



Memorandum

Date February 20, 1983

From Mark W. Oberle, M.D., Medical Epidemiologist, Program Evaluation Branch (PEB),
Division of Reproductive Health (DRH), Center for Health Promotion and
Education (CHPE)

Subject Foreign Trip Report (AID/RSSA): Costa Rica, January 31-February 14, 1983,
Contraceptive Logistics.

To William H. Foege, M.D.
Director, Centers for Disease Control
Through: Dennis D. Tolsma
Acting Director, CHPE DOT

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SUMMARY

Although both central warehouses in San Jose are well managed, Costa Rica's contraceptive logistics system suffers from several problems, especially at the clinic level. Clinic inventory levels are often dangerously low and the central MOH and CCSS levels lack adequate feedback from clinics. Supervision is by crisis only. Superimposed on these organizational problems are a national excess of Noriday and a shortage of Ovrall/Primovlar.

A number of improvements are already underway. The MOH is switching to a replacement system for most contraceptives. ADC has allowed larger consignments of orals to pharmacies. Both CCSS and the MOH appear to favor an elimination of the "visto bueno" for contraceptive requisitions. Finally, communications between CCSS and the ADC have improved.

I suggested a number of improvements in the logistics system and recommended that excess Noriday be shipped to another country. I also stressed the importance of supervision and training programs to strengthen both the logistics and clinical aspects of family planning in Costa Rica.

I. PLACES, DATES, AND PURPOSE OF TRAVEL

Costa Rica, January 31-February 14, 1983, at the request of AID/S&T/POP/FPSD, and the USAID Mission/Costa Rica, Mark W. Oberle, M.D., M.P.H., traveled to Costa Rica to review contraceptive logistics capabilities of the Costa Rican Demographic Association (ADC), Social Security Administration (CCSS) and Ministry of Health (MOH). Travel was performed in accordance with the Resource Support Services Agreement (RSSA) between the Office of Population, AID/W and CDC/CHPE/DRH, and was performed in conjunction with temporary duty in Guatemala.

II. PRINCIPAL CONTACTS

A. AID

1. Carlos Posa, Project Manager, USAID/Costa Rica
2. Dr. Robert Corno, LAC/DR/W on TDY

B. Pan American Health Organization

1. Julio Bejarano, Country Adviser

C. Costa Rican Demographic Association (ADC)

1. Juan Carlos Antillon, Administrator
2. Leon Lopez Corella, Vice President
3. Humberto Salas, Supply Chief
4. Jose Carvajal, Training Director
5. Leonel de Vargas, Warehouseman
6. Walter Vargas, Distribution Agent
7. Carlos Navarro, Distribution Agent

D. Costa Rican Social Security Administration (CCSS)

1. Dr. Saeed Mekbel, Assistant Medical Director
2. Dr. Oscar Fallas, Director, Technical Health Services
3. Dr. Raimundo Riggione, Turrialba Hospital
4. Dr. Juan Hernandez Bolanos, Dr. Rafael Angel Calderon Guardia Hospital
5. Victor Manuel Rodriguez, Warehouse Director
6. Dr. Yolanda Mendez, Quality Control Director

E. Ministry of Health

1. Dr. Joaquin Jimenez Gamboa, Maternal and Child Health Director
2. Dr. Salazar Portugues, Director, Maternal Health

III. BACKGROUND

In marked contrast to his predecessor, the current President of Costa Rica has expressed solid support of family planning. During the previous administration, sterilizations and IUD's were banned, and family planning services in the public sector were given low priority. Nevertheless, Costa Rica has maintained a relatively high contraceptive use rate of 65 percent of women in union as of 1981. Three-quarters of contraceptive users obtain their method from a public sector source. As the new Costa Rican Government implements its

policies, the three main public sector providers are sorting out their continuing role in providing contraceptive services. During this consultation, I focused on the logistical capabilities of these three organizations--the Costa Rican Demographic Association (ADC), the Costa Rican Social Security Administration (CCSS), and the Ministry of Health (MOH). In addition to the logistics system itself, several needs for supervision and training became apparent and are discussed at the end of my report. I was fortunate in having a very useful previous evaluation of the public sector program by the current ADC Vice President, Lic. Leon Lopez Corella as a resource document (Evaluacion de la consulta de planificacion familiar en Costa Rica, 1980).

IV CONTRACEPTIVE LOGISTICS

A. Overview

The ADC coordinates the distribution of most contraceptives within the public sector. Except for some direct purchases by CCSS in the past, contraceptives for the public sector are procured by ADC and enter the country via the San Jose airport or one of two seaports. ADC stores the commodities in its San Jose warehouse and distributes them via seven different mechanisms:

1. ADC itself runs only one clinic in Puerto Limon on the Atlantic Coast. Contraceptives are shipped as needed directly from the warehouse to this facility.
2. ADC ships orals, condoms, Lippes Loops, and spermicides to the CCSS general medical warehouse in San Jose. From here the CCSS dispatches supplies on a monthly basis to its clinics and hospital pharmacies.
3. ADC's Director of Medical Services rations Depo-Provera and Copper-T's directly to clinics without passing through the CCSS warehouse.
4. ADC supplies MOH clinics with all temporary methods, except orals, by a direct requisition system.
5. The majority of oral contraceptive users at MOH clinics obtain coupons which allow them to purchase orals at subsidized prices from private pharmacies. ADC supplies these pharmacies with orals.
6. Some oral contraceptive users purchase their supplies directly from MOH clinics.
7. A small proportion of MOH oral contraceptive users redeem their coupons through community based distributors who are also supplied by ADC. More than half of the public sector users of temporary methods (52 percent of reported active users in 1980) utilize CCSS clinics. Less than 1 percent are served by the ADC clinic in Puerto Limon, and the remainder use MOH facilities. Although all Costa Ricans are now eligible to receive free, complete medical services at CCSS facilities, some clients prefer to utilize MOH clinics because of location, habit, or quality of service.

