DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control

Memorandum

Date March 20, 1981

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Family Planning Evaluation Division, CHPE

Subject Foreign Trip Report (AID/RSSA): Kingston, Jamaica, January 5-23, 1981: Logistics Assistance

To William H. Foege, M.D., Director
Centers for Disease Control
Through: Horace G. Ogden, Director
Center for Health Promotion and Education (CHPE) [illegible] 3/31/81
Acting Director

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SUMMARY

From January 5-23, a trip was made to Kingston, Jamaica, to provide technical assistance to the National Family Planning Board (NFPB) in supply distribution procedures. A briefing was provided by Terry Tiffany, Director, Health, Nutrition, and Population Division, to review the scope of work and furnish background information. Most of the consultancy was spent in Kingston working with staff of the NFPB in charge of storage and distribution of contraceptive supplies. Two field visits were made to health centers which receive supplies and provide patient services. A review of inventory, control, and distribution procedures was conducted.

The NFPB is a semi-autonomous unit within the Ministry of Health. It has primary responsibility for the family planning component of general health programs and is, for practical purposes, the only source of contraceptives and related family planning supplies used in public health centers. Supplies are located in the NFPB warehouse (Stores) in Kingston and are distributed to health centers by delivery van. Stores is the responsibility of the Executive Director (Stores), who supervises a staff of six employees in Stores and several drivers and assistant workers.

Health centers prepare requisitions which are sent to Stores for approval, contingent upon the availability of supplies. For contraceptives and condoms, both supplied by USAID, stocks are always sufficient to meet demand, but for some other items shortages or outages sometimes occur. Visits to health centers revealed no evidence of hoarding at the local level.

As requisitions are filled, inventory levels are maintained on stock cards or on the "Monthly Summary." Entries appear to be timely and accurate; no major discrepancies were detected between inventory levels reflected on stock cards and spot checks of actual amounts in Stores. Packing lists and signed receipts for goods are also used. Detailed records are filed in a separate office section in Stores; the Executive Officer (Store) also maintains copies of requisitions and a requisition ledger. A large, dry, secure warehouse (the Stores facility itself) provides excellent conditions for the storage of supplies.

Stores records were used to compile Tables 1 to 3 to document elapsed time in handling of requisitions. An average of 12 days elapses between the time a requisition is dated by a health center and the time it reaches the Executive Officer (Stores). More time is lost between the time a requisition is filled and when it is delivered. Approximately 3 weeks elapse between the time a requisition is dated and the time supplies are received by a health center. Conversations with health center staff indicate that these delays are not perceived as a problem, since extra lead time is routinely allowed when requisitions are prepared.

Stock cards and "Monthly Returns" were reviewed to determine annual distribution level of oral contraceptives and condoms. Since stocks of both these contraceptives have been and continue to be adequate to meet demand, distribution figures provide an estimate of actual consumption. From 1977 to 1980, between 3,500,000 and 4,000,000 condoms were distributed annually; for the same period annual distribution of oral contraceptives ("pills") ranged from 450,000-650,000 cycles. Estimated consumption for 1981 is 4 million condoms and 600,000 cycles of pills. An inventory of contraceptive supplies conducted on January 15, 1981, showed an approximate 8-month supply of condoms and a 6-month supply of pills.

At the conclusion of the consultancy, several recommendations were made to the NFPB concerning procedures and inventory control. The most important of these include:

a. Analysis of operational costs to permit full use of additional delivery vehicles. The contemplated addition of the delivery of health-related supplies other than those for family planning will require additional resources to defray costs of gasoline and maintenance of vehicles.

b. Analysis of shortages, determination of annual need, and establishment of reorder points for family planning supplies. Except for reliable figures on the annual distribution of condoms and oral contraceptives, annual consumption levels are not available for a number of other items supplied by the NFPB. Until such figures are available, planning and budgeting for future years will be difficult.

c. Performance of annual inventory of all supplies with spot checks conducted at other times during the year.

d. Establishment of better communications with health centers, particularly those in rural areas. Broad and frequent dissemination of written communications, mostly letters and memorandums, would do much to better inform health center staff of NFPB activities.

e. Analysis of procedures and problems at the health center level rather than the NFPB level in any future consultation.

I. PLACES, DATES, AND PURPOSE OF TRAVEL

At the request of the National Family Planning Board, Ministry of Health, Jamaica, and USAID/Jamaica and AID/DS/POP/FPSD/Washington, I provided technical assistance to the National Family Planning Board to: a) train staff in supply and distribution procedures; b) analyze current stores procedures. In part, this consultation was a followup to a previous evaluation carried out in September 1978 (see CDC/RSSA trip report dated December 4, 1978).

In requesting this consultation, AID/Jamaica outlined the scope of work as follows:

A. Provide in-service training for new administrator of National Family Planning Board stores and her staff. Training should include storage, inventory, rotation of stocks, reordering, distribution, etc. This training will be done on the job.

B. Analyze current stores procedures and recommend changes in practices on policies that would improve commodity receival, storage, and distribution.

C. Assist NFPB, USAID, and Statistics Division of the MOH to determine better mechanism for collecting and reporting service statistics.

D. Assist Mission in analysis of future contraceptive requirements and, in particular, assist in completion of contraceptive procurement tables.

On the first day of the visit, discussions with AID/Jamaica led to deletion of the work with the Statistics Division of the MOH, since another AID consultant from the Bureau of the Census was to include this activity in an evaluation of overall data collection procedures.

This travel was in accordance with the Resource Support Services Agreement (RSSA) between the Office of Population, AID, and CDC/BE/FPED.

II. PRINCIPAL CONTACTS

A. USAID/Jamaica

1. Terry Tiffany, Chief, Health, Nutrition, and Population Division
2. Grace-Ann Grey, Program Assistant
3. Gary Cook, Public Health Advisor

B. Ministry of Health

1. Osmond Gordon, Senior Statistician
2. Ellen Radlein, Statistician
3. Kathleen Harrison, Supervisor, Island Medical Stores

C. National Family Planning Board

1. Samuel Cheddar, Executive Director
2. June Rattray, Board Secretary
3. Pat Woolaston, Executive Officer (Stores)
4. Augustus Davidson, Storekeeper
5. Carey Banks, Assistant Storekeeper
6. Harold Brown, Storeman

D. Other

1. Arthur Walton, UNDP
2. Maria Elena Dubourt, U.S. Bureau of the Census

III. BACKGROUND

The Ministry of Health (MOH) consists of the several sections, units, and divisions shown in the organization chart (Figure 1). An MOH publication entitled, Primary Health Care--The Jamaican Perspective, outlined plans for 430 health centers divided into five "types:"

Type 1: Serving population of about 4,000
Type 2: Serving population of about 12,000
Type 3: Serving population of about 20,000
Type 4: Parish medical program with additional staff, hospital, and laboratory facilities.

Type 5: Comprehensive Health Centers to be located in the Kingston metropolitan area and in two areas in St. Catherine's Parish.

A recent list of clinics obtained from the MOH showed 373 health centers of all types in operation in 1980. Almost all these centers offer family planning services and receive contraceptive and related family planning supplies from the National Family Planning Board (NFPB).

