicine purchases is inadequate and has not increased sufficiently to compensate for inflation and expanding health facilities.

- The same fixed value of medical supplies is allotted each year to each health center ($3,200/year) and health post ($800/year), no matter what the size and characteristics of the populations served in their catchment area.

- Stockouts and/or low inventory levels frequently occur at the medicine warehouse.

- The medicine warehouse is small and physically separated from the system's 2 other warehouses.

- Supply delivery is frequently delayed by lack of transport.

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Under the proposed family planning agreement involving USAID/Guatemala, APROFAM, and the MOH, consultants from FPED/CDC would assist the MOH in assuming responsibility for adding contraceptive distribution to their supply system in 3 departments in 1981. If this pilot project is successful, the MOH would assume control of contraceptive supply distribution throughout Guatemala in 1982. FPED/CDC is capable of providing technical and evaluation assistance to the MOH in expanding their logistics system to include distribution of contraceptives and will do so during 1980. Supply management of contraceptives by the Droguería Nacional would be less involved than medical supplies and would require relatively minor changes in the existing logistics system. The more extensive problems of the Droguería Nacional's logistics system for medical supplies are associated with procurement and allocation issues, and involve more complicated institutional and policy issues that cannot be dealt with by short-term consultants. A 1-year assignment of a full-time advisor, with logistics and policy experience, is recommended to assist the Droguería Nacional in its overall operations. It is our understanding that the new AID health loan includes funds for a full-time advisor.

In November we reported the oversupply of condoms and Norinyl 1+80 in the APROFAM warehouse. The oversupply of condoms has been documented in various AID reports since 1976. No decision has yet been made on the disposition of these commodities. If the older white condoms are disposed of, based on current demand, an additional million pieces of colored condoms will be needed in early FY 1981. The current pill supply (1+50) represents a 1-year supply. No decision has yet been made on the disposition of these commodities.

I. PLACES, DATES, AND PURPOSE OF TRAVEL

Guatemala, January 21-27, 1980, at the request of USAID/Guatemala and AID/DS/POP/FPSD, to make an initial assessment of the Guatemala Ministry of Health logistics system. This consultation was provided by Richard S. Monteith, M.P.H., and Mark W. Oberle, M.D., M.P.H., of the Program Evaluation Branch, FPED/BE/CDC. This travel was in accordance with the Resource Support Services Agreement (RSSA) between the Office of Population, AID, and CDC/BE/FPED.

Travel to El Salvador to assist USAID/El Salvador in the planning and evaluation of a regional community-based distribution program was originally scheduled to follow the Guatemalan consultation. On January 24, because of civil unrest in El Salvador, USAID/El Salvador requested that FPED/CDC technical assistance be postponed to a later date.

II. PRINCIPAL CONTACTS

A. USAID/Guatemala

1. Mr. Scott Edmonds, Health and Population Officer
2. Mr. Neal Woodruff, Assistant Health and Population Officer
3. Mr. Carlos Andrino, Project Assistant

B. Droguería Nacional (National Medical Warehouse of the Guatemala Ministry of Health)

1. Dr. Carlos García, Coordinator
2. Sr. Manuel Cardenas, Assistant to the Coordinator

C. Asociación Pro-Bienstar de la Familia (APROFAM)

1. Dr. Roberto Santiso, Executive Director
2. Dr. Luis Galich, Medical Director
3. Sr. Oscar Alfaro Rubio, Chief, Warehouse

III. INITIAL ASSESSMENT OF THE GUATEMALA MINISTRY OF HEALTH LOGISTICS SYSTEM

A. Background

In October-November 1979 FPED/CDC consultants assisted APROFAM in an evaluation of its Direct Distribution of Contraceptive Materials Program (DDP) (see FPED/CDC Foreign Trip Report: Guatemala, dated December 20, 1979). An important part of that evaluation was to estimate the number of women active in the program prior to the transfer of reporting responsibilities from APROFAM to the Ministry of Health (MOH) in 1980. This transfer of responsibility is called for in the proposed tripartite Project Grant Agreement between the MOH, APROFAM, and USAID. The agreement also provides for a pilot project in 1981 in which the MOH will supply health centers and health posts in 3 departments (states) with contraceptives, replacing the APROFAM DDP program. If this project is evaluated to be successful, in 1982 APROFAM will transfer responsibility to the MOH for supplying contraceptives to all MOH facilities providing family planning services. The tripartite agreement provides for FPED/CDC consultants to "address deficiencies in the (MOH logistics) system and allow for inclusion of contraceptives with other supplies delivered to health centers and posts under the phased turnover of responsibility for the Direct Distribution Program from APROFAM to the MOH in years two (1981) and three (1982)" of the agreement.