B. Costa Rican Demographic Association (ADC)

The ADC warehouse is currently located in two adjacent buildings behind the ADC headquarters office. Good warehouse procedures are generally being followed. Records are up to date, and contraceptives are stored properly, with the exception that some boxes are stacked against walls, limiting air circulation. One warehouse procedure is worthy of note. Some clinicians feel that Costa Rican contraceptors prefer a 21-day to a 28-day presentation of oral contraceptives. ADC spends about \$100 per year to remove each cycle of Ovral-28 from its foil pouch and cut off the 7 days of iron tablets before delivering Ovral to the distribution posts for MOH users. The CCSS warehouse does not do this.

The ADC is planning to trade in its Ohio computer for a Dynabyte machine to handle its distribution and service statistics information and to interface with the MOH's five regional computers. I discussed with ADC the possibility of adapting the logistics software package that CDC is developing for use on an Apple computer in Thailand. These programs will probably be available late in the summer of 1983 for use in other countries. Adapting the CDC package may save ADC some development time.

Additional ADC logistics activities are described in subsequent sections.

C. Costa Rican Social Security Administration (CCSS)

In addition to expanding services curtailed under the previous administration, the CCSS family planning activities have undergone a recent change in personnel. The long-time director of the program resigned 1 month before my visit, and the Director of Technical Health Services and his deputy, the Director of Preventive Medicine, were still trying to define the program. CCSS offers free family planning services at approximately 58 clinics and hospitals. In some facilities the gynecology service offers family planning, while in others both the gynecology service and a family planning clinic offer family planning. However, the exact number of facilities providing services is unknown, since some facilities may not have altered their policies since the change in administration last May. An additional constraint in analyzing the CCSS family planning program is that there is still some residual sensitivity in sharing logistical information.

CCSS facilities obtain most of their contraceptives by means of a monthly requisition sent to the central warehouse. The general goal is to requisition 1 month's supply plus a 25 percent reserve, although individual clinics frequently follow their own guidelines for ordering. In hospitals, the pharmacy is responsible for the requisition, and the clinics request contraceptives as needed. In smaller clinics, the person responsible for family planning sends the requisition directly to the warehouse. However, unlike most medicines, contraceptive requisitions are mailed from the central warehouse to the Director of Technical Health Services for his approval. He then mails the requisition, with or without reductions, back to the warehouse. The warehouse then dispatches the supplies to the clinic in 1 of 14 CCSS vehicles. This process usually takes less than 10 days. If a request is delayed in the mail or in the approval process, the contraceptive request may not be ready when the medicine shipment departs from the warehouse. Since the warehouse ships on a staggered, monthly schedule, a delayed contraceptive request may then wait until the following month for shipment to the clinic.

Unfortunately, because transportation in most of the country is reasonable, the CCSS maintains low reserves in its clinics, and when a contraceptive shipment is delayed or reduced, the result may be a low stock level in the clinic. In one San Jose hospital I visited, the clinic had been without condoms for 1 week last year and without Copper-T's for 5 months. Another hospital--2 hours drive from San Jose--had been without condoms for 1 month and would have run out of Noriday if the family planning director had not gone directly to ADC for supplies. Also, clinics throughout the country reported stockouts of glass slides for cervical cancer screening because the Government would not allow scarce foreign currency reserves to be used for the importation of medical supplies other than pharmaceuticals.

The exact inventory levels or contraceptive utilization rates for individual clinics were not known to either warehouse or Technical Health Services personnel. Recent information on active users has become unreliable, because most clinics had no reporting forms for at least 3 months last year and are still short of these forms currently. Thus, it is difficult to measure current usage rates of contraceptives. Although I was told that CCSS auditors did have inventory reports, I did not examine these records. As a surrogate for clinic usage, I utilized drawdown in the CCSS and ADC warehouses as an indirect measure of contraceptive usage (See Table 1). Usage is discussed in Section V under future supply requirements.

CCSS's 14-year old warehouse was well organized and clean. A new air conditioning system maintained ambient temperature at 20°C in the main building. However, condoms were stored in an adjacent building at approximately 26°C. The warehouse tickler file was maintained up to date.

However, a number of problems were apparent. The computerized inventory system contained several redundant codes. Two sizes of Lippes Loops were listed twice, and Dalkon Shields still appeared on the inventory although none were in stock and this IUD is no longer manufactured. Ovrall and Noriday were mislabeled on the shelving for small orders. In the bulk storage area, Noriday was stacked up to 12 feet high without pallets and against the walls---all practices enhancing deterioration.

