

**Memorandum**

**Date** August 11, 1987

**From** Jack L. Graves, M.P.H., Chief, Program Services Section (PSS), Program Evaluation Branch (PEB), Division of Reproductive Health (DRH), Center for Health Promotion and Education (CHPE), and Howard Springsteen, M.P.A., Family Planning Logistics Management Project, John Snow, Inc.

**Subject** Foreign Trip Report (AID/RSSA): May 29-June 12, 1987, Turkey

**To** James O. Mason, M.D., Dr.P.H.  
Director, CDC  
Through: Assistant Director for Science, CHPE T. Mason

**SUMMARY**

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**SUMMARY**

The purposes of our visit to Turkey were to review the status of contraceptive supplies, conduct a brief evaluation of the supply management system, estimate the needs for contraceptives in the future, and to recommend improvements in the supply management system. To accomplish this, we interviewed officials of the Turkish Ministry of Health and Social Assistance (MOH), private voluntary organizations, Hacettepe University, and others. We also visited clinics and provincial stores in six provinces in an attempt to better define the status of contraceptive stocks and problems with the supply system. The MOH is aware of problems with supply management and is preparing a supply manual with improved procedures.

Our recommendations and suggestions include:

1. A national inventory should be conducted as soon as possible to assess the status of condoms and to evaluate the supplies of Lofemenal with regard to expiration.
2. The logistics system being proposed should be completed with careful attention being paid to: (a) the levels of inventory to be maintained at all program locations, (b) the frequency of resupply to provinces,

(c) complete, timely, and accurate recording and reporting of contraceptive movement and stock on hand, and (d) be sure that instructions in the new supply manual are clear and complete.

We offered followup assistance in completing the supply system and discussed the possibility of CDC providing technical consultation to the contraceptive prevalence survey scheduled for 1988. Based on further communication between AID, the U.S. Embassy, and CDC, it has been proposed that two CDC demographers make a preliminary visit to Turkey in late September. We also estimated stock on hand and future demand for the contraceptives supplied by AID and prepared contraceptive procurement tables.

We worked with professional staff of the Asian and Pacific Regional Office, Family Planning International Assistance, in this consultancy.

#### I. PLACES, DATES, AND PURPOSE OF TRAVEL

Ankara, May 30-June 6; Istanbul, June 5-6 (Springsteen only); Adana/Mersin, June 6-10; Ankara, June 10-12. The purposes of these trips were:

1. Working with the Ministry of Health and Social Assistance (MOH), ascertain the current level of contraceptive stocks in national and provincial warehouses and stock expiry dates. Verify consumption rates for each method.
2. Review procedures used by the MOH to estimate contraceptive requirements, and recommend changes in these procedures as required. Prepare projections of contraceptive requirements for 1987, 1988, and 1989.
3. Assess the MOH family planning logistics system, including management information systems for contraceptives. Based on this assessment, formulate recommendations of further technical assistance, as necessary, to strengthen family planning services.

In addition to MOH personnel, we worked with Mr. U. C. Shyam Lama and Mr. Kim J. Deridder, Assistant Regional Directors, Asia and Pacific Regional Office, Family Planning International Assistance (FPIA).

The trip was at the request of AID/S&T/POP/CPSD, U.S. Embassy, MOH, and FPIA. Mr. Graves' travel was in accordance with the Resource Support Services Agreement between CDC/CHPE/DRH and AID/S&T/POP. Mr. Springsteen's travel was in accordance with the Family Planning Logistics Management Project between John Snow, Inc. and AID/S&T/POP. The trip was in conjunction with travel to Kenya, for which a separate trip report is being prepared.

