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**TECHNICAL ASSISTANCE FOR STRENGTHENING
EPI IN MOLDOVA**

21 June - 12 July 1995

Soren Spanner

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TABLE OF CONTENTS

| | |
|--|-----|
| ACKNOWLEDGMENTS | iii |
| ACRONYMS | v |
| I. EXECUTIVE SUMMARY | 1 |
| II. BACKGROUND | 1 |
| III. TRIP ACTIVITIES | 2 |
| IV. PURPOSE OF THE VISIT | 5 |
| V. RESULTS AND CONCLUSIONS | 5 |
| VI. RECOMMENDATIONS | 7 |
| VII. THE EQUIPMENT AUDIT | 8 |
| APPENDICES | 11 |
| APPENDIX A: Letter to Stefan Toma, UNICEF Moldova | 13 |
| APPENDIX B: Questionnaire on Power Cuts and Sub-Zero Temperatures .. | 17 |
| APPENDIX C: Letter to Chief Doctors at District SESs | 21 |
| APPENDIX D: Vaccine Arrival Report - English and Romanian | 25 |
| APPENDIX E: Daily and Monthly Stock Recording Sheets | 31 |
| APPENDIX F: Completed Vaccine Arrival Report | 37 |
| APPENDIX G: Completed Monthly Stock Recording Sheet - 03.07.95 | 41 |
| APPENDIX H: Proposed Cable | 45 |

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Particular mention should be made of the invaluable guidance given by Dr. Magdei Mircea Vassilievich, Deputy Minister of Health Care, Kishinev Republic of Moldova, and the daily support and assistance of Dr. V.P. Babalau, Chief Doctor of the republican Sanitary and Epidemiological Station and Vassily Vassilievich, Deputy Chief Doctor of the Republican Sanitary and Epidemiological Station.

Special thanks are also extended to my excellent interpreters in Moldova, Ms. Melany V. Revaykina and Vladimir Koltenuk.

ACRONYMS

| | |
|--------|---|
| BASICS | Basic Support for Institutionalizing Child Survival |
| BCG | Bacillus Calmette Guerin |
| CLM | Commodities and Logistics Management |
| FAP | Feldsher Obstetrician (Health) Post |
| DPT | Diphtheria, Pertussis, Tetanus |
| EPI | Expanded Programme on Immunisation |
| FSU | Former Soviet Union |
| MCH | Maternal and Child Health Services |
| MoH | Ministry of Health |
| NBC | Newborn Children |
| NIS | Newly Independent States |
| PIS | Product Information Sheets; WHO/UNICEF publication |
| REACH | Resources for Child Health |
| RSES | Republican Sanitary and Epidemiology Station |
| SES | Sanitary and Epidemiology Station |
| SUB | Rural Outpatient Clinic |
| SVA | Rural Hospital |
| TTM | Tiny Temperature Monitors |
| UNICEF | United Nations Children's Fund |

USAID United States Agency for International Development

WHO World Health Organization

I. EXECUTIVE SUMMARY

The purpose of this trip was twofold. First, Søren Spanner, BASICS consultant, traveled to England to meet with BASICS consultants Anthony Battersby, Rachel Feilden and Allan Bass, and discuss and share the information they have obtained in developing the Moldova National Immunization Plan, and in carrying out a preparatory study of the cost and effectiveness of immunization services in Moldova.

The group discussed their findings in the context of other work in Moldova, particularly in regard to vaccine logistics, stock control and distribution, and vaccine finance and procurement, as background for planning future technical assistance to be conducted under the USAID/BASICS project.

Next, the consultant went to Moldova, where he:

- continued the work begun on vaccine logistics and management training through a review of the existing system for routine vaccine forecasting, stock control and distribution of vaccine and commodities;
- provided detailed recommendations for further training and technical assistance in the area of vaccine logistics and stock control, identifying next steps and action to be taken;
- along with Bass, met with local USAID officials, prepared preliminary findings and recommendations and provided a briefing to the USAID mission prior to departure; and,
- analyzed data, and prepared and submitted a report.

The time frame of Mr. Spanner's trip was June 21 to July 12, 1995.

II. BACKGROUND

The Republic of Moldova covers an area of 33000 km² and has a population of 4.35 million people (including 66,000 infants). Of the total population, almost two-thirds are Moldovans, the remainder comprising Ukrainians, Russians, Gagauzi (Turkic people), Jewish people, Gypsies, and Bulgarians.

Moldova has a higher average population density than any other NIS republic. The urban population rose as a result of industrialization in the 1980s, and more than a third of the people

live in towns. Moldovan villages, moreover, are large, as most of them have at least 1,000 inhabitants; all villages are supplied with electricity.

For previous work conducted under REACH/BASICS, please refer to previous reports.

III. TRIP ACTIVITIES

The team consisting of Marcia Rock, Allan Bass, and the consultant (Spanner) met in the UK with BASICS consultants Anthony Battersby and Rachel Feilden. From the UK, the team traveled to Moldova. The consultant made no trips outside of Chisinau. In Chisinau, visits were made to the new UNICEF office, the American Embassy and the Republican SES. A final trip was made to the UK to discuss and share findings with Anthony Battersby and Rachel Feilden.

1. At the initial meeting in England, it was decided that the consultant should concentrate on gathering and analyzing the data from the equipment audit study initiated by Battersby and Feilden. The data have been obtained from all but seven Raions; it is expected that the data from the remaining seven Raions will be available during July 1995. The data will be entered by Oleg Benesh at the RSES. The data can be added to the existing data base and analyzed during the next visit.