Several observations suggest that the warehouse has not been shipping older stocks before newer supplies. First, 30 cycles of 1975 Noriday were sitting on shelves in the small order section of the warehouse (these were quickly taken to a section of the warehouse for outdated supplies). Second, boxes of 1976 and 1978 Noriday were interspersed with each other in the bulk storage area. Finally, one of the CCSS hospitals I visited had received both 1976 and 1978 Noriday, while another hospital was distributing 1981 condoms to users while the hospital's pharmacy still contained 1980 stocks.

Since the 1976 and 1978 Noriday had probably been stored at or below 26°C both at ADC and CCSS, it may well have retained its potency. Nevertheless, I carried samples back to the USA for analysis.

Independently of the main distribution system, the Technical Health Services office distributes ADC-provided Depo-Provera in 10cc vials and Copper-T's directly to clinics using an informal rationing system, based on past usage of

each clinic. In addition, the CCSS warehouse purchases 1cc vials of Depo-Provera for distribution to gynecology services. In theory the 10cc vials are used only for family planning clients, and gynecologists use the 1cc vials for treating patients with endometriosis and other gynecological conditions. In practice, many clinics use the vial sizes interchangeably. As long as these items are in short supply, a rationing system such as this appears warranted. However, when and if sufficient UNFPA funding becomes available for purchase of additional commodities, CCSS should consider incorporating these contraceptives into the regular distribution system.

Before leaving Costa Rica, I recommended the following improvements in the CCSS's warehousing and distribution procedures:

The approval of the Technical Health Services Director should be eliminated for routine requisitions in order to eliminate delays in shipments. A supervisory system should be utilized to investigate unusual requests but without delaying shipments (See Section VI).

The redundant IUD codes should be eliminated.

Stocks of Noriday should be segregated by date of manufacture.

Older contraceptives should be distributed before newer supplies are utilized both in the warehouse and in clinics. The Technical Health Services Division should stress this message to CCSS clinics.

Condoms should be moved into the air conditioned warehouse.

Contraceptives should be stored on pallets in stacks less than 2.5 meters high and 35 cm. from walls.

The Director of Technical Health Services should obtain inventory information from clinics on a quarterly basis and share this information with ADC in order to calculate national utilization rates more accurately.

Clinics, especially remote ones, should maintain a 3 month minimum of contraceptives to guarantee against natural and manmade disasters such as earthquakes and shipping errors. This policy could be adapted to local storage and transportation conditions by supervisory personnel from the Technical Health Services office.

In 1983, AID is planning to implement a major agreement with the Costa Rican Government to improve CCSS's budgetary, administrative, and warehouse procedures. CCSS's handling of contraceptives will probably improve as a result of this process.

D. Ministry of Health (MOH)

The MOH manages its distribution system in cooperation with the ADC. In a sense there is one system for distribution of IUD's, spermicides, condoms, and equipment for cervical cancer screening, and several variants of a coupon system for distribution of orals.

The MOH provides ADC with some forms and with supplies for cancer screening. ADC manages the system after this point. The MOH requisition instructs health centers to make a request for 2 months of supplies, and health posts for 3 months. No minimum stock levels are spelled out, and the requisition form does not require inventory information. The requisition lists 8 contraceptive items, 10 supply items--such as gloves and slides--and 14 items of paperwork. The clinics mail their requisitions to San Jose for review and possible reductions by the Maternal and Child Health Department (MCH) of the MOH. The MCH Department then sends the requisition to ADC, and the warehouse fills the order and sends the shipment by commercial carrier.

A frequently heard complaint among MOH personnel is that the MCH Department reduces supply requests unnecessarily. However, an additional concern is that many facilities are not utilizing the system. During 1982, all health centers submitted requests, but only 151 of the health posts (52 percent) submitted one or more requisitions. ADC's two oral contraceptive distribution agents, whose function will be described later, visit many MOH facilities along their routes and will leave extra condoms if a clinic requires them. In 1982, these distributors made 464 visits to health centers and health posts and left extra boxes of condoms during 82 percent of these visits. Some of these clinics were completely out of stock and some felt that they were short. Some clinics may not have requested enough condoms, but others simply bypassed the official distribution system and awaited the distribution agents' visits.

My visits to three health centers and posts confirmed these problems. One facility was without condoms, and another was rationing them to users. Another facility complained of not having enough coupons for oral contraceptive users. The nurse only issued one to three coupons, even for regular continuing users. This facility also lacked an IUD sterilizing solution, which is supplied directly by the MOH's regular medicine distribution system. She was autoclaving her Lippes Loops instead of using the solution. All of these clinics had prominently displayed family planning posters and readily available educational pamphlets.

Because of these problems, the MOH and ADC have agreed to switch from a requisition system of distribution to an allocation system based on clinic inventory. ADC is classifying clinics into groups, depending on past patterns of requisitioning or reported active users by method, whichever is higher. This calculation will provide an initial modular level of inventory to be maintained in each clinic. Each quarter the facilities would report their inventory of contraceptive items directly to ADC, bypassing the MCH Department. The ADC computer would then subtract the inventory of each item from the modular standard for that item in each clinic. The rounded difference would be the amount to be replaced in the next shipment. The computer would flag certain dangerously low stock situations, and ADC's supply chief would revise each clinic's maximum and minimum stock levels periodically.