The purpose of the current consultation was to follow-up on recommendations we made on user reporting during our October-November 1979 consultation and to begin discussions on the logistics system with MOH officials in the Droguería Nacional. At the time of our visit, the tripartite agreement had not been signed, and renegotiation of certain sections of the agreement was scheduled for Friday, January 25, 1980. Mr. Scott Edmonds requested that we not address the user reporting system while the agreement was still being negotiated. He did state that the reporting forms that we helped design in November 1979 were included in the tripartite agreement, but that no one in the MOH had been identified to be responsible for the reporting system. Thus, the remainder of this report focuses on our discussion with Droguería Nacional personnel and follow-up discussions with APROFAM officials.

B. Findings

Because we were originally scheduled to travel to El Salvador on Thursday, January 24, 1980, our discussions with Droguería Nacional personnel were introductory in nature. However, these officials provided us with an overview of the logistics system and insights into some of the system's problems.

The Droguería Nacional is an agency of the Ministry of Health. It is in charge of procurement and distribution of medical equipment, drugs, medical supplies, and office supplies to type B health centers (outpatient clinics) and health posts. The Droguería Nacional operates from an administrative office and 3 geographically separate warehouses in Guatemala City. Since November 1978 the medicine warehouse has occupied temporary quarters in a wing of a psychiatric hospital pending assignment of a permanent facility. Stock order forms list 89 medicines, 69 office supply items, and 35 items for minor surgery available to health centers through the Droguería Nacional.

The MOH establishes limits on the amount of medicines to be distributed to type B health centers and health posts of US $3,200 and US $800 per annum, respectively. In 1979 US $977,500 was allocated for medical supplies for approximately 171 health centers and 520 health posts.

Supplies from the 3 warehouses are shipped to the headquarters of the area health chiefs, located in each of the 21 departmental capitals excluding the Department of Guatemala. In Guatemala City the supplies are packed in individual boxes for each health center and health post and transported to the Area Chief's headquarters in MOH vehicles. Resupply of health areas is scheduled every 3 months. The Droguería Nacional does not have trucks of its own and must request vehicles from the MOH motor pool to make shipments.

The area headquarters are responsible for further shipment to health centers and health posts and do not maintain regional warehouses. Some area headquarters have vehicles which they use to distribute supplies to all health facilities within their area. Where vehicles are not available, the consignee must pick up supplies or have them shipped by public transport.

The following observations can be made on the MOH logistics system, based on our review of USAID documents, our visits to the 3 warehouses in Guatemala City, and our discussions with Dr. Carlos Garcia, Coordinator of the Droguería Nacional, and with members of his staff:

1. The Droguería Nacional budget for medicines is inadequate and has not increased significantly in recent years. For example, the amount budgeted for 1978 and 1979 was US $977,500, despite the increasing number of health centers and posts operating in the country. According to Dr. García the 1980 budget is US $1,177,000, a 20% increase

over the previous year's budget. However, he estimated that approximately 100 new health posts will open and that the cost to procure drugs and medicines will certainly increase during the year, making it impossible to establish inventory levels adequate to meet anticipated demand. Thus, the MOH apparently expects increases in coverage, although the logistical base has not been provided for such expansion.

2. The MOH establishes limits on the amount of medicines to be distributed to health centers at US $3,200 per annum and US $800 for health posts. In our opinion, the use of fixed quantities of drugs per health center and health post ignores the population size and disease epidemiology of the catchment areas and creates imbalances in the logistics system. According to Dr. García, MOH authorities at the central level have not responded to attempts by Health Area Chiefs to adjust allocations to differences among the populations-at-risk.

3. Health Area Chiefs also complain that the amounts budgeted are too low, that they do not receive all that is budgeted, and that frequently drugs ordered are not delivered while unordered drugs are delivered. Some health center Directors believe that the solution to the budgetary constraints they operate under is simply to write prescriptions and let the patients purchase their medicines at pharmacies (municipal or private). By doing so, they by-pass the logistics system, making it impossible to establish realistic inventory levels based on actual demand.

4. Stockouts and low inventory levels frequently occur in the medicine warehouse of the Droguería Nacional. This may be due in part to the procurement process of the MOH and in part to hoarding at the health facility level. Stockouts also occur at the health facility level both because of limited supply and unanticipated changes in demand.