All the data available have been entered to a data base and will be analyzed by Rachel Feilden. The data base holds information on each Raion (by Raion); the name and number of the different type of facilities; type of refrigerator; age of refrigerator; condition of refrigerator (working or not working); year of manufacturer; and facilities without a refrigerator. So far, there are more than 1,000 facilities; some of the facilities are entered more than once because they have more than one piece of equipment. This is mainly SES, CITY-SES and PCS. The exact number of facilities can only be worked out when the data base is filtered and analyzed; currently, it is approximately 1200.

In addition to the above, the data on numbers of newborn children (NBC) in 1994, and "who supplies who" have been collected for most Raions (30). The data came very late and there was not time to enter all data. The data will be entered by Oleg Benesh at the RSES as they are received. It is planned that the data be entered and ready for analysis in September 1995. The data on numbers of NBC in 1994 will be added to the summary when available. Once the data is analyzed, the most practical and economical way of maintaining a proper cold chain and distribution system can be worked out.

2. It was agreed with Dr. Sohotski to introduce a manual stock inventory system, (see Appendix E). The system will be tested at the RSES and in the four Pilot districts (Calarashi, Orhei, Telenistre and Rezina). New stock cards have been developed, one for the day-to-day activities,

and one monthly summary stock card. The method of using the stock cards has been thoroughly discussed and explained to Juri Dandara, the storekeeper, and Juri Lozovoi, the Head of Division.

Mr. Dandara will explain the use of the Stock Cards to the Districts as they collect their vaccines. The Stock Cards are to be used at each of the issuing facilities (SES, SUB, SVA and some Poly Clinics). Unfortunately, there was no time to go to the districts.

During the visit in September, the districts will be visited, and the forms and the system analyzed and revised if needed, before they are introduced in the whole country.

3. During the visit, vaccines (DT) arrived from Swiss Serum Institute, a UNICEF donation. The advance vaccine arrival fax was not sent to the Republican SES or The MoH. The fax was sent to "The Infectious Clinical Hospital." The Infectious Clinical Hospital notified the Republican SES that they had received the fax, and passed on the information.

The Republican SES went to the airport on the 27.06.95 to collect the vaccines, but they did not find anything addressed to the RSES or Ministry of Health (MoH). Later, it was discovered that the vaccines did arrive on the 27.06.95. Due to the incorrect address, the vaccines were not found by the RSES. The vaccine shipment was also addressed to the hospital. The vaccines were not located before 29.06.95.

The local UNICEF representative, Stefan Toma, was advised about the above situation. Mr. Toma asked the consultant to write a note on the "vaccine arrival" (see Appendix A). The CCM's were blue in window A and B and partly C - D was okay.

It was agreed with Dr. Sohotski to introduce a vaccine arrival form (see Appendix D). The form was developed, discussed translated into Moldovan, and explained to Mr. Dandara and Dr. Sohotski. The importance of advising the supplier or the local UNICEF representative if there is anything wrong in the delivery of "UNICEF vaccine" was also stressed and agreed to.

Later, DPT vaccine was received with no major problems. (See the completed VACCINE ARRIVAL REPORT in Appendix F).

4. After analyzing part of the data from the equipment audit, it became clear that most of the cold chain equipment is very old. Excluding the donated Vestfrost equipment, the average age of 946 local refrigerators is 17 years, and the median point is 1981 or 14 years. This means that the equipment needs frequent repair, *and, in fact, a lot of it should not be used for vaccine storage.* Many refrigerators have broken lids for the freezer compartment, and many have no tray under the freezer compartment. When there is no tray under the freezer compartment, there is a great

risk of freezing vaccines especially as, often observed, when toxoids are placed under the evaporator.

There is no money to repair the local refrigerators, and, as mentioned above, most of the equipment is too old and obsolete.

When talking to the cold chain engineer, it was revealed that none of the local equipment is being repaired -- there are no funds to buy spare parts, and spare parts in large quantities are not available in Moldova. The cold chain engineer also expressed concern that, because of the age and the unavailability of spare parts for the refrigerators, the number of non-working refrigerators in the equipment audit will rise tremendously in a relatively short period of time. The cold chain engineer visited Comrat late last year and found that five out of ten local refrigerators in FAPs were out of order!

The problem of having sub-zero temperatures during winter in facilities was also discussed. The question was raised at "the workshop," 12 of 29 districts answered yes, however, they said that they brought the vaccines to a "safe place," e.g., the cellar (potatoes are kept in the cellar as they do not freeze), or simply took it home to their own refrigerator.

This is a very risky way of handling vaccines.

The problem of "power saving/power cuts" was also raised at "the workshop," as 26 of 29 districts are having power cuts, ranging from two to eleven hours/24 hours.

There is only one way to find out about the actual temperatures in the refrigerators. It is obvious that temperatures get too low in facilities without heating during winter; the power cuts are most frequent during winter.

There are at least two sets of problems as to the temperatures in the refrigerators: temperatures might get too high during summer and too low during winter, in some places the temperatures might even get too low during summer in refrigerators with broken lids, etc.

The only way to find a reliable answer as to the temperature is to do an actual monitoring of the temperature. This should be done with Data Loggers.

The possibility of serving FAPs with vaccine carriers instead of using the refrigerators was discussed at the debriefing with Dr. Babalau, Dr. Sohotski and Dr. Melnic. After some discussion, it was agreed that it was not impossible to try it, and agreed and understood that the vaccines were better protected in a good vaccine carrier than in a fridge in poor condition. This naturally implies that the vaccines are stored (at the higher level) in a working refrigerator. The doctor, who comes to do the vaccination, will bring the vaccines.