#### II. PRINCIPAL CONTACTS

##### A. Ministry of Health and Social Assistance

1. Tandogan Tokgoz, Ph.D., Undersecretary
2. Family Health Division, MCH/FP Program.
  - a. Dr. Guler Bezirci, General Director
  - b. Mr. Ugur Aytac, Deputy General Director

3. Central Medical Stores
    - a. Mr. Hasan Ak, Director
  4. Ankara Province
    - a. Dr. Seza Imamoglu, MCH/FP Center #3
    - b. Dr. Nezahat Gelgel, MCH/FP Center #4
    - c. Dr. Tuna Yavu, Pediatrician, Gulveren-Hanskoy Arostirma Grup, Baskonligi (GHAG)
    - d. Dr. Kodriye Yurdakok, Chief Physician, GHAG
    - e. Dr. Gunsei Gunduz, GHAG
    - f. Mr. Agakisi Gifter, Storekeeper, GHAG
  5. Icel Province
    - a. Dr. Yusuf Ziya Ozsahin, MCH/FP Center
    - b. Dr. Melahat Ramazanoglu, MCH/FP Center
    - c. Dr. Ekrem Sabancioglu, MCH/FP #1
    - d. Dr. Faruk Kucukoglu, Family Planning Clinic Director, Provincial State Hospital
  6. Adana Province
    - a. Dr. Nevzat Sahan, Provincial Health Director
    - b. Dr. Sevinc Bilen, Provincial MCH/FP Director
    - c. Dr. Bulent Kirac, Head, Maternity Hospital
    - d. Mr. Yakup Agca, Director, Regional Medical Store
    - e. Dr. Abdul Aziz Coskontuncel, In-charge, Yamacli Health Center
    - f. Dr. Selim Ayoinday, Yamadi Health Center
- B. The Pathfinder Fund
  1. Dr. Turkiz Gokgol-Kline, DSc., Director (Istanbul)
- C. Hacettepe University
  1. Dr. Sunday Uner, Professor, Institute of Population Studies
- D. U.S. Embassy
  1. Mr. Carl Matthews, Labor Attache.
- E. UNFPA, New York
  1. Dr. Nick Dodd, Policy Officer
  2. Ms. Linda Sherry-Cloonan, Program Officer

### III. ACTIVITIES AND OBSERVATIONS

Upon arrival in Ankara, we met with Mr. Matthews (USEMB), Mrs. Kline (Pathfinder), Mr. Deridder and Mr. Lama (FPIA), and Mr. Aytec (MOH) for briefing and to plan our work. In addition, we read various documents including FPIA trip reports, the 1983 Turkish Population and Health Survey Report (CPS), and an English translation of a draft of a contraceptive supply manual which had been prepared by a local consultant under support from FPIA.

#### A. Background

The population of Turkey is now slightly more than 50 million compared with 44.7 million reported in the 1980 Census (See Attachment 1). According to the CPS conducted in 1983, the total fertility rate has declined from 4.61 in 1974-79 to 4.17 in 1978-83, a decline of approximately 10 percent in 9 years. The survey report also shows that 94 percent of ever married women know of one or more methods of contraception, 71 percent have practiced some form of

contraception, and 62 percent of women at risk of conception (currently married, not pregnant, physically able to have a child) are using a method. However, only 44 percent of these women (27 percent of women "exposed") are using a modern method. In fact, almost half (30 percent) of women currently using report that they and their partner use withdrawal. This is, by far, the most prevalent method, followed by oral contraception and the IUD (9 percent each). Unfortunately, the report emphasizes women at risk of conception as a denominator rather than all currently married women, which is generally used for international comparisons. Thus, depending on the proportion of women not at risk of conception, the percentage of currently married women using contraception is probably about 50 percent, with 25 percent of couples practicing withdrawal.

The report also states that more than 90 percent of contraceptives used come for the private sector. This figure is controversial, as MOH officials feel that more than 10 percent come from MOH clinics. Turkey has several manufacturing companies that produce oral contraceptives (the only contraceptive manufactured locally). MOH estimates that they produce approximately 4.5 million monthly cycles per year.