5. The medicine warehouse, which is located in a wing of a psychiatric hospital, is small and does not lend itself to the practice of proper warehousing techniques. This warehouse is also physically separated (about a 30 minute drive) from the other 2 warehouses. The medical equipment warehouse, although large, is mostly filled with obsolete or damaged equipment. The office supply warehouse, located in a building the same size as the medical equipment warehouse, shares space with a hospital ward. It appeared to us that utilization of space in this warehouse was poorly managed. We asked Dr. García whether the Droguería Nacional could dispose of obsolete and damaged equipment, combine the office supply and equipment warehouses, and then move the medicine warehouse to the vacated office supply warehouse. He responded that this would be very difficult to do because of the red tape that would be involved in equipment disposal. He also implied that the MOH may not act favorably on transferring the medicine warehouse because the equipment and office supply warehouses are located in temporary space. The current medicine warehouse does not have adequate space to store contraceptive supplies for the entire country.

6. The Droguería Nacional does not have its own vehicles and must rely on the MOH motor pool for transport. Apparently, no agency of the MOH has permanently assigned vehicles. According to Dr. García, shipments are often delayed because vehicles are down for maintenance or being utilized for other purposes, e.g., the annual immunization program. Dr. García stated that his operations would be more efficient if he had exclusive use of 2 10-ton trucks.

7. Intermediate (regional) warehouses do not exist in the MOH logistics system. Supplies are shipped to the Area Chiefs' headquarters which, in turn, are responsible for getting the supplies to the health centers and posts under their jurisdiction. Dr. García stated that he has no control over the supplies once they reach the Area Chiefs' headquarters, and frequently the supplies do not reach their final destinations in a timely fashion. Although Dr. García agreed that the use of regional warehouses may be more efficient, he was pessimistic that the MOH would budget funds to establish and maintain them because of the costs involved.

C. Implications

In the above discussion, an overview of the Droguería Nacional logistics system is presented. Although not exhaustive, the overview does demonstrate that serious problems exist in the Droguería Nacional. The purchasing, allocation, and warehouse problems affect the distribution of supplies and possibly the utilization of the health centers and health posts, which is purported to be low. Most of these problems are amenable only to high level policy changes in the MOH and the Government of Guatemala, and thus, do not readily lend themselves to technical assistance provided on a periodic basis. Primary among these problems is the amount of money budgeted for medicines and drugs, and the fixed quantitites of drugs allocated to the health centers and health posts. Unless policy changes are made affecting these issues, it is highly unlikely that the current inventory imbalances could be resolved. Unless major policy changes in budgeting and drug allocation occurred, improvements made in warehousing, transportation, inventory control, and management would result in very little impact on the efficiency and effectiveness of the medical supply system. Policy changes in budgeting and drug allocation are needed to allow the system to operate under conditions of full supply. Full supply is essential to the establishment of maximum and minimum stock levels, which, in turn, would have a positive effect on inventory imbalances and hoarding practices that are currently commonplace. Although it may be impossible to have full supply for all items as a minimum, efforts could be made to assure equitable distribution of what is available. This could be done by establishing how well the health centers and posts utilize supplies they receive.

Supply management of contraceptives by the Droguería Nacional would be less involved and would require only relatively minor changes in the logistics system. Such changes could easily be addressed by FPED/CDC

consultants on a periodic basis, because the contraceptive distribution system would operate under conditions of full supply, provided that sufficient warehouse space and other improvements are implemented. A potential problem area could be the distribution of contraceptives from the area headquarters to the health centers and health posts. This problem could be resolved by assigning the pickup truck called for in the tripartite agreement to the 3 departments of the pilot project. In addition, relatively high maximum and minimum contraceptive stock levels could be assigned to the health centers and health posts in the 3 departments as well as to a regional warehouse, if one is established.

If the pilot project is evaluated in terms of the Droguería Nacional's ability to supply both medicines and contraceptives in a 3-department area, it is unlikely that the medicine component would be judged successful because of the constraints discussed earlier in this report. The question would be then, if the Droguería Nacional demonstrates that it can effectively supply contraceptives to the pilot area but not medicines, should there be a turnover of responsibility for the Direct Distribution Program from APROFAM to the MOH in year 3 (1982) of the tripartite agreement? We recommend that the parties to the tripartite agreement establish in their negotiations the criteria that will be used to evaluate the pilot project.

