EMERGENCY CHILDHOOD IMMUNIZATION SUPPORT PROGRAM

UZBEKISTAN

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Resources for Child Health Project
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ACRONYMS

BCG  Bacillus, Calmette and Guerin Vaccine
DPT  Diphtheria, Pertussis, Tetanus Vaccine
EPI  Expanded Program on Immunization
FOP  Feldsher-Obstetrician Posts
MOH  Ministry of Health
OFDA Office of Foreign Disaster Assistance
SES  Sanitary and Epidemiology Station
UNICEF United Nations Children’s Fund
UNIPAC UNICEF Supply Division
USAID United States Agency for International Development
INTRODUCTION

Uzbekistan is one of the five newly independent Central Asian States. Economic adjustments including major rises in food prices were seen by the USAID Office of Foreign Disaster Assistance (OFDA) assessment teams, in visits earlier in 1992, as early warning signs of a malnutrition emergency in infants and young children. It was also reported that the program for the immunization of children was interrupted in 1991 due to the interruption of the supply of vaccines. Recent reports indicate an increase in tuberculosis in children under 2 years of age. While all unimmunized children are at risk from the vaccine preventable diseases, malnourished children are far more vulnerable to these diseases, and are far more at risk of disability and death as a result of these preventable diseases.

The USAID Office of Health and the Office of Foreign Disaster Assistance (OFDA) has begun to provide vaccines for common vaccine preventable diseases, the equipment to enable safe vaccine storage and transport, and the necessary injection equipment to provide safe immunization of children under two years of age for most of the year beginning in May 1992 for most of the Central Asian Republics of the former Soviet Union.

The supply of this vaccine and equipment was based on an assessment conducted in February and March 1992. The U.S. Department of Defense provided air transport for three pallet loads of equipment for the initiative in Uzbekistan. Originally scheduled for arrival in Tashkent, the Uzbekistan capital, on 7 May, the consignment actually arrived on 15 May 1992 on a C-141 aircraft.

Operation Provide Hope provided a team of two specialists to assist in the management of the flight arrival, cargo unloading, and flight departure. The REACH Project provided this consultant to make the necessary arrangements with the Ministry of Health of the Republic of Uzbekistan, to ensure safe storage and management of the vaccines, to assist the Ministry of Health in the preparation of their distribution plans, and to provide training in the new technologies being introduced through this initiative. The consultant spent 3 working days in Tashkent.

Unfortunately, this consultant was unable to return to Tashkent due to continued civil unrest in Tajikistan, the delays in the arrival of the consignments, and the closing of Uzbekistan's air space. Assistance to the MOH, during flight arrival, cargo unloading and cargo accounting was provided by the Operation Provide Hope II flight cargo team and the U.S. Embassy in Tashkent.
PART 1: THE DELIVERY OF EMERGENCY IMMUNIZATION SUPPLIES

A summary of the situation, the arrangements made, and the tasks completed follow in this section.

1. FLIGHT ARRIVAL: Arrangements were agreed with the Ministry of Health Committee for the Reception of Humanitarian Assistance for flight arrival, parking, and cargo unloading at Tashkent airport.

2. THE CONSIGNMENT: Originally scheduled for arrival on 8 May, the consignment actually arrived on 15 May 1992 on a U.S. Department of Defense C-141 aircraft. The aircraft carried 3 pallets for Uzbekistan. The OFDA cargo team maintained a count of items (boxes or cartons) as they were transferred from the aircraft pallets to the MOH trucks.

3. CUSTOMS CLEARANCE: The U.S. Embassy obtained the agreement of the customs authorities to the duty free import of these humanitarian supplies and equipment.

4. CARGO TRANSPORT: The Ministry of Health provided four 1.5 ton trucks for the transport of the equipment from the airport to the MOH Oblast and City Sanitary and Epidemiological Station storage facilities. 10 laborers were provided by the MOH to unload the aircraft and to move the supplies to the MOH Stores.

