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# **BASICS** **TRIP REPORT**

## **Diphtheria Control in the Republic of Moldova**

***BASICS is a USAID-Financed Project Administered by  
The Partnership for Child Health Care, Inc.***

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**DIPHTHERIA CONTROL IN THE  
REPUBLIC OF MOLDOVA**

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## Acronyms

Amb	Ambulatorio: Ambulatory Care Clinic (same as SVA)
BASICS	Basic Support for Institutionalizing Child Survival
BCG	Anti TB vaccine
CDC	Centers for Disease Control and Prevention
CIE	Central de Igiena si Epidemiologie (same as SES)
Cohort	Group of children with the same particular attribute
CRIE	Central Republican de Igiena si Epidemiologie (same as RSES)
CRS	Congenital Rubella Syndrome
Di	Diphtheria vaccine; not available from UNICEF
DPT or DTP	Diphtheria Pertussis and Tetanus vaccine
DT	Diphtheria and Tetanus vaccine
DT-M	Russian description of Td: modified combined Diphtheria (reduced component) and Tetanus vaccine
EPI	Expanded Program on Immunization
EURO	WHO's Regional Office for Europe (in Copenhagen)
FAP	Feldsher and Patronage Nurse Station (same as PM)
FIC	Fully Immunized Child
Freeze Watch	A heat sensitive indicator which indicates temperatures below -4°C.
GoJ	Government of Japan
IEC	Information, Education, and Communication
HepB	Hepatitis B vaccine
MOE	Ministry of Education
MOH	Ministry of Health
MMR	Mumps measles and rubella vaccine
NBC	Newborn Children
NGO	Non-governmental Organization
NIS	Newly Independent States of the former Soviet Union
OPV	Oral Polio vaccine
Peri-urban	PMs or FAPs in the area around the Raion which are supplied directly by the Raion SES, not by an SC or an Amb (cluster headquarters)
Policlinic	The largest out-patient facility
Primary doses	All immunizations given before the first dose for revaccination (booster dose).
Poli	Abbreviation for Policlinic
PIS	WHO/UNICEF Product Information Sheets

PM	Punct Medical (same as FAP): the smallest health facility staffed by a male paramedic and an obstetric nurse responsible for domiciliary services. Some only have a Feldsher.
PVO	Private Voluntary Organization
Raion	An administrative sub-division, equivalent to a District.
RSES	Republican Sanitary and Epidemiological Station (same as CRIE)
SC	Spital de Circumscriptie: rural hospital at sub-district level (same as SUB)
SES	Sanitary and Epidemiological Station (same as CIE) the Public Health Headquarters
SUB	Rural hospital at sub district level (same as SC)
SVA	Ambulatory Care Clinic (same as Amb)
TB	Tuberculosis
Td	Diphtheria (reduced component) and Tetanus vaccine
TT	Tetanus toxoid
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

## EXECUTIVE SUMMARY

This BASICS Consultant visited the Republic of Moldova to assess the needs of the national campaign to control the diphtheria epidemic.

Diphtheria in the Republic of Moldova was largely brought under control following the wide scale immunization of its population beginning in the early 1960s. The number of reported diphtheria cases increased from zero in 1989, to six in 1990, 14 in 1991, 27 in 1992, and 35 in 1993.

In 1994, 376 confirmed cases were reported and of these 19 patients died. Case fatality was about five percent. Eighty-four percent of the reported cases occurred in the autumn and winter months beginning in September with the cooler weather and the opening of the school year. A reported 25,000 primary contacts were identified and screened.

In the period January 1 through June 30, 1995, 280 cases and 11 deaths from diphtheria have been reported along with 410 confirmed carriers among an estimated 14,000 primary contacts. A major increase in cases is expected beginning in the autumn of 1995. Projected numbers of cases expected in 1995 have ranged from a low of 1,500 to a high of 2,300.

*The WHO/UNICEF strategy for diphtheria control in the Newly Independent States:*

Epidemic diphtheria can be controlled by the following well recognized measures:

- *Primary prevention* by ensuring high population immunity through immunization as the most effective measure to control epidemic diphtheria;
- *Secondary prevention* of contact cases of diphtheria by the rapid investigation of close contacts and their standardized treatment; and,
- *Tertiary prevention* of complications and death by early diagnosis and proper management of diphtheria cases.