One attractive feature of this contraceptive distribution approach is that it parallels the MOH medicine distribution system, which is also a replacement rather than a requisition system. One reason the current contraceptive system may not be functioning well is that clinics do not have experience in calculating requisitions except for contraceptives.

However, I pointed out that the nonparticipation of half of the health posts in the current system could well be repeated in the new system. Unless ADC receives the inventory reports on time, the new system as designed will not function. Thus, supervision in the field would be essential to ensure clinic participation.

Unlike public sector users of other methods, most MOH oral contraceptive clients purchase their supplies. MOH facilities do not distribute orals directly but rather they issue each user one coupon for each cycle of orals required. The user then redeems the coupon in one of 308 distribution posts. These posts consist of 106 pharmacies, 101 private individuals, 33 "botiquines," 58 health posts, and 10 health centers. Coupons come in three colors: blue, green, and red. Most users receive a blue coupon and must pay 10 colones per cycle (about US \$0.23 at the official exchange rate). Clients who are deemed too poor to afford this sum will receive a green coupon, which entitles them to a free cycle of orals. In addition, ADC operates a small private physician program with 103 physicians enrolled since November 1981. Private patients receive a red coupon and purchase their oral contraceptives at the same distribution points at a price of 30 colones per cycle (US \$0.67). The distributor retains 3 colones for each blue coupon redeemed and 10 colones for each red coupon redeemed. The remainder goes to ADC. A total of 286,235 coupons were redeemed in 1982 (See Table 2). The vast majority (98 percent) were blue coupons redeemed by paying MOH clients, while only 1,213 red coupons were redeemed by private patients. Oral contraceptive users in this program redeemed 84 percent of their coupons through private pharmacies or community-based distributors, while the 68 health centers and health posts that sell orals accounted for only 16 percent of orals distributed.

Two ADC distribution agents visit the distribution posts on a regular basis to distribute orals, inventory stocks, and collect coupons and revenue. ADC prefers that distribution points purchase the orals but does allow limited consignments especially for MOH facilities. The distribution agents cover eight routes totalling 9,650 kilometers over a period of 10 weeks. The distribution agents visit each distribution post an average of 4.1 times per year, although remote distribution points may be visited less frequently, and occasionally orals are shipped by mail. During 1982, the two agents made 1,264 visits and reported problems in 92 of these visits (7.3 percent). The most frequent problems were (1) an absent distributor (4.4 percent), (2) impassable roads (1.2 percent), and (3) discrepancies in inventory (1.7 percent). However, the agent's report does not include an analysis of the adequacy of inventories of orals.

To establish adequacy of inventory, I reviewed the 1982 records of a sample of 82 distribution points. Of these, only one encountered a stockout of orals at any time during 1982. Six had inventories of less than 10 cycles at some point during 1982. As expected, pharmacies, which are less likely to be allowed a consignment, were more likely to experience a low stock level (<1 month's supply) than were MOH facilities.

Three of 25 (12 percent) health centers and posts sampled had low inventories in 1982 as compared to 13 of 29 (45 percent) pharmacies ($p=0.04$). To remedy this situation, ADC decided during February to allow larger consignments to pharmacies.

V. 1983 CONTRACEPTIVE REQUIREMENTS

In 1983, ADC is planning to obtain contraceptives from IPPF and from UNFPA if a 3-year UNFPA agreement is signed. Whether these supplies are adequate and appropriate is difficult to evaluate, since the ADC has documentation of commodities transferred to the CCSS warehouse but did not have documentation of shipments from the CCSS warehouse to clinics before 1982. In addition, information on clinic inventory levels and distribution from clinics to users are available only for MOH oral contraceptive users. However, during 1983 MOH and CCSS should provide ADC with much more complete information for predicting contraceptive requirements.

Over the last 6 years, oral contraceptives dispatched from the ADC warehouse to MOH distribution posts reached a nadir in 1980 but increased in 1981 and 1982 (See Table 3). Shipments from the ADC warehouse to the CCSS warehouse have consisted primarily of Noriday since 1977, but the CCSS warehouse has accumulated an excessive inventory of Noriday.

Table 1 summarizes contraceptive inventory and predicted consumption for 1983. The first three columns list the warehouse inventories as of January 1, 1983. The fourth column contains incoming shipments from IPPF without considering possible UNFPA shipments. The fifth through seventh columns contain expected 1983 "usage," defined as expected shipments from the two warehouses to clinics. The next column contains the projected transfer of condoms to the CRS program, and the last two columns contain the combined balances of both warehouses at the end of 1983, expressed as commodities and as years of consumption at 1983 rates.

This analysis assumes the following:

IPPF and ADC will cancel the planned shipment of 600,000 cycles of Noriday. Usage of all methods will increase by 3 percent from 1982 to 1983. Following the IPPF guidelines, low dose orals will comprise 10 percent of oral use.