The NFPB operates as a semi-autonomous unit within the MOH, maintaining separate offices and accounts. It is headed by an Executive Director who is responsible to the NFPB Board of Directors. The Board Secretary is also on the NFPB staff and, like the Executive Director, has responsibilities to the NFPB Board of Directors.

The NFPB has a separate warehouse referred to as Stores, and that term will be used in this report. Stores staff consist of a Storekeeper, Assistant Storekeeper, two Storemen, and two assistant workers. They are supervised by the Executive Officer (Stores), whose office is located in NFPB headquarters a short distance away. The Executive Officer (Stores) also supervises several drivers and sidemen (assistants who travel with drivers to help deliver supplies).

A detailed review was conducted of the procedures used by the NFPB to provide family planning supplies. This included analysis of requisitions, receipts, packing lists, stock cards, ledgers, and files maintained by the Executive Officer (Stores) and by the Storekeeper. Several tables were developed to measure time sequences and stock consumption. These will be described, including recommended changes, if any.

Abbreviations and terminology in this report include:

1. MOH--Ministry of Health
2. NFPB--National Family Planning Board
3. KSAC--Kingston--Saint Andrew Corporation, or the Kingston Metropolitan Area.
4. IMS--Island Medical Stores
5. Storekeeper: The single word is used but applies to both the Storekeeper and the Assistant Storekeeper. Titles are usually capitalized in this report.

IV. OBSERVATIONS

A. Procedures

The Executive Officer (Stores) reviews requisition forms submitted by health centers. After the requisition is approved, two copies are retained by the Executive Officer (Stores) and one is sent to the Storekeeper. As requisition forms are received in Stores, the date of receipt, originating unit, and items requested are entered in a ledger. This ledger is used for easy reference in case a question arises over a particular requisition. If needed, detailed information can also be retrieved from the requisition files. The

ledgers maintained by both the Executive Officer (Stores) and the Storekeeper are neat and easy to read.

A packing list in four copies and a "Record of Receipt" form in four copies are prepared by the Storekeeper when items are assembled and packaged (Attachments A-1 and A-2). Volume is high with 299 packing lists used during a recent 4-1/2 month period. One copy of the packing list is given to the health center, and the person receiving the goods signs and sometimes dates the record of receipt, which is later returned by the delivery van driver to the Storekeeper. The receipt is then attached to the original requisition form and filed. A copy of the packing list is maintained in a separate ledger with sequentially numbered lists, four to a page. This file copy is used to prepare a "Monthly Return" report (discussed later).

At the present time, only three copies of the packing list and three copies of the record of receipt form are used. However, there is no need to change the number of copies printed on each tablet from four to three. The paperwork involved in accounting for shipment of goods is not considered burdensome by the Storekeeper.

Health center staff are responsible for ordering supplies and may order as often as necessary in the amounts needed. Numbered requisition forms bound to a tablet are used by health centers making requests (Attachment A-3). Each block of four pages is imprinted with the same requisition number so that four copies can be prepared--one to be retained by the originating unit and three sent by post or hand-carried to the Executive Officer (Stores). Health center, parish, and date of requisition are entered at the top of each form, and the signature of an authorized person appears at the bottom. Several items can be entered on each requisition, which provide 17 lines for listing them. Columns include a minimum quantity, usage in previous month, amount on hand, and amount requested. Most health centers list only the amount on hand and the amount requested. Some requisitions are routed through the principal medical officer in the parish, and some are sent directly to the NFPB.

Table 1 is a compilation of requisition information from September 1980 to January 1981. The figures were extracted from recent requisition file copies maintained by the Executive Officer (Stores). The requisition number and point of origin is listed for identification purposes in Columns 1 and 2. The time lapse in Column 5 is calculated by determining the number of days between the date a requisition was prepared and the date it was received at the NFPB by the Executive Officer (Stores). Dates range from 0 days for hand-carried requisitions to highs of 43 and 45 days from two different parishes. (One requisition was received by NFPB the day before it was prepared by the originating unit. This obvious recording error is not included in the computation of average elapsed time.)

An average time lapse of approximately 12 days for all areas was calculated. As might be expected, health centers located in the Kingston-St. Andrew Corporation (KSAC, or the Kingston metropolitan area), are those whose elapsed time is often low. These units are able to conveniently hand-carry requisitions to the NFPB and in many instances draw their supplies the same day. However, many Kingston area centers show considerable elapsed time because of a requirement that requisitions be countersigned by the principal medical officer for KSAC.

Many orders originiating in rural areas show greater amounts of elapsed time due primarily to two factors: a) lost time for delivery of letters through the postal system and b) lost time because of local parish approval, a procedure which varies from parish to parish. Practically no time is lost after requisition forms are received by the Executive Officer (Stores) and the Storekeeper. The Executive Officer (Stores) reviews each requisition to ensure it is satisfactorily completed and reasonable in terms of quantities requested. Rarely is it necessary to return a requisition form to an originating center for correction. Approved requisitions are sent by messenger to Stores where they are recorded in a chronological ledger listing requisition number, date received by Stores, requesting unit, and item requested. A review of the ledger maintained by the Executive Officer (Stores) and of the packing list ledger maintained in Stores indicates that most requisitions take from 0 to 1 day to reach Stores after they are received by the Executive Officer. The few exceptions are vouchers received on Fridays, which may not reach Stores until Monday. Further review indicates that Stores immediately (meaning the same day) reviews requisitions, pencils in the amount of each item that can be provided, and gives the requisitions to the Storeman. The Storeman then draws items from the shelves and assembles a discrete stack for each requesting unit. The Storekeeper checks the items in the stack against the requisition. When they agree, the Storekeeper completes both a packing list and a receipt which are later attached to cartons for use by the driver and by clinic staff in acknowledging receipt of goods.

On January 13, 1981, 25 shipments were assembled, boxed, and on the Stores floor ready for delivery (Table 2). The same day deliveries were made to St. Thomas and Portland Parishes, 1 day after the cartons had been packed for shipment. Priority was given to this area (the eastern end of Jamaica) because a NFPB health educator, scheduled to make a presentation in Portland Parish needed a ride. Otherwise, the Executive Officer (Stores) would have given priority to shipments for other areas. On January 15, long-delayed deliveries were made to Hanover and Westmoreland. Other deliveries were made on January 22.

The delays in delivery shown on Table 2 indicate that for the 25 shipments ready on January 13, an average delay of 11.3 days occurred. Of course, shipments prepared in December may have been subject to unusual delay because of the Christmas holiday season. The Executive Officer (Stores) is responsible for assigning delivery priorities and dispatching drivers and the delivery vans. It is her practice to accumulate orders until a sufficient volume is available to fill a van completely or almost completely. Orders are then grouped for a selected geographical area in order to deliver a maximum amount with minimal expense for gasoline and maintenance of vehicles. This practice is commendable but can lead, as shown in Table 2, to long delays in receipt of supplies by "unlucky" health units.

A compilation of elapsed time between the time a requisition is prepared and the time items are received is included in Table 3. Only requisitions dated in 1980 are included. The figures are based on a review of 168 requisition folders alphabetically filed from A-M by name of health center. Two to three times that number of individual requisitions were reviewed. Practically all "Records of Receipt" were signed, but less than 10 percent

included the date of receipt with the signature. Not included in this analysis are requisitions without date of receipt and those which were hand-carried by MOH personnel to NFPB Stores, since this procedure almost always assures receipt of items on the same day. The purpose of this analysis was to determine the length of time a health center must wait to obtain supplies through normal procedures--completion and posting of vouchers, approval, and delivery of items by NFPB delivery van. Although less than 10 percent of the "Records of Receipt" contained the receipt date needed for this analysis, there is no reason to think the 90 percent which were undated would reveal a different pattern.