Resolving the medicine supply system's problems is more complex and long-term than effectively integrating contraceptive supplies in the Droguería Nacional supply system. A potential problem with the proposed tripartite agreement is that it could be interpreted that FPED/CDC is responsible for changing policies necessary to improve the medicine supply system during the integration of contraceptives in the Droguería Nacional logistics system. Clearly, the scope of work implicit in making the medicine supply system effective, even if a reasonably good distribution system is in place, exceeds the agreement currently in effect between AID/POP/W and FPED/CDC. Thus, in addition to FPED/CDC TDY assistance to interpret distribution of contraceptive supplies, we believe that a full-time logistics consultant should be assigned for 1 year to work with the Droguería Nacional and the MOH. It is our understanding that the health loan currently under study includes a resident advisor in management/administration. We recommend that this advisor be assigned and that his scope of work include responsibilities related to the medicine supply system. If an advisor is assigned, FPED/CDC consultants can continue to provide technical assistance to the Droguería Nacional in integrating contraceptives into the supply system, and in extending the system nationwide in 1982 if the pilot project is successful. FPED/CDC consultants would work closely with the resident advisor.

IV. FOLLOW-UP WITH APROFAM

During our November 1979 consultation we found that the APROFAM central warehouse contained 329,617 cycles of Norinyl 1+80 with 1974-1975 GSA inspection dates (inspection dates correspond closely to manufacture dates).

We recommended that excess supplies of Norinyl 1+80 be shipped to another country and, if this were not feasible, distribute the stocks as quickly as possible in Guatemala with written guidelines for their use. During this visit we were informed by the Warehouse Chief that no Norinyl 1+80 had been issued in either 1978 or 1979. Attempts by USAID/Guatemala and DS/POP/FPSD to locate a recipient country have proven unsuccessful, principally because of the age of the stock, and no action has been taken by APROFAM to distribute the contraceptives within the country because Dr. Santiso is under the impression that they will be exported.

The Chief of the APROFAM warehouse also informed us that large quantities of condoms with manufacture dates of 1974-1975 are also on hand in the warehouse. A review of inventory control cards showed 4,486,512 pieces on hand as of December 31, 1979. Only 442,368 pieces of these condoms are colored (Tahiti brand), and the remainder are white. According to the Warehouse Chief, there is little demand for white condoms. (Data from the 1978 CPS indicate that there is little demand for condoms in general--less than 2% of couples use condoms). The current oversupply situation for condoms in Guatemala is due, in part, to the large shipment of supplies (5,494,000) received by APROFAM in 1976; expected demand was apparently overestimated in 1975. Based on data from the 1978 CPS, about 600,000 condoms a year are required by MOH/APROFAM users. If demand stays at this level, the current inventory (including white condoms) is sufficient for 7 years.

This excess inventory should not come as a surprise. Data on contraceptive flow and estimates of active users by method were available in AID/POP's Family Planning Service Statistics 1975 and 1976 Annual Reports. Information on subsequent years was available in the quarterly and annual reports submitted by USAID/Guatemala to AID/POP/FPSD, indicating very low usage levels for condoms. End-of-year stock balances by method should also have been indicated in the Annual Budget Submission (ABS).

Given the age of both the Norinyl 1+80 and the white condoms, the amount of space they occupy in the APROFAM warehouse, the apparent low demand for these commodities, and the apparent difficulty in shipping them to another country, we recommend that their condition be determined in order to decide what disposition can be made of them. If the decision is made to dispose of the white condoms or ship them to another country, additional supplies of colored condoms would be necessary to supplement the 442,368 pieces on hand. Based on current demand, about a million pieces are needed early in FY 1981. If the decision is made to dispose of or ship both the Norinyl 1+80 and the white condoms, adjustments will need to be made on the FY 1982 Contraceptive Procurement Tables.

As of November 21, 1979, 625,390 cycles of Norinyl 1+50 with GSA inspection dates of 1974 and 1975 were on hand in the APROFAM warehouse. In our report covering the October-November 1979 consultation, we recommended that these contraceptives be restacked by inspection date to insure that the older stocks would be used first. It was our understanding that this has been accomplished.

The quantities on hand of Norinyl 1+50 represent approximately a 1-year supply, taking in consideration the DDP and APROFAM's clinical and CBD programs. Nevertheless, because of the age of these commodities, their draw-down should be closely monitored.

Finally, during our discussions at APROFAM we learned that the second draft of the Spanish version of the 1978 Contraceptive Prevalence Survey (CPS) final report, which is being edited by APROFAM, should be ready for review by FPED/CDC during the second week of February 1980. Service statistics from APROFAM's 1978 clinic operations in the Department of Guatemala were also obtained. These data will be compared with CPS data on source of contraceptive service.

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