The first problem apparent in the table is an oversupply of Noriday. Both warehouses combined will have a 6-year supply at the end of 1983. The ADC stocks were manufactured in 1981 while the CCSS stocks were older. In February, the CCSS warehouse contained 178,200 cycles of Noriday manufactured in 1976 and 277,200 cycles manufactured in 1978. I brought back samples of these stocks to the U.S. for analyses. If the analyses demonstrate adequate potency, Costa Rica would face an oversupply situation. I recommended that once the pharmacological potency is documented, both ADC and CCSS warehouses begin dispatching the oldest Noriday stocks to clinics. This would involve a transfer of a portion of older Noriday from the CCSS to the ADC warehouse. In order to avoid unnecessary CCSS paperwork, CCSS may have to schedule the transfer at the same time that ADC plans to send CCSS some other contraceptive. In other words, the Noriday transfer would be described as a trade from the CCSS point of view. As the 1978 stocks are utilized, it may be necessary to repeat the analysis of potency on a regular basis. Late in 1983, ADC should be able to more accurately forecast future Noriday use levels. At that time, ADC could estimate how much excess Noriday is on hand. Since the 1981 Noriday will be 5 years old in 1986, ADC should plan on retaining only enough Noriday

to cover projected use through 1986. ADC should plan for an alternate use for any Noriday in excess of the 1984-1986 requirements. At the rate of use tentatively estimated in Table 1, the warehouses probably have a combined excess of approximately 250,000 cycles. One suggested use would be to utilize this Noriday in a CRS program. However, this alternative is probably not permissible. The other alternative would be to ship the excess Noriday to another country such as Guatemala.

In contrast to Noriday, Ovrал and Primovlar are in short supply, especially at the CCSS. The two warehouses combined will have only 2 months' reserve remaining at the end of 1983. Although some clinicians and users have a strong brand preference, this shortage may force clinics to think generic. To deal with the impending shortage, ADC should consider the following alternatives:

ADC could explore the possibility of obtaining Ovrал or equivalent from IPPF. At the rates of usage calculated in the table, ADC would require 550,000 cycles of Ovrал, or equivalent, in order to have a 1-year reserve in the warehouse at the end of 1983, or 200,000 cycles to provide a 6-month end-of-year reserve. Since Ovrал and Primovlar are "cash" contraceptives and IPPF's 1983 supply plan has already been finalized, this could be a difficult short-term alternative.

ADC could utilize UNFPA funds to purchase Ovrал or equivalent when and if the UNFPA agreement is signed. If ADC utilized the proposed UNFPA contraceptive procurement budget for 1983 for purchase of Ovrал or equivalent, ADC would have less funds for purchase of Copper T's, Depo-Provera, and progestin-only pills.

CCSS could purchase some Ovrал or equivalent using their own funds. Although CCSS officials discussed this possibility, they were pessimistic about obtaining the additional funds because CCSS faces a 1.7 billion colon (\$38 million) deficit this year.

ADC could try to arrange an early 1984 shipment of Femenol (an "in-kind" contraceptive) from IPPF and ration Ovrал and Primovlar in late 1983. If a shipment of Femenol could be arranged for January 1984, this alternative might involve minimal disruption, but ADC would have to monitor clinic inventories closely. However, some users who may prefer to use Ovrал or Primovlar may be forced to use another contraceptive, especially if Femenol failed to arrive by January. Increased program dropout rates may occur. However, this last alternative may prove to be the most practical.

In order to decide on the best choice of action, clinic inventory levels from both CCSS and MOH are essential.

Demand for the new low-dose combined orals--Nordette and Microgynon (the same formulation)--is difficult to estimate. On the one hand, my estimated end-of-year balances are probably too high, since initial shipments to stock clinics were not included. On the other hand, a progestin-only pill, which ADC may introduce if UNFPA funding becomes available, may reduce the demand for Nordette and Microgynon.

Condom stocks in the warehouses appear to be adequate, in sharp contrast to the shortage of condoms in the MOH clinics. As with orals, my estimate of

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condom balances in the warehouses at the end of 1983 would be too high if the MOH and CCSS accept my recommendations to provide larger reserves at the clinic level.

Stocks of foam and Lippes Loops appear to be adequate with the exception of Lippes A. I suggested that ADC request additional supplies of this size.

VI. SUPERVISION

Clinic supervision is sorely lacking in the family planning programs at both CCSS and the MOH. Currently, supervision is performed by crisis, and neither institution has a budget for regular supervision of family planning activities. Both at CCSS and the MOH, supervision will be immediately necessary in the field to help reactivate family planning activities, dormant since the previous administration, and to identify training needs. It is essential that the MOH initiate clinic supervision during the switch to the new distribution system, especially in view of the nonparticipation of half of the health posts in the current system. An important part of supervision should be ongoing instruction in contraceptive methods, especially the new low-dose combined orals being introduced this year. Supervision should also be necessary to establish familiarity with administrative procedures, adequacy of clinic hours, and appropriateness of clinic inventories of contraceptives.

The exact form which supervision should take is a matter of some discussion. At CCSS Dr. Fallas suggested a semivertical approach because CCSS's wide range of clinical activities, combined with frequent emergencies, could easily swamp a more routine activity such as family planning. However, he did suggest that family planning supervision could be integrated appropriately with supervision of other preventive medicine activities such as immunization services. The director of preventive medicine may need one additional staff member, preferably a physician who could receive special training in family planning and other preventive medicine activities. Dr. Fallas may be able to obtain a vehicle from CCSS for preventive medicine supervision, but even if it were necessary to pay mileage for use of a personal vehicle, the cost of a physician's salary and travel expenses for supervising CCSS facilities 2-4 times per year would amount to \$8,000-\$10,000.