The high rate of induced abortion (12.1 percent of pregnancies are terminated by induced abortions), as reported in the 1983 survey, indicates that there is a large unmet need for family planning services. The MOH is trying to address the unmet need by expanding family planning services through both service delivery and information, education, and communication activities.

The MOH is testing or contemplating several innovative approaches to family planning, such as community based distribution, social marketing, private sector projects, etc. They consider family planning as a basic part of public health services.

Some of the problems identified during these initial discussions were:

1. There is a need to expand training in family planning for MOH personnel. Highly trained personnel tend to migrate to the private sector because of better earning potential (we did not investigate this as it was beyond the scope of our visit).
2. Program management is not satisfied with the current procedures for managing contraceptive supplies at all program levels. The current system does not produce the information necessary to forecast future needs. Port clearing is difficult and slower than it should be.
3. The demand for all contraceptives seems to be increasing, with condoms experiencing a dramatic increase over the past few months. The supply system has not been able to keep up with the increased demand for condoms. Most of the increased condom usage is attributed to fear of AIDS.
4. The oral contraceptives used in the MOH program are approaching the expiration dates, and some may be lost to the program due to expiry.
5. The program has an NCR computer that is underutilized.

6. A contraceptive prevalence survey is to be conducted in 1988, and the program might need external assistance.

#### B. Activities

We proceeded to investigate the above-mentioned problems by visiting various program locations, including the Central Medical Store (CMS), Provincial Health Offices in Ankara, Istanbul, Icel, and Adana (our FPIA colleagues had visited Istanbul, Kirklarelli, and Takidag Provinces before our arrival) and 13 clinics, 2 provincial stores, 2 regional stores and other local MOH operations. In addition, we collected data on the quantities of contraceptives shipped from the CMS in 1984, 1985, 1986, and 1987 to date. Some of these data were verified by telephoning the larger provinces and examining the records of CMS. We attempted to collect data on contraceptives dispensed or issued and stock on hand at all locations and to evaluate the storage conditions, records, and reporting procedures used in the contraceptive logistics system.

#### C. Observations

The fact that the logistics system does not work very well was verified at all program levels. We found inconsistencies in stock being maintained relative to demand, some official and some locally produced recording and reporting systems, and confusion regarding reporting, ordering, and transportation procedures. Most clinics do not keep records on contraceptives dispensed to users. Program management is well aware of these problems, and a new logistics system is being designed. The latest draft of the manual describing the system has been circulated to all provinces with a request for comments.

There seems to be a substantial increase in demand for condoms. Condom shipments from CMS doubled from 1985 to 1986, and, from the data that we collected, an additional 50 percent increase is anticipated in 1987. Stocks were below desired levels at most places visited, and condom shipments will be required, sufficient to "refill the pipeline" and provide services to clients. However, this estimate is based on incomplete data; very little data are available on actual quantities dispensed to users.

We confirmed that the orals (Lofemenal) used by the program have little shelf life remaining. We found manufacturing dates ranging from February 1983 to January 1984 on the packages of Femenal. We also found a few expired Noriday orals in one clinic (manufactured June 1980). If our projected use is correct, and if distribution is carefully managed, almost all of these orals can be used before they expire.

We also learned that some clinics are dispensing orals that have been given to them by local manufacturers. We were not able to determine the extent of this practice or its effect on the program.

### IV. RECOMMENDATIONS AND CONCLUSIONS

#### A. National Inventory

Instruct all Provincial MCH/FP directors to conduct a physical count of contraceptives in all clinics in each province. The count should include

Femeral oral contraceptives by date of manufacture. This should be done as soon as practical, perhaps at the end of June. The questions to be answered should be:

1. How many Copper T IUD's do you have? \_\_\_\_\_ pieces

2. How many Lippes Loops IUD's do you have?

size A \_\_\_\_\_ pieces  
size B \_\_\_\_\_ pieces  
size C \_\_\_\_\_ pieces  
size D \_\_\_\_\_ pieces