Table 3 shows that the elapsed time between the submission of a requisition and receipt of goods shows unpredictable variation and range from a low of 2 days to a high of 74. Seven of the 30 deliveries took more than a month; five took 1 week or less. Average elapsed time for the KSAC area was about 1-1/2 weeks; for the rest of the country about 3-1/2 weeks. The NFPB can probably do nothing about time lost between the date of voucher preparation and the date of receipt by the Executive Office (Stores). The NFPB may not be able to dispatch delivery vans more often than now is done because of the considerable cost of gasoline. This analysis is not intended to direct the NFPB to change delivery procedures. It is simply included to document the considerable amount of time which may be lost in receiving goods at the health center level and document expected elapsed time, which should be taken into account by health centers when supplies are ordered.

In summary, delays experienced by health centers in receipt of supplies show the following averages:

Table 1 (Health center to Executive Officer (Stores)	12.2 days
Table 2 (Stores to health center)	11.3 days
Table 3 (Health center requisition to actual receipt)	22.1 days

Since these tables are based on different requisitions, the averages cannot be added for a total average time. Further comments on the data in Tables 1-3 are included in the section on recommendations (Section V).

B. Inventory Control

Stock cards are maintained in the Storekeeper's office file for all items in Stores (Attachment A-4). Bin cards are not used. Stock cards for 1980 record the name of each item and receipts of shipments of that item in red ink; issuances are recorded in blue ink. Receipts of shipment list the date of receipt, source by name of supplier, and amount. Issuances list date, packing list number, destination, and amount. Each item on the stock cards is recorded by the unit in which it is ordinarily dispensed by Stores, including such terms as cartons, packs, packages, packets, bottles, kits, vials, tubes, pills, sets, gallons, and units. These terms are recorded as appropriate on the upper left corner of each card. Stock cards also have a balance column which is adjusted with each receipt or issuance. A random check of balances of several items indicated that accurate totals are maintained. (In checking over 100 computations, no errors were detected.) Stock cards for 1980 are classified separately. New cards with balances on hand as of January 1, 1981, are in a separate cabinet for use in 1981. Current plans are to continue the procedure of separating stock cards each year.

A total of 50 stock cards are presently used for commodities which have been distributed by NFPB over the past several years. A recent grant by the Association for Voluntary Sterilization (AVS) has added 15 more items to Stores and a corresponding number of stock cards. The cards are listed alphabetically and do not present any problems when a search is made for a particular card. Cards are stored in one drawer of a 4-drawer file cabinet.

Many of the items listed on stock cards are alphabetized by brand name or other term. For example, pregnancy test kits are filed under "G" for Gravindex pregnancy test kits. Condoms are filed generically as condoms, and gloves are filed as disposable gloves.

This procedure appears to work well for the Storekeeper, since he has no difficulty retrieving a particular stock card when it is needed. Maintaining 50 family planning stock cards and 15 AVS stock cards by multiple alphabetizing approaches is a simple task. If, in the future, the number of items and stock cards maintained by NFPB stores increases dramatically to several hundred, a different approach to filing of stock cards would be needed. A comment on stock card nomenclature is included in the section on recommendations.

The amounts issued are maintained daily, totalled monthly, and are recorded in a separate column on the stock cards. This information is later transferred to a "Monthly Return," one copy of which is sent to each addressee shown below:

a. USAID/Jamaica
b. Executive Officer (Stores)
c. Administrative Officer, NFPB
d. Ministry of Health (Chief Pharmacist)
e. Board Secretary, NFPB
f. Senior Accountant, NFPB
g. Stores File Copy

The "Monthly Return" (not included as an exhibit in this report) is the principal means by which supply use rates and remaining inventories are monitored. At the time of this consultancy, the "Monthly Return" was modified slightly to include the monetary value of existing inventories to help NFPB auditors in preparing their reports.

Table 4 is a consolidation of information included on Tables 5-8 and some information obtained from the Commercial Distribution of Contraceptive Program (CDCP). The information for 1977 was obtained from the Jamaica trip report dated December 4, 1978. Figures for 1978 and 1979 may be understated due to apparent inconsistencies on stock card records. The figures were assembled to provide, in summary form, annual distribution levels for use by the NFPB in assessing program average, and for use by USAID/Kingston in preparing contraceptive procurement tables for the annual budget submission. A draft copy of the procurement tables for FY 1983 was prepared and left with USAID/Kingston.

Figures in Table 4 represent distribution of supplies and presumably consumption of those supplies. Since there is an adequate supply of both condoms and Norinyl, all requisitions for these items are completely filled. Distribution figures thus serve as a surrogate for current demand. This is not true for many non-contraceptive items in NFPB Stores. Distribution figures for items out-of-stock or in short supply cannot be equated with demand, and annual need levels are often unknown.

For the past 4 years, between 3,500,000 and 4,000,000 condoms have been distributed. Annual projected usage for FY 1981 is 4,000,000 condoms. Oral contraceptive distribution ranged from 450,000-650,000 cycles. Annual projected usage for CY 1981 is 600,000 cycles. No major changes in family planning program operations are contemplated in 1981, and there is no reason to expect consumption levels to increase over the 1980 level. The consumption and inventory levels for oral contraceptives Gynovular 21 and Ovral 21 were included in the contraceptive procurement tables for the 1983 annual budget submission but are not viewed as a major oral contraceptive alternative. Comments on the use of these products are included in the section on recommendations.

Monthly issuances of condoms and oral contraceptives for 1978, 1979, and 1980 are shown in Tables 5, 6, 7, and 8. These figures were obtained from the Monthly Return and/or stock cards.

The Stores inventory shown in Table 9 was compiled independently by this consultant and by the Assistant Storekeeper. Condoms available to MOH health centers total 458 cartons, or an approximate 8-month supply. The supply of Noriday 1-50 totaled 546 cartons or an approximate 6-month supply. Supplies of Norminest (Norinyl 1-35) are not included in this calculation, since annual usage is unknown. Comments on the need for annual inventory and determination of annual usage rates are included in the section on recommendations.

V. RECOMMENDATIONS

A. Procedures

1. Operational Costs

The Executive Officer (Stores) indicated that due to the cost of gasoline and other operational costs, delivery vans were usually not sent to the field until a sufficient number of requisitions were processed to fill or nearly fill a van. This type of prudent financial management is reasonable, particularly since health center staff interviewed by this consultant indicated they expected a certain wait for delivery and did not consider it a problem.

USAID plans to purchase two more vehicles for the NFPB to further improve delivery service and to allow, on a space-available basis, for the transport of other MOH supplies to health centers. The NFPB should arrive at some specific agreement concerning gasoline and other logistic costs with those organizational units in the Government of Jamaica responsible for funding the present distribution program. Without additional support for operational costs, the NFPB will have difficulty making maximum use of the new vehicles.