Because the MOH's clinical activities are more restricted than CCSS's, a more horizontal strategy may work for the MOH. On the other hand, because of the greater number of dispersed MOH clinics, supervision may be more complicated logistically. The MCH Department felt that supervision of MCH activities by current staff or possibly an additional staff member 2-4 times per year would be desirable. Transportation facilities are limited at the Ministry, but if the MOH paid mileage for an additional staff member to use his or her own car, the cost would be \$10,000-\$12,000 per year.

One alternative to the approaches mentioned above would be an integrated CCSS-MOH family planning supervisory activity under ADC auspices. This would have the advantage of economizing salary and transportation costs and assuring family planning adequate supervisory attention. However, Lic. Antillon, who has extensive experience with the MOH, preferred that each institution bear the responsibility for supervising its own programs, with ADC perhaps providing supplemental funds and guidance. He will be exploring these options during negotiations for the UNFPA project.

VII. TRAINING NEEDS

One major trend in family planning programs worldwide is the switch from an "either/or" approach to multiple options of contraceptives to fit the needs of individual users. This trend will be especially apparent in an advanced country like Costa Rica with its literate population, reasonable transportation, and high physician-to-population ratio. Nevertheless, Costa Rica's medical schools are producing graduates inadequately trained to operate in this changing environment. Only two of the medical school faculties in Costa Rica offer any family planning training, despite the fact that the required obstetrics and gynecology rotation for medical students lasts up to 6 months. Each year, approximately 100 graduating medical students enter their social service year without basic family planning experience. For example, this year only 6 of 50 students starting their social service year with the MOH had ever inserted an IUD. The MCH orientation period for this group amounted to only 1-2 hours in January 1983. Even some practicing physicians I met had outdated or mistaken notions about family planning methods. For example, there appears to be confusion between the low-dose combined orals to be introduced this year and progestin-only formulations.

The Government has proposed eliminating the social service obligation because an increasing number of physicians cannot obtain slots for their social service year. This step will have the advantage of reducing physician turnover in the public sector and increasing the long term impact of in-service training activities in CCSS and the MOH.

In 1983, the MCH Department and ADC will offer a series of regional, 2-day training courses for 111 MOH physicians. The courses will stress contraceptive methods and training in IUD insertion. In addition, ADC is proposing an ongoing training program for CCSS and the MOH to be funded by UNFPA. Besides the physicians and auxiliaries to be trained in this activity, ADC should consider offering short rotations to medical students, since many of these physicians will never perform a social service year or be exposed to family planning training before or after graduation.

ADC and I discussed a number of training options during my visit, including sending two or more physicians to the U.S. to be trained as trainers. I have sent ADC several descriptions of short-term training courses in the U.S. and have discussed this possibility with Dr. Robert Hatcher, Director of the Emory University Family Planning Program in Atlanta. I also sent Lic. Antillon some materials he might consider utilizing in this year's MOH/ADC training course.

VIII. SUMMARY OF RECOMMENDATIONS

ADC

In designing the proposed UNFPA-funded training program, ADC should consider offering a short rotation to medical students to provide them with clinical family planning experience.

The ADC should negotiate a specific supervisory system with the CCSS and MOH to assure ongoing field supervision of family planning activities. ADC could provide guidance and possibly supplemental funds through the UNFPA project.

The ADC warehouse generally follows good operating procedures. However, I did leave a copy of the warehouse guidelines (See attachment) and recommended that boxes of contraceptives be removed from walls to ensure adequate ventilation.

The incoming shipment of 600,000 cycles of Noriday appears to be unnecessary, and ADC should discuss the possibility of cancelling this shipment and acquiring additional supplies of Ovril or equivalent (See Section V).

If the analyses of the 1976 and 1978 Noriday demonstrate adequate potency, Costa Rica would face an oversupply situation. I recommended that once the pharmacological potency is documented, both ADC and CCSS warehouses begin dispatching the oldest Noriday stocks to clinics. This would involve a transfer of a portion of older Noriday from the CCSS to the ADC warehouse. As the 1978 stocks are utilized, it may be necessary to repeat the analysis of potency on a regular basis. Late in 1983, ADC could estimate how much excess Noriday is on hand and should plan for an alternate use for any Noriday in excess of the 1984-1986 requirements. One suggested use would be to ship the excess Noriday to another country such as Guatemala.

Based on 1982 shipments from the two central warehouses, Lippes A's may be out of stock by the end of 1983. ADC should consider requesting additional stocks of this IUD before year's end.

ADC should consider adopting the logistics software package CDC is developing in Thailand, but only if the ADC system is not ready by late summer.

CCSS

The approval of the Technical Health Services Director should be eliminated for routine requisitions in order to eliminate delays in shipments. A supervisory system should be utilized to investigate unusual requests but without delaying shipments.

The redundant IUD codes should be eliminated.

Stocks of Noriday should be segregated by date of manufacture.

Older contraceptives should be distributed before newer supplies are utilized, both in the warehouse and in clinics. The Technical Health Services Division should stress this message to CCSS clinics.

Condoms should be moved into the air conditioned warehouse.

Contraceptives should be stored on pallets in stacks less than 2.5 meters high, and 35 cm. from walls. Labels should be clearly visible.