3. How many other brands of IUDs do you have?

brand _____	quantity _____

4. How many condoms do you have? \_\_\_\_\_ pieces

5. How many Femeral oral contraceptives do you have? \_\_\_\_\_ mc  
How many were manufactured before July 1983? \_\_\_\_\_ mc  
How many were manufactured in August 1983? \_\_\_\_\_ mc  
How many were manufactured in September 1983? \_\_\_\_\_ mc  
How many were manufactured in October 1983? \_\_\_\_\_ mc  
How many were manufactured in November 1983? \_\_\_\_\_ mc  
How many were manufactured in or after December 1983? \_\_\_\_\_ mc

6. How many other brands of oral contraceptives do you have (including samples given by drug manufacturers)?

brand _____	number of mc _____
brand _____	number of mc _____
brand _____	number of mc _____
brand _____	number of mc _____

After the questionnaires are returned, they should be aggregated into a single provincial report for stock-on-hand by adding the quantities for each contraceptive together. The aggregate report should include all locations within the province where contraceptives are taken from the MOH supply system, except the Provincial Warehouse. A separate report should be submitted for the Provincial Warehouse. The quantities reported should be a result of an actual count for the contraceptives, including any that might be held by doctors, nurse-midwives, in examining rooms, or wherever they might be located in the clinic, in mobile units, in community distribution posts, or any other location. If any of the items are expired or damaged and cannot be used, do not include in the count. They should be reported separately so that provisions can be made for removing them from stock. The two reports, one covering clinics and other outlets, and the other covering provincial stores should be submitted to the central MCH/FP Office by August 1, 1987.

When the reports are received at the central office, they should be consolidated into two national reports, one for all clinics and the other for all provinces. A similar report should be constructed for central/regional storage. When all inventory reports are consolidated, the projections for contraceptive needs should be reviewed, and the quantities requested should be adjusted, if necessary, according to the future needs of the program (See Attachment 2).

#### B. Nonprogram Contraceptives

The use of contraceptives, other than those prescribed for the program, should be investigated to determine the effect of their use on the program. This investigation will be for the purpose of establishing a national policy governing the practice and should determine the reasons for clinic personnel prescribing nonprogram contraceptives. By using samples in the outlets, it might not be possible for the program to continue to provide the method without buying the other brands. The alternative is to prescribe the brand and have the client purchase her needs at a local pharmacy.

#### C. The Logistics System

We have reviewed the English translation of the supply manual and have the following comments:

1. Instructions for calculating the maximum and minimum inventory levels are not clear. Our recommendation is that, for provincial operations, the minimum level should be half the order interval (i.e., frequency of resupply) or twice the lead time (time elapsing between recognition of need and receipt of the order), whichever is greater. The maximum should be the minimum plus the order interval.
2. The manual recommends order intervals of 6 months for some provinces and 4 and 8 months for others. We recommend that, if possible, this be 6 months for all provinces. We also recommend that clinics be resupplied from provincial stores every 2 months and that they operate on a maximum and minimum of 4 and 2 months. If we assume a maximum and minimum of 9 and 3 for provinces, then clinics will maintain an average of  $(4+2) \div 2 = 3$  months, and provinces will maintain an average of  $(9+3) \div 2 = 6$  months for a total mean field inventory of 9 months. We also recommend that the central/regional supply operate on a 9 and 3 maximum and minimum, thus giving a mean national inventory at all program levels of 15 months. Contraceptives should be received at the central warehouse on a semi-annual basis.
3. We recommend that a month's supply be calculated as the mean monthly quantity for the most recent 6 months of contraceptives dispensed to users by the clinics and other outlets and, in the case of provinces, by all the outlets that the province in question serves.
4. All clinics should submit a periodic (monthly or bimonthly) report to the provincial MCH/FP director giving the quantities of each contraceptive dispensed during the month and the quantities on hand at the end of the month.