2. File All Documents in One Location

In 1981, the Storekeeper plans to rearrange the files in which copies of requisitions are located. Documents will be filed by parish and alphabetically within each parish. At the present time, each completed requisition has a receipt attached which verifies that supplies have been received by the health center. An extra copy of the packing list should also be attached to the requisition. This will permit complete and easy retrieval of all pertinent shipping documents in case any question ever arises about a requisition. The Storekeeper indicated he does not often need to refer to requisitions to resolve questions, but maintaining all records in one location would be desirable.

3. Date Receipts

Receipts for goods are signed by health center staff but are rarely dated. A review of over 300 requisitions produced only 30 with dated receipts attached. This in itself is not a problem for Stores or for the health centers, but it does make difficult an analysis of elapsed time between the date a requisition is prepared and the date goods are received.

In the future, van drivers should assume responsibility for dating receipts. They can either write the date themselves or have the nurse at the health center record it. This kind of information will be useful for the NFPB Executive Officer (Stores) to reduce, if possible, the time required to send supplies to health centers. It would be particularly interesting to analyze elapsed time by geographic area.

4. Unlock Stores Door

During working hours, stores security against theft is sometimes maintained by locking, with a padlock, a small entrance door while employees are inside. At other times the padlock is in the door but unlocked. The padlock should always be unlocked while employees are in the building. In case of fire, no one wants to have to unlock a door or even worse, try to remember who has the key.

5. Revised Procedure for Issuing Alcohol

During the latter months of 1980 and in 1981, NFPB Stores had an adequate supply of alcohol available in a 55-gallon drum but had no small containers (in quart, half-gallon or gallon size) to send alcohol to health centers. A supply of approximately 20 empty two-liter bottles was obtained from Island Medical Stores. One or two cartons numbering from 6 to 12 bottles, should be carried in vans whenever deliveries are made. Health centers should give the van drivers or sideman an empty bottle for every full bottle issued. In this way, Stores will always have bottles available.

If this procedure should prove unworkable in practice, the NFPB should obtain empty containers sufficient to meet demand. It is this consultant's understanding that there is a plastics factory located in or near Spanish Town which manufactures, among other things, plastic containers. This may be a satisfactory source if the NFPB finds it is necessary to purchase containers for alcohol.

B. Inventory Control

1. Shortages, Reorder Points, and Annual Supply Needs:

Although the management of Stores is generally excellent, there is need for improvement in maintaining adequate levels of some supplies, establishing reorder points, and in the determination of annual consumption levels. Before reorder points and annual needs can be determined, the problem of stock outages and shortages needs to be resolved.

In deciding what can be supplied and what cannot, the NFPB should consider the "critical" or "non-critical" characteristics of each item in the stores inventory. Health center staff can probably continue to provide adequate patient care, even if the facility lacks such things as pails or instrument trolleys. These items may be considered "non-critical." Staff cannot provide adequate medical care if they run out of contraceptives such as Gynovular 21 and Ovral 21, or Mycostatin, Flagyl, and other medications. These items are "critical." Casual substitution of one type of oral contraceptive for another is not recommended, and for some medications there is no substitute at all.

The shortages in supplies of Ovral 21 and Gynovular 21 documented in Table 7 could be resolved by discontinuing the use of these two products. USAID provides adequate amounts of Noriday and Norminest, and these two formulations alone are the only oral contraceptives used in family planning programs in many other countries. The NFPB and USAID should discuss this possibility.

Shortages for several other items cannot be resolved by discontinuation. The NFPB should plan for the uninterrupted provision of "critical" supplies, budgeting adequately, and ordering supplies promptly when needed. Provision of "non-critical" supplies should also be considered, based on the priority of individual items, costs, and sources of supply. Funding for both "critical" and "non-critical" supplies should be carefully considered. If the Government of Jamaica cannot afford the quantities needed, support from other sources should be sought.

Elimination of shortages will require several months. During this time, an estimate of annual supply needs should be prepared. This is fairly simple for those supplies available in adequate quantity (e.g., Noriday and condoms), since quantities issued very closely reflect consumption. It is not so simple for those items which the NFPB cannot supply in the quantities reflected by health centers. A separate ledger should be maintained by the Storekeeper to record the quantity requested, item by item, in each requisition. Amounts can be summarized monthly with monthly totals later added to obtain estimates of need over a period of time (preferably 1 year). This procedure may result in overestimation, since health centers staff may reorder supplies in greater quantity than is actually needed. However, as improved provision is achieved for items now in short supply, requests will more accurately reflect actual need.

Once supply shortages are resolved and annual consumption levels determined, reorder points can be established. A reorder point is a supply level adequate to last a certain number of months based on current usage and

projected future consumption. It should be sufficient to provide an uninterrupted flow of supplies until a new order can be placed and goods received. Reorder points will vary according to rates of consumption and source of supply.

Column 8 on the Monthly Return is entitled, "Estimated Period Balance Will Last." This information can be used to establish a reorder point for each item.

2. Annual Inventory:

An annual inventory of all items should be conducted, preferably at the end of December or in early January. The last complete inventory was conducted in March 1980, and an inventory of contraceptives was conducted on January 15, 1981 during this consultation. At a minimum, an inventory of condoms and all oral contraceptives, regardless of source, should be conducted on or about January 1 each year. This information is needed by USAID to complete long-range contraceptive procurement tables.

Because supplies are well-stored and controlled, complete inventories at 3 or 6 month intervals are not needed. The Storekeeper may, at his discretion, conduct spot inventories of any item(s) at other times during the year.

3. Air Circulation in Bulk Storage Area:

Bulk supplies of condoms, oral contraceptives, and a few other items, are now stacked on pallets with some of the cartons in contact with exterior walls. After these supplies are depleted, new shipments should be stacked on pallets, but at least 1 foot of space should be left between cartons and exterior walls. This technique allows for better air circulation and will prevent potential absorption of moisture from exterior walls. There was no evidence of moisture absorption by cartons presently in Stores. Guidelines for proper storage were discussed and a written list left with Stores personnel (see Attachment C).

4. Stock Card Nomenclature:

The Storekeeper presently maintains about 50 stock cards for family planning supplies and another 15 for AVS supplies. The cards are kept in alphabetical order under generic names (condoms), brand names (Noriday), and modified names (disposable gloves). With only 65 stock cards, use of diverse nomenclature is not confusing for the Storekeeper, and no changes in procedure are recommended at this time.

If, in the future, the number of items supplied through NFPB Stores expands dramatically (say, 200 or more), the Executive Officer (Stores) and the Storekeeper should consider a revised nomenclature. Condoms might become "Contraceptives, barrier, condoms" and Noriday might become "Contraceptives, Oral, Noriday." The manual used to provide the nomenclature for Island Medical Stores would be a useful reference for obtaining standard terminology.

5. Bin Card Trial:

Bin cards are a stock control tool, particularly useful in large facilities. Unlike stock cards, they are physically located with supplies. Issuances, receipts, and balances are maintained on each bin card. Periodic comparison of balances with actual inventory can be conducted, facilitating accurate record-keeping. Bin cards are not currently in use in Stores and are not categorically recommended at this time. However, the Storekeeper might consider using them on a trial basis for some of the items now in stock. Supplies located on metal shelving are those most practical for the use of bin cards. The two NFPB Storemen will need training, since bin cards balances must be adjusted every time an item is issued or received.