**Moldova Plan of Action for the control of diphtheria:** Following the major increase in cases and the spread of the diphtheria epidemic to nearly all parts of Moldova, a plan to control diphtheria was developed after wide consultation, and approved as Order Number 267 on June 2, 1995.

BASICS/USAID and WHO/EURO provided technical assistance in the planning process, senior Moldovan Health officials participated in international conferences on diphtheria control and immunization, and specific technical information was translated and provided by both WHO and BASICS.

Serious constraints on the successful control of the diphtheria epidemic in the Republic of Moldova have been identified.

**Vaccines:** The timely provision of adequate supplies of vaccines is a major constraint on the campaign to control diphtheria. Immunization is one of the two major mechanisms for the prevention and control of diphtheria in the Republic of Moldova.

There is a shortage of antibiotic supplies at all levels of the health system. While included in the WHO/UNICEF appeal for Moldova, the supplies required are greatly underestimated, with procurement remaining to be initiated.

Poor injection safety and the hazardous injection waste disposal have been identified as serious problems by previous Technical Assistance missions.

**Coordination and Teamwork - Ministry of Health:** The major constraint identified is the management of primary contacts of diphtheria cases who should be identified and receive a single dose of Benzathine Penicillin as prophylaxis. The operational separation of epidemiological, and curative, and preventive health services leaves an estimated 19 of 20 primary contacts untreated with antibiotics.

**Coordination and Teamwork - Multisectoral:** The National Diphtheria Committee manages the national diphtheria control effort. Members are senior medical or scientific officials under the chairmanship of the Minister of Health. No other government departments, including the MOH's own IEC and logistics professionals, the media, non-governmental organizations (NGOs) or health service users are represented.

**Coordination and Teamwork - Donors:** Many donors have offered and are providing assistance to the national diphtheria campaign and the national immunization programme. A review of donor activities, and a donor coordination committee chaired by the Ministry of Health would provide a focus for donor assistance planning, collaboration, and cooperation. Donors will also need to develop their own formal and informal coordination mechanisms for sharing information and resources to enable effective and efficient assistance to the Government of the Republic of Moldova.

**Public cooperation and IEC:** The experience of the recent diphtheria immunization campaign activity in Chisinau has demonstrated a lack of both public interest and public cooperation in immunization for the prevention of diphtheria.

**Information Systems:** A review of the immunization status of 1995 diphtheria cases resulted in the identification of some serious constraints on the recording, reporting, analysis, and use of information for action. The review of diphtheria case reports was complicated by the lack of recording and reporting standards. During the BASICS mission, two forms were developed and agreed for immunization supply inventory control. A routine inspection reporting form for international vaccine deliveries was also developed and agreed. The standardization and implementation of the use of these forms were limited and compromised by the unavailability of paper, and the lack of capacity to reproduce the forms for distribution and use.

The equipment and materials proposed in section IV.E., for the limited production of small posters and handouts for use in the diphtheria control campaign could be used for printing the standard forms.

**Planning:** A review of the National Immunization Plan and the Additional Measures on the Control of Diphtheria indicated a serious misunderstanding of planning and the use of plans. As discussed in section II., these national level plans provide guidance and the appropriate context

for activity plan development. Set out as orders, objectives, targets, and responsibilities are established, while leaving the actual implementation activity unplanned. It is a feature of the past bureaucratic culture in the NIS that *orders or decrees are seen as the equivalent of activity*. Continued technical assistance in immunization program activity planning would promote long term sustainability.

An activity planning workshop was held on July 4, 1995; participants included 46 District and municipal Epidemiologists and Chief Medical Officers, three staff of the Medical University, one from the Moldovan Railway Organisation. The workshop was facilitated by three senior epidemiologists from the RSES, five BASICS interpreters, and the three person BASICS technical team. The purpose of this workshop was to develop a detailed plan of activities for EPI and diphtheria control for the remainder of 1995 and to the end of 1996. In the short time available for the workshop it was not possible for the participants to complete the action planning exercise. 18 draft Plans of Action were produced and are attached in translation in Appendix J, Part 2. Completed Plans of Action will be submitted to the RSES at the end of July 1995 with the monthly statistical reports.