5. STORAGE: This consultant visited the Tashkent Oblast, and the Tashkent City Sanitary and Epidemiological Stations (SES) storage facilities. The warehousing facilities are adequate for receiving the equipment consignment, though would not be suitable for taking delivery of vaccines. No -20°C storage equipment for the storage of Oral Polio vaccine exists. The freezers being provided by USAID OFDA will be able to fill this role for the planned September 1992 vaccine shipment.

Tashkent Oblast SES had 2 non-functioning cold rooms (27 M³) and 2 non-functioning refrigerators. The one working refrigerator contained polio vaccine stored at +3.1°C. Vaccine storage was not well organized and equipment maintenance was non-existent.

Tashkent City SES had one non-functioning cold room (27 M³), and 2 working refrigerators at 12.9°C and 11.2°C respectively. Internal thermometers indicated +6°C and -7°C storage temperatures. All refrigerator shelves had hardboard sheets to support the weight of vaccines which totally blocked air circulation. This has now been rectified.

6. RECEIVING AND INSPECTION: This was carried out by the Provide Hope II flight team. No ice packs for use in the vaccine transport boxes were received except for some spare ice packs.

7. DISTRIBUTION: The equipment received was to be divided between the City and Oblast Sanitary and Epidemiological Stations, with the sterilizers and small cold boxes being distributed to health facilities.

8. TRAINING: Training is needed, at all levels throughout the City and Oblast, in the use of the sterilizer - syringe kits, the ice pack freezers, the vaccine transport cold boxes, and the vaccine carrier - cold boxes. A list of facilities, equipment, and materials for a practical training course was prepared. The arrangements for a course to be held and the assignment of participants were made by the Chief of the
Republican Sanitary and Epidemiological Service. Mr. Carl Hasselblad of the REACH project will conduct the course.

9. **IMMUNIZATION**: The vaccination of children under two years of age will be carried out by the regular staff of health facilities throughout Tajikistan.

10. **IMMUNIZATION REPORTING**: The Ministry of Health has been requested to provide information on the immunization work performed using these US donated supplies. This will be followed up by the REACH Project consultant remaining in the region.

11. **TECHNICAL ISSUES**: Some progress has been made on critical vaccine management issues. The importance of the storage of Oral Polio and Measles vaccines in freezers at -20°C or colder at the Oblast and City levels was well accepted, particularly as USAID provided the appropriate equipment.

While the need for ice packs in vaccine transport and the appropriate cold chain management procedures are accepted in principle, the current practices, emphasizing property control, are in direct conflict with safe vaccine transport. Before the emergency provision of cold boxes, vaccine carriers, and ice packs, vaccines were transported in boxes made with 1/8 inch hardboard sheet on wooden frames, and 'insulated' with about 1.5 inches thickness of raw cotton padding. These boxes were wrapped in string, with a sealing wax seal to identify unauthorized opening. While the cotton will reduce breakage, it will not significantly reduce the exposure to ambient temperatures of these sensitive vaccines.

It should be noted that the Uzbekistan immunization policy is complicated, requires long intervals between vaccine doses, late completion (after the age of greatest risk), and uses multiple doses of most vaccines throughout the life of the child. Our targeting of emergency immunization support for children under 2 years of age still accepts late completion of the primary immunization series. The formulation and development of immunization policy does not appear to have been a local function related to local disease patterns. Possibly the immunization policy reflects frequent vaccine or cold chain failure.

12. **CONSTRAINTS**: The Ministry of Health and its Republican Sanitary and Epidemiological Service and all personnel met by this consultant have provided the highest cooperation and hospitality. The limited time available for field visits has been a constraint. This consultant was in Uzbekistan for 3 working days.