C. Other

1. Informational Letters and Memorandums:

This consultant made field visits to a total of 13 health facilites. Without exception, all persons spoken to indicated:

a) That they were not aware Noriday 1-80 had been discontinued;
b) That they were not aware Norminest 1-35 was available;
c) That they were not aware of stock outages and shortages except for the fact that some items were either not issued or issued in short supply when delivered by van;
d) That they were not aware that empty bottles should be sent to Stores in order to obtain more alcohol (this procedure changed--see Recommendation Section).

Informational letters should be prepared as needed to advise health center staff of the availability of supplies. Medical/pharmaceutical information on changes in product formulation or on new products (such as Norminest 1-35) should also be sent to health centers. Policy guidelines on distribution of information should be as broad as possible so that MOH/NFPB staff at all levels can be kept as fully informed as possible. At a minimum, a letter should be sent immediately concerning Noriday 1-80 and Norminest 1-35.

As concerns supplies, the Executive Officer (Stores) is probably the most appropriate person to prepare informational letters. The NFPB Executive Director should determine who is the appropriate person to sign such letters. For information concerning new medications or subjects not concerning supplies and Stores, letters should be prepared by persons knowledgeable in the subject and responsible for dissemination of information. This may sometimes involve persons in the MOH other than those with the NFPB.

The importance of good communications with the 373 health centers of the MOH cannot be overemphasized. Good communications may require that written information be sent to each health center with the associated costs of sufficient copies and postage. Verbal communications or written communications limited to the principal medical officer in each parish appear unlikely to

be satisfactory. The area of communication with field staff and feedback of information from the field might be an appropriate subject in a future consultation.

2. Training:

Control of inventories and accounting for supplies in Stores is highly satisfactory. Stores facilities are neat and clean, and the Storekeeper and Storeman are able to locate needed supplies immediately. Storage and work space is adequate. A red line painted on the inside of part of the exterior wall indicates the maximum height to which bulk goods may be stacked. Records are stored separately from supplies, are legible, and can easily be understood by outside visitors. Reliance is placed on written records and not on the memory of the Storekeeper or Storeman. At the present time, further outside assistance in the management of the physical facility does not appear to be needed.

Discussions were held with USAID and NFPB concerning the feasibility of more formal, didactic training for such persons as the Executive Officer (Stores), the Storekeeper, or Storeman. Such training would be different than the practical, on-the-job training conducted during this consultation and would focus on the broader aspects of supply management such as administration, cost accounting, and planning. At the present time, no such training course has been identified. In general, training for supply management is best conducted on the job with consultant assistance concentrating on the problems which are faced in each country. While principals of supply management remain the same in many different social and economic situations, understanding of these principals is better accomplished by the resolution of situation-specific problems. This technique is difficult to apply in a formal, academic situation.

3. Health Management Improvement Project:

The NFPB should maintain close contact with USAID during the implementation of a new program called the Health Management Improvement Project (HMIP). This project includes, among other things, plans to upgrade the storage and distribution facilities in 20 rural hospitals. Use of some of these facilities as intermediate storage points for Stores family planning supplies may be feasible, particularly those hospitals located in western Jamaica. Establishment of intermediate storage facilities may decrease operational costs in the provision of supplies, but at the same time would increase problems associated with administration and inventory control. The practicality of the use of intermediate storage facilities may become clearer after the analysis of lapsed delivery time (mentioned in Recommendation Section) is conducted. USAID and the NFPB should continue to discuss intermediate storage possibilities as the HMIP project is implemented.

4. Future Consultations:

A future consultation, which focuses primarily on NFPB Stores, is not recommended at this time. However, analysis of supply and operational problems, as perceived at the parish and health center level would provide

the NFPB and USAID with more complete information of the effectiveness of the supply distribution program. The consultation should also consider lines of communication and transmittal of information. The problems that health centers have in obtaining information on the availability of supplies (mentioned in Recommendation C-1) should be analyzed and resolved by the NFPB.

Neal Ewen

Neal Ewen

Attachments

FIGURE 1

ORGANIZATIONAL CHART - HEAD OFFICE OF THE MOH

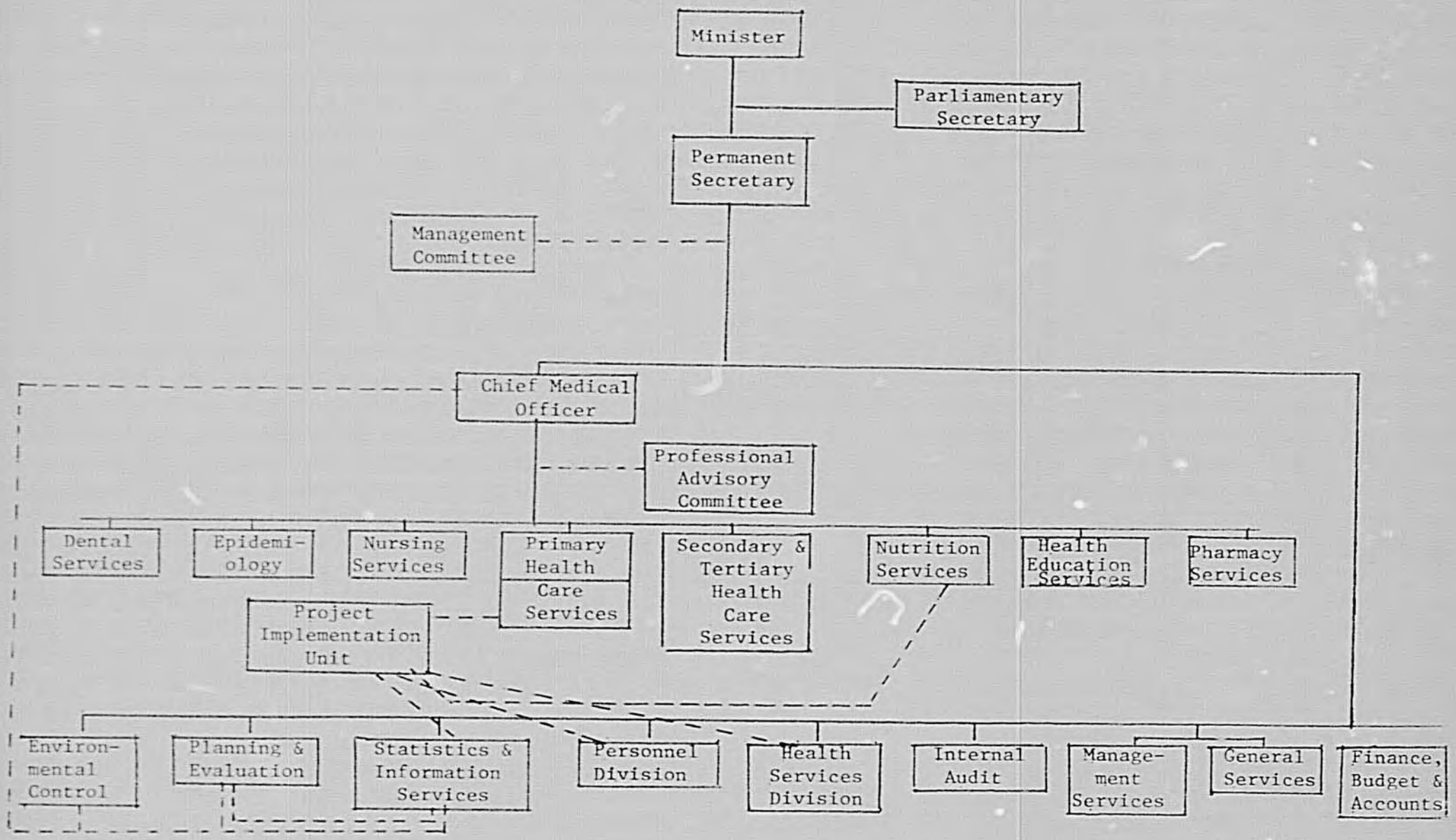

TABLE 1
Requisition Flow Time
Originating Parish to NFPB Executive Officer (Stores)
September-December, 1980