The Director of Technical Health Services should obtain inventory information from clinics on a quarterly basis and share this information with ADC in order to calculate national utilization rates more accurately.

Clinics, especially remote ones, should maintain a 3-month minimum of contraceptives to guarantee against natural and manmade disasters such as earthquakes and shipping errors. This policy could be adapted to local storage and transportation conditions by supervisory personnel from the Technical Health Services Office.

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When and if UNFPA funding becomes available for purchase of additional commodities, CCSS should consider incorporating the distribution of Copper-T's and Depo-Provera into the regular distribution system.

In addition to the specific recommendations above, I left a set of warehouse operation guidelines for contraceptives. I also carried to the U.S. samples of the 1976 and 1978 Noriday for testing.

MOH

The MOH should eliminate the approval of the MCH office for contraceptive requests. Unusual requests can be investigated after shipment by supervisory personnel.

The new distribution system for contraceptives should allow for a 3-month minimum stock level to avoid stockouts and rationing.

A supervisory system will be essential in order to guarantee the completeness of clinic inventory reporting. Requisition or inventory instructions and supervision should stress first-in, first-out principles.



Mark W. Oberle, M.D.

TABLE 1
SUMINISTROS 1983

| | INVENTARIO (A) 1/1/83 | | | INGRESOS (B) 1983 | | | CONSUMO 2,3 (C) | | | (A+B-C)= (D) | D/C |
|---------------------|--------------------------|-----------|-----------|----------------------|-----------|-----------------------------|-----------------|--------------------------|------------------------|--|-----|
| | CAJA: | A.D.C. | TOTAL: | TOTAL: | CAJA: | A.D.C. (MINIST. OTRO) | TOTAL: | CONSUMO: (ASDECOSTA); | SALDO: | SALDO: (AÑOS): | |
| Noriday 1 | 470.334 | 343.604 | 813.938 | --- | 77.475 | 39.598 | 117.073 | | 696.865 | (6.0) | |
| Ovral. 4 | 63.855 | 207.002 | 270.857 | --- | 273.245 | 126.396 | 399.641 | → | 132.824 | (2/12) | |
| Primovlar | 393.816 | 149.695 | 543.511 | --- | 138.334 | 143.569 | 281.903 | → | | | |
| Nordette 5 | --- | ---- | --- | 150.000 | 26.378 | 16.697 | 43.075 | | 106.925 | (2.5) | |
| Microgymon | 51.831 | ---- | 51.831 | 290.000 | 26.378 | 16.697 | 43.075 | | 298.756 | (6.7) | |
| SUB-TOTAL: | 979.836 | 700.301 | 1.680.137 | 440.000 | 541.810 | 342.957 | 884.767 | | 1.235.370 | (1.4) | |
| Preserva- tivos: | 877.500 | 2.841.900 | 3.719.400 | 5.770.000 | 1.794.569 | 898.753 | 2.693.322 | ← (2.160.000) → | 4.636.078 6.796.078 | (1.7) (con la entrega a (2.5) ASDECOSTA.) (sin la entrega a ASDECOSTA.) | |
| Cremas/Jaleas: | 5.004 | 12.526 | 17.530 | 10.000 | 7.670 | 5.459 | 13.129 | | 14.401 | (1.1) | |
| Aplicadores: | 1 | 6.246 | 6.247 | 5.000 | 0 | 4.222 | 4.222 | | 7.025 | (1.7) | |
| <u>DIUS</u> | | | | | | | | | | | |
| Lippes A 6 | 580 | 319 | 899 | 1.500 | 788 | 1.697 | 2.485 | | 86 | (0) | |
| B | 967 | 2.860 | 3.827 | 4.000 | 869 | 1.894 | 2.763 | | 5.064 | (1.8) | |
| C | 990 | 3.160 | 4.150 | 0 | 571 | 1.588 | 2.159 | | 1.991 | (11/12) | |
| D | 746 | 511 | 1.257 | 1.500 | 31 | 745 | 776 | | 1.981 | (2.6) | |
| Appl. Lippes: | 663 | 3.445 | 4.108 | 0 | 288 | 626 | 914 | | 3.194 | (3.5) | |

- NOTAS:
- 1) El envío de IPPF de 600.000 ciclos de Noriday será cancelado.
 - 2) 10% de las usuarias de Noriday, Ovral y Primovlar en 1982 cambiarán a microdosis.
 - 3) Crecimiento de 3% en todos los métodos que habían en 1982.
 - 4) Intercambios de los almacenes ADC/CCSS e intercambio de Primovlar y Ovral.
 - 5) Microgymon y Nordette van a dividir el mercado para el microdosis 1:1
 - 6) IPPF enviará 1500 no 500 Lippes A. y enviará Lippes D y no C.

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TABLE 2

Oral Contraceptive Coupons Collected by ADC Distribution Agents
Costa Rica, 1982

| <u>Type of Post</u> | <u>Blue Coupons*</u> | <u>Green Coupons</u> | <u>Red Coupons</u> | <u>TOTAL</u> |
|---|----------------------|----------------------|--------------------|--------------|
| Private pharmacies, "botiquines," and private individuals | 237,017 | 3,116 | 1,200 | 241,333 |
| Health centers and posts | 43,964 | 925 | 13 | 44,902 |
| TOTAL | 280,981 | 4,041 | 1,213 | 286,235 |

*MOH clinics distribute blue coupons to most of their oral contraceptive users, but they also issue green coupons to those clients too poor to afford the purchase. Private physicians issue red coupons to private patients, but the coupons are redeemed at the same ADC distribution posts.