## RECOMMENDATIONS

1. The urgent provision of vaccines, syringes and the means for safe disposal, antibiotics, and antitoxin must be secured in a timely manner to enable the control of the diphtheria epidemic in Moldova. While donor, including USAID and Government of Japan (GOJ) funding is committed, procurement is not complete and needs to be followed up with UNICEF/Geneva.
2. A re-evaluation of the diphtheria control immunization schedule should be carried out. Whether three doses of Td vaccine for the population aged 30 to 50 years or one dose of DT for the five to seven year olds, and one dose of Td for those aged eight to 19 addresses the relative risk should be re-evaluated.
3. The draft order on teamwork in contact identification should be approved immediately; Raion level Epidemiologists would carry antibiotic supplies, and District Doctors carrying out antibiotic prophylaxis from house to house.
4. The rapid implementation of the planned shift to re-sterilizable plastic syringes and the associated steam sterilizers and quality assurance measures, along with the necessary field training of health workers should be carried out in the early 1996 phase of the diphtheria control effort.
5. Multi-sectoral collaboration and cooperation should be established for both achieving the immunization targets and for obtaining material and logistical support for the campaign. Other Government ministries such as the Ministry of Education, as well as major industrial and agricultural cooperatives, non-governmental organizations, and the private voluntary sector should be included in a National Diphtheria Task Force.
6. A review of donor activities should be conducted and a donor coordination committee chaired by the Ministry of Health established to provide a forum for solving problems as

they arise and provide a focus for donor assistance planning, collaboration, and cooperation. Donors will also need to develop their own formal and informal coordination mechanisms for sharing information and resources to enable effective and efficient assistance to the Government of the Republic of Moldova.

7. Technical assistance should be provided to strengthen the technical capacity of the MOH to enable the development and production of clear diphtheria control campaign and immunization information for the public. Equipment and materials for the limited production of small posters and handouts for use in the diphtheria control campaign should be provided.
8. The concern that there may be very limited compliance by clinicians with the reduced contraindications for diphtheria immunization, raises the question of the achievability of the mass immunization coverage targets. Legislation indemnifying medical practitioners and providing for compensation of parents of vaccine damaged children for the additional costs of child care may provide public health benefits. Technical assistance in this area may be useful.
9. Technical assistance should be considered in information management and standards, and in the use of computers for information management. The equipment and materials proposed in section IV.E and in recommendation 7 above (for the limited production of small posters and handouts for use in the diphtheria control campaign) could be used for printing the standard forms.
10. Continued technical assistance in immunization program activity planning would enable long term sustainability.
11. Activity Plans will be completed by the workshop participants and submitted to the RSES at the end of July 1995. These plans will require a review by both the National authorities and by BASICS. The RSES may need to negotiate and modify some of the planned activities and responsibilities assigned in each district plan. BASICS may need to identify resource requirements which would not be met by the Government of Moldova, but which could be reasonably met by BASICS or other donors.
12. An activity monitoring plan will need development and follow up by both the RSES and BASICS.
13. A thorough epidemiological evaluation of the 1994 and 1995 diphtheria cases, case immunization status, and vaccine efficacy in Moldova should be carried out at the end of the first quarter of 1996. For discussion see Appendix G, Immunization Status of Diphtheria Cases: 1 Dec. 1994 - 4 June 1995.

## I. INTRODUCTION

Diphtheria in the Republic was largely brought under control following the wide scale immunization of its population beginning in the early 1960s. In the early 1980s, there was a relatively small outbreak of diphtheria which was soon brought under control. From the mid-1980s, there were only sporadic cases reported, with no diphtheria cases reported during the period from 1986 to 1990. The number of reported diphtheria cases increased from 14 in 1991, to 22 in 1992, and 35 in 1993.