Requisition Number	Parish of Origin	Date Prepared (Day-Month-Year)	Date Received By Executive Officer: Stores (Day-Month-Year)	Elapsed Time (Days)
5965	St. Mary	31-12-80	6-01-81	6
7521	KSAC	18-12-80	6-01-81	19
7178	St. Elizabeth	22-12-80	6-01-81	15
5059	St. Mary	24-11-80	3-12-80	9
8621	St. Catherine	21-11-80	3-12-80	12
7687	KSAC	3-12-80	3-12-80	0
7392	Clarendon	2-12-80	2-12-80	0
2572	KSAC	2-12-80	3-12-80	1
5793	KSAC	24-11-80	2-12-80	8
5738	KSAC	26-11-80	28-11-80	2
4846	Hanover	14-11-80	1-12-80	17
5598	St. Thomas	21-11-80	1-12-80	10
4601	KSAC	10-11-80	2-12-80	22
1350	St. Thomas	26-11-80	2-12-80	6
2951	St. James	26-11-80	2-12-80	6
4301	St. Elizabeth	24-11-80	28-11-80	4
3889	St. Ann	29-10-80	3-11-80	5
6098	St. Elizabeth	23-10-80	3-11-80	11
766	St. Elizabeth	29-10-80	3-11-80	5
2569	KSAC	21-10-80	24-10-80	3
1705	St. Catherine	17-10-80	24-10-80	7
7273	Trelawny	1-10-80	27-10-80	26
9087	KSAC	21-10-80	21-10-80	0
1347	St. Thomas	22-10-80	27-10-80	5
8650	KSAC	1-10-80	22-10-80	21
3474	St. Mary	2-10-80	22-10-80	20
2609	St. Andrew	8-10-80	29-10-80	21
8718	St. Catherine	14-10-80	29-10-80	15
255	St. Andrew	15-09-80	29-10-80	45
3936	KSAC	13-10-80	29-10-80	16
8378	KSAC	17-10-80	17-10-80	0
709	Hanover	29-09-80	17-10-80	18
28	Hanover	4-09-80	17-10-80	43
6886	St. Catherine	8-10-80	7-10-80	-1
9086	KSAC	8-10-80	9-10-80	1
523	KSAC	8-10-80	13-10-80	5
7718	KSAC	19-09-80	6-10-80	17
4232	KSAC	3-10-80	6-10-80	3
7683	KSAC	7-10-80	13-10-80	6
5147	St. Elizabeth	26-09-80	6-10-80	10
5056	St. Mary	6-10-80	13-10-80	7
2454	KSAC	17-09-80	3-10-80	16
5278	KSAC	11-09-80	6-10-80	25
3392	St. Mary	23-09-80	29-10-80	36
Total Days				524
Average Days				12.2
Range				0-45

Source: Requisition ledger maintained by Executive Officer, NFPB Store

TABLE 2

DELIVERY DELAYS:
PACKING DATE COMPARED WITH DATE OF VISIT TO NFPB STORES

Date Packed	Parish	Awaiting Delivery for
December 4	Trelawny	40 days
December 4	St. Elizabeth	40 days
December 11	Hanover	33 days
December 11	KSAC	33 days
December 15	St. Andrew } 2 separate centers	29 days
December 15	St. Andrew	29 days
December 24	St. James	20 days
January 6	St. Catherine	7 days
January 6	Hanover	7 days
January 6	Westmoreland	7 days
January 6	St. Catherine	7 days
January 8	KSAC } 2 separate centers	5 days
January 8	KSAC	5 days
January 8	St. Elizabeth	5 days
January 8	St. Mary	5 days
January 12	KSAC } 2 separate centers	1 day
January 12	KSAC	1 day
January 12	St. Elizabeth	1 day
January 12	Trelawny	1 day
January 12	St. James	1 day
January 12	St. Elizabeth	1 day
January 12	St. Mary	1 day
January 12	Portland } 2 separate centers	1 day
January 12	Portland	1 day
January 12	St. Thomas	1 day
Total		282 days
Average		11.3 days
Range		1-40 days

Source: Visual inspection of Stores, January 13, 1981

TABLE 3
ELAPSED TIME*

REQUISITION SUBMISSION/RECEIPT OF GOODS
BY SELECTED HEALTH CENTER

NFPB FAMILY PLANNING PROGRAM, 1980

HEALTH CENTER	PARISH	REQUISITION	DATE OF REQUISITION (Day-Month-Year)	DATE/RECEIPT OF GOODS (Day-Month-Yr.)	ELAPSED TIME
Glen Vincent PH Sector	K S A C	7718	10-09-80	21-10-80	42
" " " "	"	7717	29-08-80	2-09-80	4
" " " "	"	7715	12-07-80	5-08-80	24
" " " "	"	7711	5-03-80	7-03-80	2
" " " "	"	7516	14-03-80	27-03-80	13
" " " "	"	7515	22-02-80	7-03-80	13
Cross Roads H.D.	"	4478	13-08-80	20-08-80	7
" " "	"	4479	14-09-80	1-10-80	17
Edna Manley H.C.	"	2608	8-10-80	10-11-80	33
" " "	"	2603	21-01-80	19-02-80	29
Kiwanis Maternity C.	"	2299	15-08-80	26-08-80	11
SUBTOTAL: KSAC					195
AVERAGE DAYS KSAC					17.7
Jajo Park	St. Catherine	6883	14-08-80	22-08-80	8
Clarendon H.D.	Clarendon	7378	21-02-80	6-03-80	13
Kitson Town H.C.	St. Catherine	6883	14-08-80	22-08-80	8
Mandeville Daily Clinic	Manchester	9192	27-02-80	18-03-80	19
" " "	"	9191	7-02-80	28-02-80	21
Alligator Pond	"	6326	28-08-80	8-10-80	41
Bettfield H.C.	"	8526	26-05-80	8-08-80	74
Black River H.C.	St. Elizabeth	759	10-03-80	19-03-80	9
Myersville "B"	"	8030	30-01-80	14-02-80	15
Elderslie H.C.	"	8778	7-02-80	14-02-80	7
Claude Stuart M.C.	St. Mary	9457	2-07-80	28-08-80	57
Gayle H.C.	"	462	25-01-80	22-02-80	28
Clarke's Town M.C.	Trelawny	4278	4-07-80	17-07-80	13
Falmouth H.C.	"	6105	26-02-80	4-03-80	6
Jackson Town H.C.	"	7272	26-05-80	17-07-80	52
Cambridge H.C.	St. James	4533	8-09-80	25-09-80	17
Baulk H.C.	Westmoreland	2157	29-07-80	12-08-80	14
Llandewey H.C.	St. Thomas	7211	9-07-80	21-07-80	12
Buff Bay H.C.	Portland	1861	25-04-80	19-06-80	55
SUBTOTAL - OTHER PARISHES					469
AVERAGE DAYS - OTHER PARISHES					24.7
TOTAL - 30 HEALTH CENTERS					664
AVERAGE - 30 HEALTH CENTERS					22.1

* These figures are based on a review of 168 requisition folders alphabetically filed from A-M by health center name. Two to three times that number of individual requisitions were reviewed. All "Records of Receipt" were signed, but less than 10% included the date of receipt with the signature.