IV. PURPOSE OF THE VISIT

As discussed above, data collection for the equipment audit, on newborns, and on “who supplies who” was the number one priority. The remaining time was spent on making and introducing the new stock cards and vaccine arrival reports.

V. RESULTS AND CONCLUSIONS

VACCINE LOGISTICS AND MANAGEMENT TRAINING

Vaccine Arrival

The vaccine arrival system is not well functioning, for various reasons. Sometimes the vaccines have been left, by Air Moldova in Frankfurt (without cold chain) because “more important” cargo had to go on the plane. During this visit, vaccines arrived from Swiss Serum Institute, by Air Moldova, (a UNICEF donation); the vaccines were at the airport in Chisinau, for two days without cold chain; luckily, this time, it was less sensitive to heat (DT), (see Appendix A). It could just as well have been a more heat sensitive vaccine such as OPV. The staff at the RSES does not give any feedback to the suppliers.

When Moldova received vaccines through UNICEF, there have been a number of occasions when the vaccines arrived with the monitor cards exposed to heat upon arrival, (See Battersby 1995). In addition to what is listed in Battersby’s report, BCG was received on June 20, 1995 - windows A and B were blue.

None of the faults that occurred were reported back to the suppliers/UNICEF by the RSES. It appears that the Staff of the RSES is reticent about complaining to the donors.

Repeatedly, training has been given on how to receive vaccine, what to do if the shipment is not acceptable, and interpreting and completing monitor cards.

During this visit, a vaccine arrival report was developed (see Appendix D), translated into Romanian, and the staff retrained in the whole procedure of receiving vaccines. Mr. Toma (UNICEF representative) is also willing to assist in receiving the vaccines; he will continue the training, and ensure that proper feedback is given to the supplier.

Stock Management

New stock cards were developed with the staff of the stores and Dr. Sohotski, (see Appendix E).

There is a day-to-day stock card and a monthly stock card; both were translated into Romanian. Training was given in how to use and fill in the cards. An example from RSES, present stock card per 03.07.1995, of a filled in Monthly Stock Card is in Appendix G. The cards will be used (field tested) at the RSES and in the four pilot districts (See Feilden, February 1995).

During next visit, the use of the cards will be monitored, and the cards revised and more training given, as needed.

The vaccines in the RSES cold room and freezers are kept in good order. However, when making a physical stock check, it was found that some of the vaccines were not recorded on the "old stock cards."

VACCINES NOT RECORDED IN INVENTORY at RSES

| Vaccine | Amount (Doses) | Expiration Date | Doses per Vial |
|----------------|-----------------------|------------------------|-----------------------|
| DT | 490 | 20.10.96 | 1 |
| DT (Romania) | 2200 | 30.06.97 | 1 |
| BCG (Russia) | 213000 | 01.09.95 | 20 |

There was no explanation as to why these vaccines were not recorded on the stock cards. The consultant was informed (and saw) that the vaccines were recorded at the accountant's office. There is a kind of double bookkeeping, but it does not help. It confuses more than it helps, because the people at the stores are sure that everything is recorded at the accountant's office, and are therefore less careful. Getting information from the accountant's office takes hours, as it is in one big file containing all kinds equipment.

The consultant stressed the importance of having all information on vaccines and syringes at one place.

There were no records of the number of syringes at the store. When the storekeeper was informed that this should also be filled in at the new stock cards, the information was found and entered into the stock card.

The whole stock control and inventory "system" is dissimilar. There is no uniformity. An attempt was made to make the system more uniform and clear, by introducing the new stock cards. However, there is still a lot to be done in order to make people understand the importance of a well-functioning stock control and inventory system.

The vaccines stored at the RSES are relatively safe. It can be seen from the chart recorder charts that there are very few power cuts at the RSES in Chisinau, and if there are power cuts, they do not last for long. There had been no power cuts since those reported in Battersby's report (1 March 1995). The chart recorder battery had just run out when the consultant checked the Cold Room; the battery was changed immediately. The dates on some of the charts were missing. The monitor cards for the cold room were checked, and the results were the same as in Battersby's report (1 March 1995), apart from BCG that was received 20 June 1995, A and B were blue. The procedure and importance of completing the charts and CCMs was repeated and restated. The exposure to heat does not happen at the RSES; it happens during the shipment. As mentioned, the DT that arrived from Swiss Serum Institute had CCMs where windows A, B and partly C were blue, D was okay.

When vaccines are received at the RSES, like the BCG with A&B being blue, no one takes any action. During the consultant's last visit, it was explained that they should contact the supplier if anything was wrong - that does not happen.

The consultant discussed with Dr. Sohotski and the Mr. Toma, the UNICEF representative, the importance of thoroughly checking and examining each vaccine shipment before acceptance. Mr. Toma is willing to assist in this exercise.

The new vaccine and syringe stock control cards were developed in collaboration with Dr. Sohotski and the staff of stores, and introduced at the RSES. They will also be introduced in the four Pilot districts.

VI. RECOMMENDATIONS

1. The remaining data on the equipment audit, on newborns per facility per district and on "who supplies who," should be collected and analyzed as soon as possible.
2. After analyzing the data, the most practical and economical way of maintaining a proper cold chain and distribution system should be worked out.
3. The idea of using cold boxes/vaccine carriers (for vaccines) instead of "old refrigerators" at FAP level should be pursued.
4. The possibility of equipping all higher level (SES, SUB, SVA and Poly Clinics) with new cold chain equipment be looked into; donors must be identified.
5. Store keeper training (using WHO material) is needed.