In 1994, 376 confirmed cases were reported and of these 19 patients died. Case fatality was about five percent. Eighty-four percent of the reported cases occurred in the autumn and winter months beginning in September<sup>1</sup> with the cooler weather and the opening of the school year. A reported 25,000 primary contacts were identified and screened. Among the primary contacts, 617 carriers were confirmed by bacteriological and serological methods.

In the period January 1 through June 30, 1995, 280 cases and 11 deaths from diphtheria were notified, along with 410 confirmed carriers among an estimated 14,000 primary contacts. The case fatality rate appears to have fallen to 3.9 percent, possibly as a result of increased immunization activities and improved case management.

A major increase in cases is expected beginning in the autumn of 1995. Projected numbers of cases expected in 1995 have ranged from a low of 1,500 to a high of 2,300.<sup>2</sup> Other 1995 projections, based on a larger population<sup>3</sup> and higher numbers of reported cases, range up to 3,158. All projections assume that control activities are not effectively carried out.

### **The Diphtheria Control Strategy**

The WHO/UNICEF strategy for diphtheria control in the Newly Independent States<sup>4</sup> has been elaborated and detailed in a series of WHO/EURO meetings, consultations, and documents from 1993 through 1995.

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<sup>1</sup> Vice Minister of Health, Republic of Moldova, "Retrospective Epidemiological Analysis of the morbidity in the population of the Republic of Moldova from diphtheria in 1994", MOH Order 126-2/111526 May 1995.

<sup>2</sup> Dittmann, S., "Diphtheria in the NIS - Situation, projection and strategy", WHO EURO April 1995.

<sup>3</sup> Population 4,455,645 (1993 estimate from 1992 census) *1993 CIA World Fact Book*.

<sup>4</sup> Ibid, Dittmann, S.

## **THE WHO/UNICEF STRATEGY FOR DIPHTHERIA CONTROL IN THE NEWLY INDEPENDENT STATES<sup>5</sup>:**

Epidemic diphtheria can be controlled by the following well recognized measures:

- *Primary prevention* by ensuring high population immunity through immunization as the most effective measure to control epidemic diphtheria;
- *Secondary prevention* of contact cases of diphtheria by the rapid investigation of close contacts and their standardized treatment; and,
- *Tertiary prevention* of complications and death by early diagnosis and proper management of diphtheria cases.

## **II. MOLDOVA PLAN OF ACTION FOR THE CONTROL OF DIPHTHERIA**

Following the major increase in cases and the spread of the diphtheria epidemic to nearly all parts of Moldova, plans to control diphtheria were developed. A draft plan was submitted in March 1995, revised, and after wide consultation, resubmitted in April and again in May 1995. The diphtheria control plan<sup>6</sup> was approved as Order Number 267 on 2 June 1995, printed and distributed in the following two weeks.

BASICS/USAID and WHO/EURO provided technical assistance in the planning process, senior Moldovan Health officials participated in international conferences on diphtheria control and immunization, and specific technical information was translated and provided by both WHO and BASICS.

This approved plan:

- Sets a programme of additional actions for control of diphtheria and the spread of the epidemic. This includes the immunization campaign, immunization schedule and targets, contact identification and treatment, and the reduction of contraindications for diphtheria immunization to that of a severe reaction to a previous dose of diphtheria vaccine;

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<sup>5</sup> Dittmann, S., "Diphtheria in the NIS - Situation, projection and strategy", WHO EURO April 1995.

<sup>6</sup> See Appendix 1: Order No. 267 of 2 June 1995, "On Additional Measures for Eradication of Diphtheria Epidemics in the Republic of Moldova" Minister of Health, Republic of Moldova (original and translation).

- Establishes a Diphtheria Prevention and Control Coordinating Committee;
- Elaborates a budget for diphtheria control campaign supplies, equipment, and social mobilization;
- Assigns specialists to provide consultative support on social mobilization methodology and immunization at national, district, and municipal levels; and,
- Orders weekly statistical reporting on the progress of immunization and the availability of vaccines.

#### **A. Immunization**

While focusing on immunization as a means of preventing diphtheria, the national diphtheria control plan does incorporate and provide mechanisms for strengthening the national immunization programme, particularly in the areas of contraindications and reporting.