TABLE 4

CONTRACEPTIVE DISTRIBUTION

NFPB STORES & COMMERCIAL PROGRAM (CDC)

1977 - 1980

	CONDOMS (units, all Brands)			ORALS (cycles, Norinyl, all types)		
	MOH Clinics	CDC	Total	MOH Clinics	CDC	Total
1977[1]	3,202,128	719,712	3,921,840	514,650	143,533	658,183
1978[2]	2,698,800	826,848	3,525,648	298,680	175,644	474,324
1979[2]	2,904,192	893,808	3,798,000	239,060	212,160	451,220
1980[2]	3,018,144	845,856	3,864,000	362,268	226,332	588,600

[1] Based on Jamaica trip report dated December 4, 1978.

[2] Based on best available information from stock cards, monthly returns, and records from the program for the Commercial Distribution of Contraceptives (CDC). Figures for 1978 and 1979 may be understated because of issuances to the CDC program as recorded on stock cards appeared to be inconsistent.

TABLE 5

1978 Annual Issuances

Based on NFPB Stock Cards Only

	Orals		Condoms		
	Noriday 1-50	Noriday 1-80	Conture	Tahiti	Prime
January	N/A	N/A	N/A	N/A	N/A
February	17,880 cycles	1,560 cycles			2,160 gross
March	17,700 "	3,540 "			1,480 "
April	33,300 "	8,700 "			2,520 "
May	17,740 "	2,880 "		800 gross	760 "
June	27,760 "	3,420 "		2480 "	
July	25,120 "	5,580 "	680 gross		
August	13,860 "	4,860 "	1400 "		
September	22,560 "	5,400 "	1680 "		
October	41,100 "	6,780 "	1240 "	4 cartons	
November	21,540 "	4,140 "		61 "	
December	9,060 "	4,200 "		20 "	
TOTAL	247,620 cycles	51,060 cycles	5000 gross x 144 = 720,000	3280 gross x 144 = 472,320 85 cartons x 6000 = 510,000 units	6,920 gross x 144 = 996,480 units

TOTAL: 720,000
472,320
510,000
996,480
2,698,800 units

TABLE 6

1979 Annual Issuances

Based on Monthly Return and/or Stock Cards

	Orals		Condoms
	Noriday 1-50	Noriday 1-80	Prime and Tahiti
January	38,160 cycles	12,900 cycles	99 cartons
February	12,300 "	2,700 "	41 "
March	33,300 "	3,600 "	71 "
April	30,120 "	1,980 "	25 "
May	84,420 "	5,040 "	94 "
June	21,600 "	3,900 "	29 "
July	66,980 "	6,180 "	103 "
August	26,280 "	5,520 "	13 "
September	1,800 "	-	7 "
October	35,400 "	7,740 "	63 "
November	32,100 "	960 "	61 "
December	18,180 "	60 "	27 "
TOTAL	400,640 cycles	50,580 cycles	633 cartons @ 6000 =
	50,580 "		3,798,000 units
	451,220 "		

T A B L E 7

CONTRACEPTIVE DISTRIBUTION *
CONDOMS & NORIDAY
NFPB STORES, 1980

DATE	ISSUED DURING MONTH			
	Prime	Tahiti	Total	Noriday 28 1 - 50
	(Cartons of 6000 Units)			(Cartons of 600 Cycles)
January	0	62	62	120
February	0	52	52	44
March	0	39	39	45
April	0	68	68	113
May	0	31	31	81
June	1	64	65	51
July	0	61	61	148
August	16	48	64	88
September	38	-	38	82
October	58	-	58	63
November	47	-	47	86
December	59	-	59	60
TOTAL (Cartons)			644	981
TOTAL (Units or Cycles)			3,864,000	588,600

*Figures are based on stock cards and/or "Monthly Return".

TABLE 8

1980 Annual Issuances

Based on Monthly Return and/or Stock Cards

Orals

	Gynovular 21		Ovral 21
January	5200 cycles		4200 cycles
February	1100 "		4556 "
March	-		2420 "
April	-		3330 "
May	-		1320 "
June	-	out of stock	2340 "
July	-	completely	5300 "
August	-		4230 "
September	-		2500 "
October	-		out of stock completely
November	240 cycles		2990 cycles
December	38 "		610 "
TOTAL	6578 cycles		33796 cycles

Note: These totals reflect issuances, no. amounts requested o requisitions.

TABLE 9

CONTRACEPTIVE INVENTORY

NFPB STORES

January 15, 1981

A. CONDOMS

458 cartons, NFPB	=	2,748,000 units
53 cartons, YWCA	=	318,000 units
511 cartons Total	=	3,066,000 units

B. ORALS

546 cartons Noriday, NFPB	=	327,600 cycles
34 cartons Noriday, YWCA	=	20,400 cycles
162 cartons Norminest, NFPB	=	97,200 cycles
742 cartons Total	=	445,200 cycles

Ovral 21	:	37,986 cycles
Gynovular 21:		810 cycles

ATTACHMENT A:

NFPB STORES FORMS

A-1

ORIGINAL **NATIONAL FAMILY PLANNING BOARD STORES**

№ 17434

PACKING LIST

.....

..... Date.....19.....

Your Reqn. No..... Our Ref. No.....

Quantity		Description of Articles	Packing
Number	Unit		

RECEIVED

A-2

№ 1614

ORIGINAL

197

Please receive and sign for in good condition the under-mentioned from

NATIONAL FAMILY PLANNING BOARD

Received by

NFPB Store Keeper

A-3

NATIONAL FAMILY PLANNING BOARD

5 Sylvan Avenue
P.O. Box 287 · Kingston 5

№ 2770

REQUISITION

Centre/Grade . . . . . .

Parish . . . . . .

Date . . . . . .

Page . . . . . of . . . . . Form

Instructions: Prepare requisition in 4 copies. Retain one and forward 3 copies to National Family Planning Board, attention: Manager, Supplies

Stock number	Items	Clinic minim.	Units used last Quarter	Number units on hand	Units now required	For Office use		
						Number units supp.	Rate	Amount

F 9

Signature _____
Medical Officer (Clinic)

Signature _____
Nurse Officer

UNIT: ITEM: MINIMUM: LOCATION: A-4

DATE	REF.	MOVEMENT TO/FROM	RECEIPTS	UNIT VALUE	ISSUES	MONTH ISSUE	BALANCE

ATTACHMENT B

FIELD TRIP NOTES

1. Family planning section, Spanish Town Hospital. The Nurse-Educator indicated that a greater variety of oral contraceptives would make provision of contraception easier for those women with side effects from one brand or formulation. Was not aware NORIDAY 1-80 to be discontinued nor of availability of NORMINEST 1-35 (This was true of all nurses in all health centers visited by this consultant). Supplies take about a week to arrive--elapsed time not a problem. About 500 tubal ligations are performed annually, and 35-40 family planning patients are seen each week. Needles for injections and materials for cold sterilization are in short supply or not available.