6. A study on sub-zero temperatures in refrigerators at different levels is needed - using Data Loggers, Tiny Temperature Monitors (TTM) or similar. The same study will also, to some extent, answer the question of hours of power cuts.
7. More training should be given in "vaccine arrival," especially how to communicate with suppliers, this will to some extent be taken care of by the local UNICEF office.
8. Possibilities of using a safer way of shipping should be investigated.

VII. THE EQUIPMENT AUDIT

It is specified in the Plan of Operation that the RSES should conduct a full audit of all immunization equipment (only data on refrigeration equipment has been collected) and mentioned in Feilden's report (February 1995), that most of the Raions had completed the collection of data and that analysis would soon begin at the EPI unit. It was decided at the meeting in Bath that the consultant should concentrate on analysing the data from the equipment audit.

At the time of arrival in Chisinau, not a single bit of data had been entered. Only some of the Raions had sent in their data.

A form had been sent out to each of the districts asking each district to answer questions on its equipment. The form can be seen below:

| RAION | TOWN | FACILITY TYPE | REFRIG- ERATOR TYPE | QUAN- TITY | QUANTITY WORKING | REPAIR- ABLE | NOT REPAIRABLE | YEAR OF MANUFAC- TURER |
|-------|------|------------------|---------------------------|---------------|---------------------|-----------------|-------------------|------------------------------|
|-------|------|------------------|---------------------------|---------------|---------------------|-----------------|-------------------|------------------------------|

The consultant started entering the data that were available. Most of the data was not in a useable format.. With the help of the interpreter and Oleg Benesh, when he was available, the data was put into a useful format.

There were two sets of data, one set having information on equipment, and one on NBCs and on "who supplies who", i.e., from where does "the facility get the vaccines" and how many newborns per facility, (see questionnaire in Appendix C).

The data are not complete, there are data on equipment from 36 Raions, and on NBCs from 24 Raions; only some of the Raions that reported both are the same (19 Raions). Feilden is working on merging the two data bases.

Some of the Raions have not reported all the equipment, (e.g., Comrat has not reported the Vestfrost equipment, some have not reported the equipment at the SES, the whole data base needs to be gone through once again in order to see what is missing).

In general, the data base gives very useful information, but it is not 100 percent complete. There is still quite a lot of work to be done, in analyzing, collecting and entering the remaining data. Oleg Benesh will work on collecting the remaining data.

The major problem is that most of those refrigerators that are repairable are very old and there are no funds or spare parts to repair those that are repairable.

To get a good, working cold chain, all efforts should be made to make the cold chain at higher level SVAs and upwards as good as possible, i.e. ensure good, well functioning and up-to-date equipment.

APPENDICES

APPENDIX A
LETTER TO STEFAN TOMA, UNICEF MOLDOVA

Stefan Toma
Country Representative
UNICEF MOLDOVA

Chisinau 04.07.1995

RE.: ARRIVAL OF DT VACCINE FROM SWISS SERUM - UNICEF DONATION

Reference is made to our conversation of today.

The advance vaccine arrival fax was not sent to The Republican SES or The MoH. The fax was sent to "The Infectious Clinical Hospital". "The Infectious Clinical Hospital" notified The Republican SES that they had received the fax and passed on the information.

The Republican SES went to the airport on the 27.06.95 to collect the vaccines, they did not find anything addressed to RSES or MoH. The vaccine shipment was also addressed to the hospital.

It was discovered later that the vaccines arrived on the 27.06.95. Due to the incorrect address, the vaccines were not found by the RSES.

The vaccines were not located before 29.06.95. Due to the incorrect address, the customs were not happy about releasing the vaccines to the RSES, finally the vaccines were released.

The vaccines were shipped without DT & TT shipping indicators.

The index of the Cold Chain Monitors were:
A-blue, B-blue, C-partly blue.

The Cold Chain Monitor was not filled in at SWISS Serum.

A SUMMARY OF WHAT WENT WRONG

- The advance vaccine arrival fax was sent to the wrong address
- The vaccines were addressed to the wrong consignee.
- The vaccines were left at the airport for 2 days without cold chain
- There were no ice packs
- The vaccines were shipped without DT & TT indicators
- Cold Chain Monitors were not filled in at Swiss Serum
- Due to the incorrect address it was difficult to have the vaccines released from customs.