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TABLE 3

Oral Contraceptives Provided by ADC to the CCSS Warehouse
and to MOH Clinics, by Brand, 1977-1982

| | Noriday/Norinyl | | | Ovral | | |
|-------|-----------------|---------|---------|---------|---------|---------|
| | CCSS | MOH | Total | CCSS | MOH | Total |
| 1977 | -- | 34,771 | 34,771 | 250,000 | 69,032 | 319,032 |
| 1978 | -- | 36,805 | 36,805 | -- | 63,126 | 63,126 |
| 1979 | 72,191 | 36,072 | 108,263 | 11,265 | 69,319 | 80,584 |
| 1980 | 300,000 | 23,510 | 323,510 | -- | 71,727 | 71,727 |
| 1981 | 250,200 | 46,188 | 296,388 | -- | 152,217 | 152,217 |
| 1982 | 150,000 | 42,373 | 192,373 | 50,000 | 135,755 | 185,755 |
| TOTAL | 772,391 | 219,719 | 992,110 | 311,265 | 561,176 | 872,441 |

| | Primovlar | | | Other | | |
|-------|-----------|-----------|-----------|---------|-----|---------|
| | CCSS | MOH | Total | CCSS | MOH | Total |
| 1977 | 250,000 | 228,369 | 478,369 | 100,000 | -- | 100,000 |
| 1978 | -- | 198,504 | 198,504 | -- | -- | -- |
| 1979 | 1,051 | 188,591 | 189,642 | 99,480 | -- | 99,480 |
| 1980 | -- | 177,537 | 177,537 | -- | -- | -- |
| 1981 | -- | 114,153 | 114,153 | -- | -- | -- |
| 1982 | -- | 154,403 | 154,403 | -- | -- | -- |
| TOTAL | 251,051 | 1,061,557 | 1,312,608 | 199,480 | -- | 199,480 |

| | All Brands--Total | | |
|-------|-------------------|-----------|-----------|
| | CCSS | MOH | Total |
| 1977 | 600,000 | 332,172 | 932,172 |
| 1978 | -- | 298,435 | 298,435 |
| 1979 | 183,987 | 293,982 | 477,969 |
| 1980 | 300,000 | 272,774 | 572,774 |
| 1981 | 250,200 | 312,558 | 562,758 |
| 1982 | 200,000 | 332,531 | 532,531 |
| TOTAL | 1,534,187 | 1,842,452 | 3,376,639 |

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ATTACHMENT

GUIA PARA ALMACENAJE

- 1) LIMPIAR CUARTO Y PAREDES.
- 2) CHEQUEAR EL TECHO (SIN GOTERAS).
- 3) NO DEBE DE ENTRAR LA LUZ DEL SOL HASTA LAS CAJAS.
- 4) EL AGUA NO DEBE DE ENTRAR EN EL ALMACEN.
- 5) LAS CAJAS DEBEN DE ESTAR ENCIMA DE UNA TARIMA DE 10 cm. DEL SUELO.
- 6) LAS CAJAS DEBEN DE ESTAR 35 cm. DE LA PARED.
- 7) DEBE DE GUARDAR LAS CAJAS EN GRUPOS ACCESIBLES PARA MANEJARLAS SEGUN EL PRINCIPIO DE " PRIMERO ENTRAR PRIMERO SALIR " (PEPS). TAMBIEN DEBEN DE TOMAR EN CUENTA LA FECHA DE FABRICACION Y/O VENCIMIENTO DEL PRODUCTO.
- 8) LAS CAJAS NO DEBEN DE ESTAR EN ESTIBADAS MAS DE 2.5 MTS. DE ALTO.
- 9) LAS MARCAS DE IDENTIFICACION DEBEN DE ESTAR VISIBLES.
- 10) SI ES POSIBLE DEBE DE DISTRIBUIR LOS PRODUCTOS POR CAJITAS Y NO - POR UNIDAD.
- 11) VENTILACION ADECUADA.
- 12) LUZ ADECUADA.
- 13) EXTINGUIDOR DE INCENDIO ACCESIBLE.
- 14) ARCHIVOS, SUEROS, PAPELERIA, FOLLETOS DEBEN DE ESTAR GUARDADOS A PARTE.
- 15) INSECTICIDAS Y OTROS QUIMICOS NO DEBEN DE ESTAR GUARDADOS JUNTO CON LOS ANTICONCEPTIVOS U OTRAS MEDICINAS.
- 16) EL ALMACEN DEBE SER DESINFECTADO Y SI ES NECESARIO, FUMIGADO CONTRA LOS INSECTOS CADA TRIMESTRE.
- 17) MATERIALES DANADOS DEBEN SER SEPARADOS Y DESTRUIDOS SIN DEMORA.
- 18) LAS LLAVES DEBEN ESTAR DISPONIBLES TODO EL TIEMPO.
- 19) LIMPIAR EL ALMACEN TODOS LOS DIAS.
- 20) VACUNAS, SUEROS DEBEN ESTAR GUARDADOS EN REFRIGERACION.