5. Every effort should be made to use existing forms; i.e., forms should not be changed unless there is a clear deficiency in the existing form. The manual should include instructions for all forms (old and new) that might be used by the system.
6. The manual might be easier to use if it is written in separate sections for clinic, provincial, and central levels.
7. The manual should provide instructions for a national inventory to be conducted by every program location at the end of each fiscal year.
8. It should contain job descriptions for those who will be responsible for each task.
9. The manual should include flow charts for the movement of contraceptives and reports.
10. Users of the system should be instructed to count contraceptives by units rather than boxes, cartons, gross, dozens, etc.
11. The manual should include instructions regarding the logistics records to be maintained at all program levels.

The above recommendations were discussed with Mr. Aytec and Mr. Matthews. They indicated agreement with all of them. During these debriefings we offered (1) to review the next draft of the supply manual, (2) to make comments for its improvement, and (3) if necessary, to return to Ankara to assist with the final preparation of the manual, to adapt the analysis of logistics reports to the NCR computer, to design training courses for instructing field personnel in good logistics techniques, and to assist with the training of the trainers who will conduct the field training exercises.

The present logistics information system does not produce sufficient data for estimating contraceptive use rates and forecasting future needs. We cannot overemphasize the need for these data to be made available to program management. Many decisions need to be made on the operation of the logistics system; followup assistance can be provided in developing a management information system.

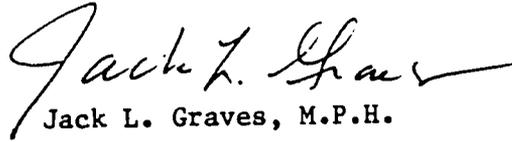
We prepared Contraceptive Procurement Tables (CPTs) for AID-supplied contraceptives (See Attachment 2). These were based on limited data, as described above, and we re-emphasize that they should be reviewed when better data are available. The CPTs and assumptions used were delivered to CPSD/AID/W upon return to the U.S.

#### D. Other

We received an inquiry on the availability of DRH/CDC demographers to assist with the 1988 survey. We talked to CDC by phone and were informed that the assistance could be provided. Based upon further communication between AID/W, CDC, and the U.S. Embassy, Drs. Howard Goldberg and Sevgi Aral will travel to Ankara in late September to review budget and technical requirements for the survey.

Page 9 - James O. Mason, M.D., Dr.P.H.

We enjoyed our work in Turkey. Our Turkish and FPIA colleagues are obviously committed to improving family planning services. We look forward to working with them again.

  
Jack L. Graves, M.P.H.

  
Howard Springsteen, M.P.A.