Best regards

Søren Spanner

APPENDIX B
QUESTIONNAIRE ON POWER CUTS AND SUB-ZERO TEMPERATURES

TABLE XX
QUESTIONNAIRE HANDED OUT AT THE DIPHTHERIA WORKSHOP

| TOWN/RAION | FREQUENCY OF POWER FAILURE 1994 - 1995 ? | DOES THE TEMPERATURE GO BELOW ZERO DURING WINTER ? | OTHER PROBLEMS ? |
|----------------|--|--|----------------------------------|
| CHISINAU | FROM 8-10 AND 15-17 IN DIFFERENT AREAS OF CHISINAU | NO | NO |
| BALTI | IN 1994 TWO HOURS PER DAY | NO | NO |
| DUBASARI | NONE | NO | REFRIGERATORS, FUEL AND CARS |
| CAHUL | OCTOBER TO APRIL, 8 HOURS PER DAY | NO | NO |
| ORHEI | 9 HOURS PER DAY DURING WINTER | YES | SALARIES ARE NOT PAID |
| BRICENI | SOMETIMES DURING WINTER 2-3 HOURS PER DAY | SOMETIMES IN FAPS | |
| CANTEMIR | NONE | SOMETIMES IN FAPS | NO |
| CALARASI | EVERYDAY IN AUTUMN AND WINTER FROM 17 TILL 20 | APPROXIMATELY 10-12% OF ALL RURAL FACILITIES | CANNOT REPAIR REFRIGERATORS |
| CAUSENI | IN SPRING 5-6 HOURS AND IN SUMMER 4 HOURS PER DAY | YES AT ALL HEALTH FACILITIES | LACK OF FUEL |
| CHAI DIR-LUNGA | 2-3 HOURS PER DAY IN WINTER | NO | NO |
| DONDUSENI | EVERY DAY DURING SPRING AND WINTER | IN SVA AND FAP | |
| DROCHIA | EVERY DAY DURING WINTER | YES | |
| EDINET | 2-3 HOURS DURING WINTER | NO | REPAIR OF REFRIGERATORS |
| FLORESTI | 3-4 HOURS PER DAY | NO | |
| GLODENI | 3-4 HOURS PER DAY DURING WINTER | QUITE OFTEN | FINANCE |
| GRIGORIOPOLI | ONCE A DAY | NO | LACK OF SPARES FOR REFRIGERATORS |
| HINCESTI | SPRING AND WINTER, 3 TIMES PER DAY | YES | NO MONEY TO REPAIR REFRIGERATORS |
| LEOVA | SPRING/WINTER 4 HOURS PER DAY | YES | |
| NISPORENI | IN WINTER "ACCORDING TO SCHEDULE" | NO | "EVERYWHERE-PROBLEMS" |
| OCHNITA | IN WINTER 3-4 HOURS PER DAY, SUMMER SELDOM | SOMETIMES | |
| RISEANI | NONE | YES | |
| STRASENI | NOVEMBER TO MAY, 5 HOURS DURING DAY AND 6 HOURS AT NIGHT | SOMETIMES IN VILLAGES | |
| STEFAN VODA | OCTOBER TO MAY, 4 HOURS TWICE PER DAY | YES AT ALL FAPS AND SVAS, 60% OF ALL FACILITIES | REPAIR OF REFRIGERATORS |
| TELENESTI | IN WINTER FROM 9 TO 11 AND 23 TO 5AM | YES AT FAPS | |
| CIE FERVIAR | TILL NOVEMBER 1994 TWICE A WEEK 2 HOURS | NO | REFRIGERATORS |
| VULCANESTI | IN WINTER 3 HOURS IN MORNING AND 2-3 AFTERNOON | YES | REFRIGERATORS |
| ? | NO | | |
| SORCCA | NO | YES | |
| UNGHENI | IN WINTER OFTEN, SUMMER NO | YES | |

As can be seen from the answers in the questionnaire, there are problems, both with regular electricity supply and sub-zero temperatures during winter

The answers does not give answers to what actually happens to the vaccine, I find that the only way to find useful answers is to use Freeze Watch monitors and the TTM monitors.

A sample of 50 randomly selected facilities could be used as test area.

APPENDIX C
LETTER TO CHIEF DOCTORS AT DISTRICT SESs

TO THE CHIEF DOCTORS OF DISTRICT SES¹

In order to optimize work on vaccine supplies to the rural health facilities it is necessary to submit before 2 July, 1995 to the National Center of Hygiene and Epidemiology the data on the number of children born in 1994 with the breakdown into each health facility & FAP.

For health facilities, that have FAP's under them (i.e. children's polyclinics and consultations, SVU's and SVA's) the data should be submitted separately for every facility (village) and summed up per every Health Facility. For this up-dated data, obtained through "form no. 6" can be used for this. (Form no. 6 is a "report on the groups of children and teenagers immunized against infectious diseases".

Please indicate in the second column the location (facility, village) from where each medical facility receives the vaccines.

The data should be formatted as per sample below:

DATA ON THE NUMBER OF CHILDREN BORN IN 1994

| No | Medical Facility | Number of children 1994 <1 | Vaccines received from..... |
|----|---|----------------------------|-----------------------------|
| 1 | District children's poly clinic | | |
| 2 | FAP | | |
| | FAP | | |
| | FAP | | |
| | Total of children served by the Poly clinic | | |
| | | | |
| | Rural Medical area (SVU) | | |
| | FAP | | |
| | FAP | | |
| | Total of children served by the SVU | | |
| | | | |
| | Rural Medical Ambulatory (SVA) | | |
| | FAP | | |
| | FAP | | |
| | Total of children served by the SVA | | |
| | | | |

Deputy Chief Doctor

V. Sohotchi

¹ Source RSES, Translated from Russian

CENTRUL REPUBLICAN DE IGIENA SI EPIDEMIOLOGIE

Medicilor sefi al C.I.E. teritoriale
 Главным врачам территориальных СЭС

nr. _____ din ____/____/____

In scopul optimizarii activitatii de asigurare a institutiilor medicale din teren cu vaccinuri, este necesar de a prezenta pina la 05.07.95 la Centrul Republican de Igiena si Epidemiologie date privind numarul de copii, anul nasterii 1994, pe fiecare institutie medicala si punct de felceri si moase. Pentru institutiile medicale, ce au in subordonare puncte de felceri si moase, (policlinici si consultatii de copii, spitale rurale de circumscriptie, ambulate medicale rurale) datele se vor prezenta aparte pe fiecare institutie (sat) si sumar pe institutia medicala. In acest scop pot fi folosite datele precizate primite la sfirsitul a.1994 prin intermediul formularului nr.6 "Raport statistic privind contingentele de copii si adolescenti vaccinati impotriva bolilor infectioase.

In coloana a doua rugam de a indica locul (institutia medicala, localitatea) de unde primeste vaccin fiecare institutie medicala.
 Informatia se va prezenta dupa modelul indicat mai jos.