#### **Contraindications**

In previous immunization schedules, a multiplicity of contraindications applied to the administration of all vaccines. In the analysis of the 1994 cases of diphtheria in Moldova, 43.4 percent of all reported cases were non-immunized. Of the non-immunized cases, 37.5 percent had been medically contraindicated for immunization by Moldovan medical standards. Parenthetically, 31.3 percent of the non-immunized cases were reported to have refused vaccination.

Anecdotal data suggests that between 10 percent and 30 percent of all children presenting for immunization are contraindicated. Contraindicated clients are subtracted from the health facility's immunization target population.

The 2 June 1995 Order On Additional Measures for Eradication of Diphtheria Epidemics in the Republic of Moldova states:

To determine, that the only contraindication to diphtheria vaccines in the time of epidemics can be *strong allergic reaction to the previously administered dose of the preparation in question.*

This contraindication is almost in accordance with the WHO recommendations for routine immunization programmes. Anecdotally, medical practitioners and senior pediatricians are not convinced on the correctness of the new contraindication and are reluctant to accept it. This may be due to fear of retribution if vaccine damage to children does in fact occur.

## **Immunization schedule**

The diphtheria campaign immunization schedule is summarized in Table 1. The plan states that at least 95 percent of children under three years of age will complete the primary immunization series with Diphtheria Pertussis Tetanus (DPT) vaccine, while most of the population up to age 60 will receive one booster dose of the adult Diphtheria - Tetanus (Td) vaccine. Adults from 30 to 50 years of age will receive two or three booster doses depending on their immunization history.

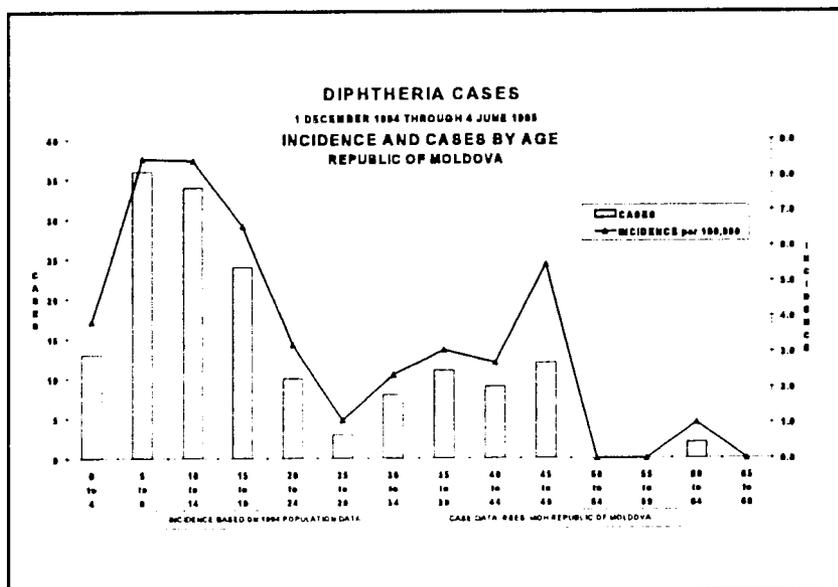
High risk groups, such as health care workers, teachers in primary and secondary schools, university staff, retail trade, catering and transport staff, frequent international travelers, and the clergy, are supposed to have priority for booster vaccine doses.

**Table 1: Diphtheria Campaign Immunization Schedule for 1995 and 1996**

TARGET GROUP	VACCINE						
	Primary Series			Booster			Notes
	1	2	3	1	2	3	
Children < three years	DPT	DPT	DPT				>95 percent coverage
Children < three years contraindicated	DPT	DT	DT				
Children < two years who received Td				DT			12 months after previous dose
Children three to seven years inclusive				DT			six months after previous dose
Children eight to 14 years				5LF or Td			six months after previous dose
Children 11 to 14 who previously received Td or 5LF				Td or 5LF			two months after previous dose
Children at 15				Td			routine immunization
Adults 30 to 50				Td	Td	Td	second dose six weeks after first, third six months after second only second & third given if first received in 1994-95
Adolescents and Adults 16 to 29				Td			except those vaccinated in 1994-95
Adults 51 to 60				Td			except those vaccinated in 1994-95
Adults > 60 years				Td			on request or if epidemiologically indicated

## Target Populations

An analysis of the age-specific incidence of the diphtheria cases in 1994 and in 1995, raises concerns about the appropriateness of the age-specific immunization targets in the diphtheria control plan.