Several problems not directly related to NFPB were mentioned, including lack of beds. In the maternity ward, patients are sometimes required to share beds and must furnish their own bed linens. Also promised but not yet available is increased office and storage space for health education materials.

2. Cumberland Road Health Center, Spanish Town. Family planning is staffed by a receptionist, RN, nurse-midwife, and PHN. Facility has 700-800 visits per month, provides all types of contraception, including IUDs but not sterilization. GYNOVULAR 21 and OVRAL 21 needed. Supplies usually arrive shortly after requisitions are submitted, and the intervening delay is not considered a problem.

3. By Brook Health Center, Bog Walk. Facility is staffed by a public health nurse, a district midwife, and four community health aides. The PHN interviewed indicated she provided a broad range of health services, including family planning. She indicated frequent shortages of needles, syringes, and SONACIDE (brand name of a cold sterilization medium). A steam sterilizer is available. Requisitions for supplies are forwarded through the office of the senior medical officer in Spanish Town; delays are not a problem. At one time could not obtain a 60cm. diaphragm. Monthly statistical reports are sent directly to the Ministry of Health in Kingston, and feedback is received in the form of computer printouts.

4. Riverside Health Center. Staff consists of a district midwife, PHN, two health aides, two public health inspectors, and a clinic orderly. Contraceptive supplies are adequate, but greater oral cc variety such as GYNOVULAR 21 and OVRAL 21 could be useful. IUDs can be obtained by appointment with itinerant district nurse. Alcohol, syringes, and needles in short supply but SONACIDE available. NFPB supplies are delivered directly by van. Length of time required for delivery unknown. Clinic sees from 70-100 patients per month.

5. Linstead Health Center. Linstead is one of the larger towns in interior Jamaica and has a large, clean health center about 3 years old. The principal family planning nurse was not available at the time

of visit; information was provided by a nurse-educator who indicated she lacked sufficient office and storage space for her work and educational materials. She suggested more educational films should be made available by the NFPB or MOH, stating that the number of copies of films presently in stock is sometimes insufficient to meet demand. The nurse-educator was not aware of any problems in the provision of family planning services in the clinic.

6. Dr. Melbourne, Linstead private practitioner. A few private physicians in Jamaica receive family planning supplies from the NFPB. The Linstead Office of one of these physicians was visited. He indicated that supplies are received as ordered and that he provided a full range of contraceptive services, including mini-laparatomies. Several patients were waiting to be seen, so this consultant spoke only briefly with the physician.

7. Ewarton Health Center. This unit is staffed by a PHN, district midwife, and two aides. NORINYL 1-50 and remaining supplies of NORINYL 1-80 were the only oral contraceptive supplies; clinic had not been using GYNOVULAR 21 and OVRAL 21. IUDs not inserted at this center. Requisitions for supplies sent directly to NFPB; no problems with delivery. Needles and syringes in limited supply. Boiling hot water used to sterilize equipment. Clinic sees 40-60 patients per month. Statistical report sent to MOH and computer feedback returned.

8. Lluidos Vale Health Center. Health center staff were absent, visiting other facilities that afternoon.

9. Watermount Health Center. Staff at other facilities that afternoon.

10. Kitson Town Health Center. This health center is one of a few in Jamaica where full-time and complete family planning services have yet to be offered. The nurse-midwife in charge indicated she and her supervisory nurse in Spanish Town had been discussing a new clinic schedule but because of staff shortages and the patient load for other health services, they had not yet been able to schedule a family planning clinic. General medical services, a prenatal clinic, and child health clinics are now scheduled. The center is staffed by a nurse-midwife, a PHN, an aide, and an attendant. (A subsequent discussion with the NFPB Board Secretary indicated she was aware of the problem.) The nurse-midwife indicated a need for a refrigerator and sterilizer. Some equipment is sterilized at the Spanish Town Hospital eight miles away, and some in the nurse-midwife's home.

11. A brief field visit was also made to the Kingston Clinic operated by the Jamaica Family Planning Association, an affiliate of the IPPF.

12. On January 14, a visit was made to Island Medical Stores, the chief repository in Jamaica for medical supplies used by the Ministry of Health. Mr. Terrence Tiffany and Mr. Gary Cook of the Health, Nutrition, and Population Division were also present. Mr. Arthur Walton, an UNDP consul-

Mr. Walton is helping to reorganize the Island Medical Stores, a formidable assignment which involves construction of a new warehouse, conversion and upgrading of two existing warehouses, and reorganization of two others. Approximately 2,000 drug items, many in large quantities, will need to be relocated in either bulk or short-term storage facilities, catalogued, and arranged on shelves or pallets in a sequence which facilitates filling of requisitions.

The NFPB obtains a limited number of local purchase items from Island Medical Stores, usually those which IMS can purchase economically in large quantities. NFPB supplies are physically and administratively separate from IMS, and the changes planned by the UNDP consultant will probably not affect NFPB stores.

ATTACHMENT A

GUIDELINES FOR PROPER STORAGE

1. CLEAN ROOM AND WHITE WASH WALLS.
2. CHECK ROOF FOR WATER LEAKAGES.
3. NO DIRECT SUNLIGHT ON THE SUPPLIES.
4. STOREROOM NOT SUBJECT TO WATER PENETRATION.
5. SUPPLIES TO BE STACKED AT LEAST 4"(10 cm) FROM FLOOR (Arrange dunnage of wood or steel).
6. SUPPLIES TO BE STACKED AT LEAST 1'ft. (35 cm) FROM ANY WALL.
7. SEPARATE STACKS ACCESSIBLE FOR "FIRST IN FIRST OUT" (FIFO), COUNTING AND GENERAL MANAGEMENT.
8. STACKS NOT MORE THAN 8' ft. HIGH (2.5 m).
9. IDENTIFICATION MARKS AND OTHER LABELS VISIBLE.
10. ISSUE SUPPLIES BY CARTON OR BOX LOT IF POSSIBLE.
11. WELL VENTILATED.
12. WELL LIGHTED.
13. FIRE EXTINGUISHERS NOT BLOCKED.
14. VACCINES AND SERAS MUST BE STORED IN REFRIGERATOR.
15. OLD FILES, INFORMATION MATERIAL, OFFICE SUPPLIES ETC SHOULD BE STORED SEPARATELY.
16. INSECTICIDES AND OTHER CHEMICALS NOT TO BE STORED TOGETHER WITH CONTRACEPTIVES AND MEDICAL SUPPLIES.
17. THE STOREROOM TO BE DESINFECTED AND SPRAYED AGAINST INSECTS EVERY THIRD MONTH.
18. DAMAGED AND CONDEMNED SUPPLIES TO BE SEPARATED AND DISPOSED OF WITHOUT DELAY.
19. STORE KEYS MUST BE AVAILABLE AT ALL TIMES.
20. DAILY CLEANING OF STORE ROOM.

THE MANAGEMENT
UNFPA/UNICEF PROJECT
BGD/74/P06