В целях оптимизации работы по обеспечению территориальных медицинских учреждений вакцинами, необходимо представить до 05.07.95г. в Республиканский Центр Гигиены и Эпидемиологии данные о количестве детей 1994 года рождения по каждому медицинскому учреждению и ФАПУ. Для медицинских учреждений, имеющих в подчинение ФАПы (детские поликлиники и консультации, СБУ, СВА) данные необходимо представить отдельно по каждому учреждению (селу) и суммарно по врачебному медицинскому учреждению. Для этого могут применяться уточненные сведения полученные в конце 1994 года посредством формы N.6 "Отчет о контингентах детей и подростков, привитых против инфекционных болезней".

В второй колонке просим указать место (учреждение, село) откуда непосредственно получает вакцину каждое медицинское учреждение.

Информацию необходимо представить по нижеуказанному образцу.

Date privind numarul de copii, a.n.1994pe
 Данные о количестве детей 1994 г.р. по

| Nr. | Institutia medicala Медицинское учреждение | numarul copiilor количество детей | primeste vaci вакцину полу |
|-----|--|--------------------------------------|-------------------------------|
| 1. | Policlinica (consultatia) rationala copii Районная детская поликлиника (консультация) | | |
| 2. | P.F.M./ФАП | | |
| 3. | P.F.M./ФАП | | |
| . | P.F.M./ФАП | | |
| | Total copii deserviti de catre policlinica Всего детей на обслуживание поликлиники | | |
| . | Circumscripția medicala rurala (C.M.R.) Сельский врачебный участок (СВУ) | | |
| . | P.F.M./ФАП | | |
| . | P.F.M./ФАП | | |
| . | P.F.M./ФАП | | |
| | Total copii deserviti de catre (C.M.R.) Всего детей на обслуживание (СВУ) | | |
| . | Ambulatoriul medical rural (A.M.R.) Сельская врачебная амбулатория (СВА) | | |
| . | P.F.M./ФАП | | |
| . | P.F.M./ФАП | | |
| . | P.F.M./ФАП | | |
| | Total copii deserviti de catre (A.M.R.) Всего детей на обслуживание (СВА) | | |

Medicul sef-adjunct

V. Schotchi

APPENDIX D
VACCINE ARRIVAL REPORT - ENGLISH AND ROMANIAN

VACCINE ARRIVAL REPORT

FLIGHT DETAILS:

| | |
|------------------------------|--|
| AIRPORT OF ORIGIN | |
| SCHEDULED STOPOVERS EN ROUTE | |
| DATE AND TIME OF ARRIVAL | |
| AIRLINE AND FLIGHT NUMBERS | |
| SUPPLIER | |

VACCINES:

| VACCINE | MANUFACTURER | NO. OF VIALS | DOSES PER VIAL | LOT NUMBER | EXPIRY DATE |
|---------|--------------|--------------|----------------|------------|-------------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

DILUENT :

| | | | | |
|--------------|--|--|--|--|
| VACCINE | | | | |
| NO OF VIALS: | | | | |

| | | |
|----------------------------|-----|----|
| ARE VIAL MONITORS ATTACHED | YES | NO |
|----------------------------|-----|----|

| | | |
|--|-----|----|
| IS AIRWAY BILL AND PACKING LIST ATTACHED | YES | NO |
|--|-----|----|

SHIPPING PROCEDURES:

| | |
|---|--|
| WAS ADVANCE FAX RECEIVED - WHEN (DATE) | |
| WAS IT SENT TO CORRECT ADDRESS | |
| WHO WAS IT SENT BY | |
| WERE THERE DIFFERENCE BETWEEN INFORMATION ON FAX AND ACTUAL ARRIVAL | |

COLD CHAIN MONITOR:

| | | | |
|----------------------|---------|---------|---------|
| HOW MANY IN EACH BOX | | | |
| VACCINE → | | | |
| INDEX | A B C D | A B C D | A B C D |
| DATE OF PACKING | | | |
| DATE OF ARRIVAL | | | |

DPT, DT, Td and TT SHIPPING INDICATORS:

| | | |
|--------------------|-----|----|
| WERE THEY INCLUDED | YES | NO |
| WAS THE DOT BLACK | YES | NO |

VACCINE TRANSPORT BOXES:

| | |
|-----------------------|--|
| TOTAL NUMBER OF BOXES | |
|-----------------------|--|

| | | |
|--------------------------------|-----|----|
| IS THE CARGO PROPERLY LABELLED | YES | NO |
|--------------------------------|-----|----|

| | | |
|---|-----|----|
| IS THE TELEPHONE NUMBER OF CONSIGNEE ON THE CARGO | YES | NO |
|---|-----|----|

| | | |
|--|-----|----|
| DOES IT STATE "STORE VACCINES AT 0 °C TO + 8 °C" | YES | NO |
|--|-----|----|

| | | |
|--|-----|----|
| DOES IT STATE "DO NOT FREEZE" (IF DPT, DT, Td OR TT VACCINE) | YES | NO |
|--|-----|----|

| | | |
|---------------------------------------|-----|----|
| WERE PACKAGES LABELLED "VACCINE RUSH" | YES | NO |
|---------------------------------------|-----|----|

| | | |
|--|-----|----|
| IS PACKAGE LABELLED "CONTAINS VACCINE" | YES | NO |
|--|-----|----|

WHAT WAS THE STATE OF THE PACKAGING ON ARRIVAL:

NAME: _____ DATE: _____ SIGNATURE: _____

RAPORT DESPRE EXPEDIEREA VACCINELOR

INFORMAȚIA DESPRE ZBOR

| | |
|------------------------|--|
| AEROPORTUL DE ORIGINE | |
| ESCALE PLANIFICATE | |
| DATA ȘI TIMPUL SOSIRII | |
| RUTA ȘI NUMĂRUL CURSEI | |
| FURNIZORUL | |

VACCINELE:

| VACCINA | PRODUCĂTORUL | N DE FIOLE | DOZA UNEI FIOLE | N PARTIDEI |
|---------|--------------|------------|-----------------|------------|
| | | | | |

DILUENT:

| VACCINA | | | | |
|-------------|--|--|--|--|
| No DE FIOLE | | | | |

| MONITORELE DE FIOLE SUNT ANEXATE | DA | NU | CONTUL PENTRU TRANSPORTARE ȘI LISTA DE AMBALARE SUNT ANEXATE | DA | NU |
|----------------------------------|----|----|--|----|----|
| | | | | | |

PROCEDURILE DE TRANSPORTARE:

| | |
|---|--|
| FAXUL PREVENTIV PRIMIT - (DATA) | |
| A FOST TRIMIS LA ADRESA CORECTĂ | |
| DE CINE A FOST TRIMIS | |
| A FOST DIVERGENTE ÎNTRE INFORMAȚIA PREVENTIVĂ ȘI ACTUALĂ LA SOSIREA CARGOULUI | |

MONITORUL LANGULUI FRIG.

| CANTITATEA ÎN FIECARE CUTIE | | | | |
|-----------------------------|-------|-------|-------|-------|
| VACCINA | | | | |
| INDICELE | ABC D | ABC D | ABC D | ABC D |
| DATA AMBALĂRII | | | | |
| DATA SOSIRII | | | | |

INDICELE DE PRIMIRE A VACCINELOR DPT, DT, Td și TT

| | | |
|----------------------|----|----|
| AU FOST INCLUSE | DA | NU |
| A FOST PUNCTUL NEGRU | DA | NU |

TRANSPORTAREA CUTIILOR CU VACCINE:

| | |
|------------------------|--|
| NUMĂRUL TOTAL DE CUTII | |
|------------------------|--|

| | | |
|---|----|----|
| CARGOUL A FOST AMBALAT CONFORM CERINȚELOR | DA | NU |
|---|----|----|

| | | |
|---|----|----|
| NUMĂRUL DE TELEFON AL DESTINĂTARULUI ESTE PREZENT PE CARGOU | DA | NU |
|---|----|----|

| | | |
|---|----|----|
| INDICAȚIA "PĂSTRATI VACCINELE LA T DE LA 0' LA +8' C" ESTE PREZENTĂ PE CARGOU | DA | NU |
|---|----|----|

| | | |
|---|----|----|
| PE CARGOUL CU VACCINELE DPT, DT, Td sau TT ESTE PREZENTĂ INDICAȚIA "NU REFRIGERAȚI" | DA | NU |
|---|----|----|

| | | |
|--|----|----|
| A FOST PREZENTĂ PE CARGOU NOTA "VACCINE: URGENT" | DA | NU |
|--|----|----|

| | | |
|----------------------------|----|----|
| ARE CARGOUL NOTA "VACCINE" | DA | NU |
|----------------------------|----|----|

STAREA CARGOULUI LA SOSIRE

NUMELE

DATA

SEMNĂTURA

APPENDIX E
DAILY AND MONTHLY STOCK RECORDING SHEETS

APPENDIX F
COMPLETED VACCINE ARRIVAL REPORT

VACCINE ARRIVAL REPORT

FLIGHT DETAILS:

| | | |
|------------------------------|------------------------|---------------------------------------|
| AIRPORT OF ORIGIN | CHARLES DE GAULLE | |
| SCHEDULED STOPOVERS EN ROUTE | FRANFUCT | |
| DATE AND TIME OF ARRIVAL | 05.07.95 - 19.10 | |
| AIRLINE AND FLIGHT NUMBERS | LH | AZ FRANCE - AIR MOLDOVA 90 |
| SUPPLIER | PASTEUR MIEUX / UNICEF | |

VACCINES:

| VACCINE | MANUFACTURER | NO. OF VIALS | DOSES PER VIAL | LOT NUMBER | EXPIRY DATE |
|---------|--------------|--------------|----------------|------------|-------------|
| DPT | P.M. | 1076 | 10 | L5008 | 07/97 |
| " | " | 824 | 10 | L5201 | 09/97 |
| | | | | | |
| | | | | | |

DILUENT :

| | | | | |
|--------------|--|--|--|--|
| VACCINE | | | | |
| NO OF VIALS: | | | | |

| | | |
|----------------------------|-----|----|
| ARE VIAL MONITORS ATTACHED | YES | NO |
| | | ✓ |

| | | |
|--|-----|----|
| IS AIRWAY BILL AND PACKING LIST ATTACHED | YES | NO |
| | ✓ | |

SHIPPING PROCEDURES:

| | |
|---|--------------------------------|
| WAS ADVANCE FAX RECEIVED - WHEN (DATE) | yes - 05.0 29.06.95 |
| WAS IT SENT TO CORRECT ADDRESS | yes |
| WHO WAS IT SENT BY | Pasteur Mieux |
| WERE THERE DIFFERENCE BETWEEN INFORMATION ON FAX AND ACTUAL ARRIVAL | No |

COLD CHAIN MONITOR:

| | | | | |
|----------------------|----------|----|-------|-------|
| HOW MANY IN EACH BOX | 4 | | | |
| VACCINE → | DPT | | | |
| INDEX | ABC D | OK | ABC D | ABC D |
| DATE OF PACKING | 05 07 95 | | | |
| DATE OF ARRIVAL | 05 07 95 | | | |