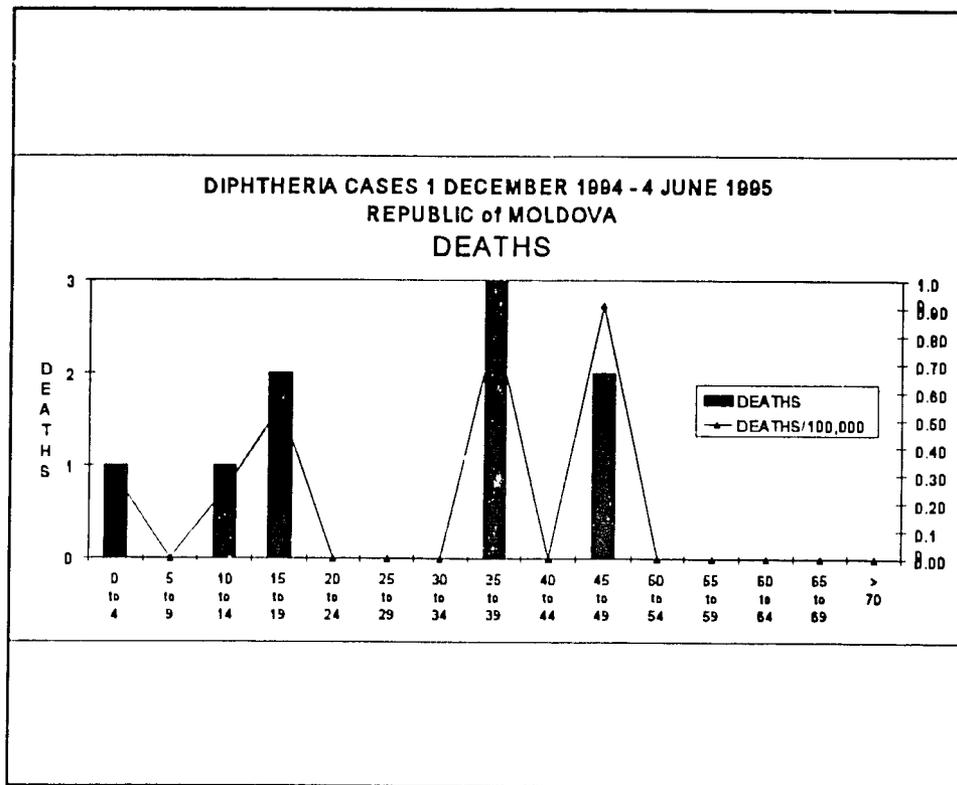


In 1994, the highest incidence rates were in the population aged five to 24 years and in the group aged five to 19 years during the first six months of 1995.<sup>7</sup> Anecdotal data suggests that this population largely consisted of contraindicated students in closed institutions.

In 1994, a second level of relatively high incidence was in the age group 34 to 44 years, while in the first six months of 1995, the second highest incidence occurred in the population aged 45 to 49 years. It is assumed that this population is largely unimmunized and had little natural exposure to the disease prior to the current epidemic. The reported incidence rate is similar to that of the population 15 to 19 years of age.

Of the nine deaths, of the ten reported, for which data were available, their age distribution and associated death rates follow in the graph below.

<sup>7</sup> See the graph: Diphtheria Cases, 1 December 1994 through 4 June 1995, Incidence and Cases by age, Republic of Moldova.



Whether three doses of Td vaccine for the population aged 30 to 50 years, or one dose of DT for the 5 to 7 year olds, and one dose of Td for those aged 8 to 19 addresses the relative risk should be re-evaluated.