1980 Census	Total Population	Female Population	Female Population (15-49)
01 Adana	1 485 743	735 526	349 530
02 Adıyaman	367 595	182 546	35 560
03 Afyon	597 516	291 090	136 979
04 Ağrı	368 009	124 696	71 881
05 Amasya	341 287	168 848	81 165
06 Ankara	2 854 689	1 388 105	724 740
07 Antalya	748 706	371 843	182 750
08 Arvin	228 997	116 391	55 043
09 Aydın	652 488	325 889	164 353
10 Balıkesir	853 177	419 652	205 178
11 Bilecik	147 001	72 409	35 158
12 Bingöl	228 702	111 568	45 871
13 Bitlis	257 908	122 792	50 650
14 Bolu	471 751	237 383	113 346
15 Burdur	235 009	117 579	57 287
16 Bursa	1 148 492	568 745	299 048
17 Canakkale	391 568	186 985	92 541
18 Çankırı	258 436	132 638	60 652
19 Çorum	571 831	292 310	133 794
20 Denizli	603 338	304 912	141 360
21 Diyarbakır	778 150	374 547	156 819
22 Edirne	363 286	167 648	85 859
23 Elazığ	440 808	219 692	101 480
24 Erzincan	282 022	138 492	62 818
25 Erzurum	801 809	390 127	176 752
26 Eskişehir	543 802	268 194	136 999
27 Gaziantep	808 697	399 335	176 894
28 Giresun	480 083	248 081	111 609
29 Gümüşhane	275 191	144 993	66 527
30 Hakkari	155 463	71 407	29 422
31 Hatay	856 271	418 448	189 048
32 Isparta	350 116	167 733	80 667
33 İçel	843 931	414 210	200 483
34 İstanbul	4 741 890	2 259 643	1 191 506
35 İzmir	1 976 763	954 774	497 748
36 Kars	700 238	340 954	144 482
37 Kastamonu	450 946	324 739	106 901
38 Kayseri	778 383	389 163	182 742
39 Kırklareli	283 408	130 163	64 181
40 Kırşehir	240 497	125 534	58 336
41 Kocaeli	596 899	285 062	144 058
42 Konya	1 562 139	785 637	373 683
43 Kütahya	497 089	245 838	120 714
44 Malatya	606 996	298 136	135 047
45 Manisa	941 941	466 246	234 992
46 K. Maraş	738 032	360 425	158 376
47 Mardin	564 967	276 582	111 959
48 Muğla	438 145	217 179	106 883
49 Muş	302 406	145 796	59 275
50 Nevşehir	256 933	132 064	61 956
51 Niğde	512 071	262 440	115 845
52 Ordu	713 535	363 104	163 988
53 Rize	361 258	187 607	85 915
54 Sakarya	548 747	272 701	130 205
55 Samsun	1 008 113	512 615	240 375
56 Siirt	445 483	215 230	88 441
57 Sinop	276 242	142 850	55 303
58 Sivas	750 144	377 373	168 533
59 Tekirdağ	360 742	167 008	84 285
60 Tokat	624 508	307 422	126 739
61 Trabzon	731 045	381 542	179 037
62 Tunceli	157 974	78 747	33 191
63 Urfa	602 736	291 019	121 369
64 Uşak	247 224	126 972	61 444
65 Van	468 646	223 844	94 854
66 Yozgat	504 433	258 731	117 292
67 Zonguldak	954 512	479 407	223 475

TURKEY

44 736 957

22 041 595

10 445 453

ATTACHMENT 2

CONTRACEPTIVE PROCUREMENT TABLES

FY 1989 CPT  
 COUNTRY: TURKEY  
 PROGRAM: MOH  
 PROJECT: 000-0000  
 PRODUCT: COND - CONDOM  
 SOURCE OF DATA FOR BEGINNING-OF-YEAR STOCK:MOH/CMS  
 TABLE YEAR: 1987  
 START NET DEFICIT YEAR: 1987

	CALENDAR YEARS					
	1987	1988	1989	1990	1991	1992
1. BEGINNING-OF-YEAR STOCK (PLEASE READ INSTRUCTIONS TO FILL IN THIS LINE ITEM)	10808	18750	20000	22500	23750	
PLUS						
2. NEW SUPPLY OF SAME PRODUCT						
(A) AID SUPPLIES RECEIVED 1987 TO DATE	500					
(B) ADDITIONAL AID QUANTITIES SCHEDULED FOR SHIPMENT BUT NOT YET RECEIVED	2000					
(C) OTHER SOURCES OF SUPPLY OF SAME PRODUCT (HOST COUNTRY/OTHER DONORS)						
MINUS						
3. ESTIMATED PRODUCT USE/SALES/DISTRIBUTION	13500	15000	16000	18000	19000	21000
EQUALS						
4. END-OF-YEAR STOCK	-192	3750	4000	4500	4750	
MINUS						
5. DESIRED END-OF-YEAR STOCK LEVEL (EQUAL TO 125% OF ESTIMATED USE IN SUBSEQUENT YEAR)	18750	20000	22500	23750	26250	
EQUALS						
6. NET SUPPLY SITUATION/AID REQUIREMENT (NEGATIVE NUMBER SIGNIFIES ADDITIONAL SUPPLIES REQUIRED FROM AID; POSITIVE NUMBER SIGNIFIES NO AID REQUIREMENT)	-18942	-16250	-18500	-19250	-21500	