DPT, DT, Td and TT SHIPPING INDICATORS:

| | | |
|--------------------|-----|----|
| WERE THEY INCLUDED | YES | NO |
| | | ✓ |
| WAS THE DOT BLACK | YES | NO |
| | | |

VACCINE TRANSPORT BOXES:

| | |
|-----------------------|----|
| TOTAL NUMBER OF BOXES | 12 |
|-----------------------|----|

| | | |
|--------------------------------|----------|----|
| IS THE CARGO PROPERLY LABELLED | YES ✓ | NO |
|--------------------------------|----------|----|

| | | |
|---|----------|----|
| IS THE TELEPHONE NUMBER OF CONSIGNEE ON THE CARGO | YES ✓ | NO |
|---|----------|----|

| | | |
|--|----------|----|
| DOES IT STATE "STORE VACCINES AT 0 °C TO + 8 °C" | YES ✓ | NO |
|--|----------|----|

| | | |
|--|----------|----|
| DOES IT STATE "DO NOT FREEZE" (IF DPT, DT, Td OR TT VACCINE) | YES ✓ | NO |
|--|----------|----|

| | | |
|---------------------------------------|----------|----|
| WERE PACKAGES LABELLED "VACCINE RUSH" | YES ✓ | NO |
|---------------------------------------|----------|----|

| | | |
|--|----------|----|
| IS PACKAGE LABELLED "CONTAINS VACCINE" | YES ✓ | NO |
|--|----------|----|

WHAT WAS THE STATE OF THE PACKAGING ON ARRIVAL:

| |
|----|
| OK |
|----|

NAME V. Sahotchi DATE: 05.07.1995 SIGNATURE: [Signature]

APPENDIX G
COMPLETED MONTHLY STOCK RECORDING SHEET - 03.07.95

**APPENDIX H
PROPOSED CABLE**

PROPOSED CABLE TO BE SENT:
TO: ACTION OFFICE NIS 03
CC: HEAL 04
PLEASE PASS TO BASICS

BASICS CONSULTANT SOREN SPANNER TOGETHER WITH BASICS CONSULTANT ALLAN BASS BRIEFED THE EMBASSY ABOUT THE FINDINGS OF THE MISSION TO MOLDOVA FROM 21 JUNE TO 12 JULY 1995.

SPANNERS FINDINGS ARE AS FOLLOWS:

THE WAY THE EP PROGRAMME IS OPERATED, IS MOST UNECONOMICAL AND VERY LABOUR INTENSIVE.

A DATA BASE CONTAINING ALL RELEVANT INFORMATION FROM EACH HEALTH FACILITY HAS BEEN ESTABLISHED. DATA FROM MOST OF THE COUNTRY HAS BEEN RECEIVED AT THE REPUBLICAN SES.

THE DATA BASE FOR COLD CHAIN EQUIPMENT IS NEARLY COMPLETED APART FROM 7 DISTRICTS. THE DATA BASE HOLDS INFORMATION ON: RAION, VILLAGE, TYPE OF FACILITY, TYPE OF REFRIGERATOR, YEAR OF MANUFACTURER, CONDITION OF REFRIGERATOR AND FACILITIES WITHOUT REFRIGERATOR.

THE DATA BASE WILL BE EXPANDED TO HOLD INFORMATION ON THE NUMBER OF NEW-BORNS PER FACILITY AND WHICH FACILITY IS SUPPLYING WHICH FACILITY WITH VACCINES.

THE DATA BASE WILL BE USED TO DETERMINE HOW BEST AND MOST ECONOMICALLY TO IMPROVE THE EPI PROGRAMME.

THE COLD CHAIN, ESPECIALLY AT LOWER LEVELS (FAP) IS VERY POOR AND UNRELIABLE. THE DATA BASE WILL TELL WHICH FACILITY HAS A LOW WORKLOAD AND IS UNECONOMICAL.

A NEW STOCK CONTROL SYSTEM WAS AGREED WITH THE REPUBLICAN SES, THIS SYSTEM HAS BEEN INTRODUCED AT THE REPUBLICAN SES AND WILL BE INTRODUCED IN FOUR PILOT DISTRICTS.

THERE IS A GREAT NEED FOR TRAINING IN STOCK CONTROL AND MANAGEMENT, THIS WORK WAS BEGUN, HOWEVER, FURTHER TRAINING OF PERSONNEL IS NEEDED AND RECOMMENDED.

VACCINE STOCK AS OF JULY 3, 1995.

| VACCINE IN STOCK AS PER JULY 3, DOSES | 162,000 | 67,110 | 104,800 | 250,000 | 2,690 | 132,700 | 273,000 |
|---------------------------------------|---------|--------|---------|---------|-------|---------|---------|
| VACCINE | BCG | DPT | MEASLES | POLIO | Td | Hep. B. | DT |

ON 5 JULY 19,000 DOSES OF DPT WERE RECEIVED FROM UNICEF

ON JULY 4 WE HELD A WORKSHOP ON DISTRICT ACTIVITY PLANNING FOR CONTROL OF DIPHTHERIA

EMBASSY REQUESTS RETURN VISITS BY BASICS CONSULTANT SOREN SPANNER FOR CONTINUED WORK ON THE DATA BASE AND FOLLOW UP VISITS TO DISTRICTS AND TO CONDUCT FURTHER TRAINING ON STOCKS AND LOGISTIC MANAGEMENT JULY 12, 1995