13. **FOLLOW-UP**: Mr. Carl Hasselblad, REACH Consultant will remain in the Central Asian Republics for several additional weeks to provide follow-up and any training and additional needs assessment required. Recent information suggests an increase in hospital admissions of children with tuberculosis in the first 3 months of 1992 as a result of the interruption of the immunization program in 1991. A further visit with the Director of the Tuberculosis Institute in Tashkent, who stated that he has the relevant data, should clarify the situation.
PART 2: AN ASSESSMENT OF THE ADEQUACY OF THE SUPPLIES PROVIDED

VACCINES: As polio vaccine production has resumed in Russia, it is expected that some additional vaccines will be provided by this manufacturer (a small quantity has already been received). UNICEF has recently provided 350,000 doses of measles vaccine. While probably sufficient for the needs of Tashkent Oblast and City until the planned September delivery, it will not be enough vaccine for all of Uzbekistan.

ICE PACKS: In order to protect the vaccines supplied, ice packs are used in cold boxes for transport and for daily use, and in refrigerators to stabilize storage temperatures. Urgent action is needed to procure and deliver an additional quantity of ice packs of the same specification as those already delivered (UNIPAC E5/9). The quantity required should be assessed by the remaining REACH consultant.

FREEZERS: A sufficient number of vaccine storage freezers were supplied for safe polio and measles vaccine storage at the Oblast and City levels. A sufficient quantity of ice pack freezers were supplied to support safe vaccine transport from the Oblast and city levels of the vaccine delivery system.
PART 3: AN INFORMAL ASSESSMENT OF THE COLD CHAIN SYSTEM

While there was little opportunity for a field level assessment, it was clear that the management of the vaccine cold chain at the Republican, Oblast, and City levels and in the transport system was extremely fragile and weak. The principles of good vaccine management while partially understood in principle, were not effectively translated into good practice.

Vaccines were packed for distribution in small or large wood and hardboard (compressed wood fiber sheet) boxes, lined with raw cotton. Sent by road or air, no real protection against exposure to ambient high temperatures, which may destroy vaccines, existed until the Provide Hope equipment was delivered. Vaccine supplies awaiting delivery to Oblasts were found to sit in cool (and warm) but not vaccine safe storage areas for days before shipment.

Temperature monitoring of vaccine storage was casual, rather than regular and routine.

Vaccine storage equipment maintenance is poor.

It is clear that further training in the vaccine cold chain and vaccine management is required at all levels of the system.
PART 4: RECOMMENDATIONS

1. As a matter of immediate urgency an additional 3,450 E5/09 ice packs should be supplied to Tashkent Oblast and City SES to ensure safe vaccine transport and storage.

2. After completing the planned emergency delivery in September 1992, a decision should be made on whether to provide any additional assistance to Uzbekistan. The need for assistance in terms of vaccines, equipment, and technical support is great. The token level of EPI assistance provided under the Childhood Immunization Initiative is inadequate to the needs of Uzbekistan. If further assistance is to be provided, it should start with the improvement of vaccine storage equipment at National and Oblast level, along with the provision of new vaccine storage and transport equipment for the Vaccine Institute (local vaccine manufacturer).

3. A formal assessment of the vaccine cold chain and the immunization delivery system should be agreed with the Government of Uzbekistan and then conducted. Training based on the findings of the formal assessment should be conducted. These activities should be considered as a way of facilitating the transition from emergency support to a more normal functioning and self-sufficient immunization program in Uzbekistan. Technical assistance should be provided to assist in this completion phase of emergency support.

4. For any future deliveries, a cargo manifest detailing the items, quantities, and their packaging, should be provided in advance of arrival.

5. Ministry of Health officials and health workers at all levels have limited knowledge of good cold chain practices, and almost no awareness of recent developments in immunization program and vaccine cold chain management. Immunization policies and practices reflect isolation from the international developments in public health. Materials, modules, and guidelines developed by the World Health Organization, REACH, and other international and national organizations should be provided to the MOH. While Russian translations of these materials would be desirable, but would take too long to produce, their supply in English editions is recommended. Local translations could be made by the MOH.
CONTACTS

All Ministry of Health discussions were held with the following MOH officers in Tashkent:

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Mr. Jim Elliot, Charge d’Affairs
Ms. Masha Yavonovich, Political Officer (TDY)
Mr. Bill Harrison, Administrative Officer (TDY)

My interpreter in Tashkent was:

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