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FY 1989 CPT  
 COUNTRY: TURKEY  
 PROGRAM: MOH  
 PROJECT: 000-0000  
 PRODUCT: LFMP - DC LO-FEMENAL BLUE LADY PKG.  
 SOURCE OF DATA FOR BEGINNING-OF-YEAR STOCK: MOH/CMS  
 TABLE YEAR: 1987  
 START NET DEFICIT YEAR: 1987

	CALENDAR YEARS					
	1987	1988	1989	1990	1991	1992
1. BEGINNING-OF-YEAR STOCK (PLEASE READ INSTRUCTIONS TO FILL IN THIS LINE ITEM)	2525	1750	1875	1875	2000	
PLUS						
2. NEW SUPPLY OF SAME PRODUCT						
(A) AID SUPPLIES RECEIVED 1987 TO DATE						
(B) ADDITIONAL AID QUANTITIES SCHEDULED FOR SHIPMENT BUT NOT YET RECEIVED						
(C) OTHER SOURCES OF SUPPLY OF SAME PRODUCT (HOST COUNTRY/OTHER DONORS)						
MINUS						
3. ESTIMATED PRODUCT USE/SALES/DISTRIBUTION	1300	1400	1500	1500	1600	1680
EQUALS						
4. END-OF-YEAR STOCK	1225	350	375	375	400	
MINUS						
5. DESIRED END-OF-YEAR STOCK LEVEL (EQUAL TO 125% OF ESTIMATED USE IN SUBSEQUENT YEAR)	1750	1875	1875	2000	2100	
EQUALS						
6. NET SUPPLY SITUATION/AID REQUIREMENT (NEGATIVE NUMBER SIGNIFIES ADDITIONAL SUPPLIES REQUIRED FROM AID; POSITIVE NUMBER SIGNIFIES NO AID REQUIREMENT)	-525	-1525	-1500	-1625	-1700	

FY 1989 CPT  
 COUNTRY: YURKEY  
 PROGRAM: MOH  
 PROJECT: 000-0000  
 PRODUCT: CT38 - COPPER T IUDS - MODEL TCU380A  
 SOURCE OF DATA FOR BEGINNING-OF-YEAR STOCK: MOH/CMS  
 TABLE YEAR: 1987  
 START NET DEFICIT YEAR: 1987

	CALENDAR YEARS					
	1987	1988	1989	1990	1991	1992
1. BEGINNING-OF-YEAR STOCK (PLEASE READ INSTRUCTIONS TO FILL IN THIS LINE ITEM)	342	425	500	563	688	
PLUS						
2. NEW SUPPLY OF SAME PRODUCT						
(A) AID SUPPLIES RECEIVED 1987 TO DATE						
(B) ADDITIONAL AID QUANTITIES SCHEDULED FOR SHIPMENT BUT NOT YET RECEIVED						
(C) OTHER SOURCES OF SUPPLY OF SAME PRODUCT (HOST COUNTRY/OTHER DONORS)						
MINUS						
3. ESTIMATED PRODUCT USE/SALES/DISTRIBUTION	300	340	400	450	550	600
EQUALS						
4. END-OF-YEAR STOCK	42	85	100	113	138	
MINUS						
5. DESIRED END-OF-YEAR STOCK LEVEL (EQUAL TO 125% OF ESTIMATED USE IN SUBSEQUENT YEAR)	425	500	563	688	750	
EQUALS						
6. NET SUPPLY SITUATION/AID REQUIREMENT (NEGATIVE NUMBER SIGNIFIES ADDITIONAL SUPPLIES REQUIRED FROM AID; POSITIVE NUMBER SIGNIFIES NO AID REQUIREMENT)	-383	-415	-463	-575	-612	