### **B. Primary Contact Prophylaxis**

The need for antibiotics is clearly defined in the Moldovan diphtheria control plan and in the WHO/UNICEF strategy. A projection of supply requirements was made and submitted on the request of the Government of Finland through UNICEF.

The plan refers to the supply of antibiotics for preventive treatment of case contacts in outbreak areas, but does not establish any mechanisms for primary contact identification and prophylaxis.

In meetings with clinicians, epidemiologists, and senior health officials, it was confirmed that, while primary contact prophylaxis is both policy and a correct diphtheria methodology, in practice, this is only done for a small number of primary contacts.

Under current practices, each diphtheria case is identified by a clinician, who reports it to the Raion level epidemiologist. The epidemiologist then identifies the primary contacts, takes bacteriological and serological samples for laboratory testing, and refers the contacts for

prophylaxis. Anecdotal data suggests that compliance with antibiotic prophylaxis is between one in ten to one in twenty of the referred primary contacts.

In some of the more authoritarian localities of the country, the identified primary contacts are sequestered in hospitals awaiting the outcome of laboratory investigations, and prior to any treatment of the confirmed carriers. The delays and additional contacts generated through this procedure are matters of concern.

While partly limited by the availability of supplies, the major problem is that of the separation of the work of clinicians and epidemiologists in contact identification and prophylaxis.

A solution was proposed for the duration of the epidemic, by senior officials of the Ministry of Health, Division of Curative and Preventive Services, and calls for teamwork in contact identification by Raion level Epidemiologists, who would carry antibiotic supplies, and District Doctors carrying out antibiotic prophylaxis from house to house. An order is being drafted, and is expected to be approved immediately. The Republican Epidemiological and Sanitary Station will conduct a joint seminar for clinicians and epidemiologists to introduce this methodology.

### **C. Case Management**

While the diphtheria control plan provides for a limited budget for the management and treatment of diphtheria cases, no specific details of treatment regimes are incorporated, including the use of diphtheria antitoxin and antibiotics.

In discussions with clinicians and Raion level epidemiologists, it was apparent that wide variations in treatment practices exist. Anecdotal data suggests that the use of antibiotics is relied on, with only at most, one in ten cases receiving diphtheria antitoxin. This reflects the severely limited supply situation.

The need for diphtheria antitoxin is clearly defined in the Moldovan diphtheria control plan and in the WHO/UNICEF strategy. A projection of supply requirements has been made and submitted on the request of the Government of Finland through UNICEF.

## **III. CAMPAIGN OPERATIONS**

The national diphtheria control plan defines a general campaign strategy, which includes mass immunization along with priority immunization of what are considered high risk populations.<sup>8</sup>

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<sup>8</sup> See Appendix A: Order No. 267 of 2 June 1995, "On Additional Measures for Eradication of Diphtheria Epidemics in the Republic of Moldova" Minister of Health, Republic of Moldova (original and translation) "PROGRAMME section 2."

## **National**

The national level Chief Medical Officers of the Republican Health Services are responsible for the establishment of methods, and the provision of vaccines and other campaign supply requirements. These senior officials are also responsible for the use of the national media and social mobilization for the campaign. The committee members are senior medical or scientific officials under the chairmanship of the Minister of Health. No other government departments, including the MOH's own IEC and logistics professionals, the media, non-governmental organizations, or health service users, are represented.

The national committee monitors the weekly campaign immunization reporting returns completed by the heads of city and district health services. These reports are processed and analyzed by the RSES.

## **District and City**

Under the guidance of the national plan and the Coordination Committee on Diphtheria Prevention and Control, heads of city or municipal health services, and chiefs of health care facilities are charged with developing detailed operational campaign plans.

City and district polyclinic committees assisted by facility-level immunologists are responsible for the immunization of chronically or frequently ill children and adults who would normally be contraindicated. These district and local level committees are responsible for social mobilization at the local level. These committees are composed solely of medical officers and health professionals.

Within ten days of vaccines becoming available, the heads of city or municipal health services and chiefs of health care facilities are responsible for implementing the mass immunization campaign.

Immunization campaign progress, and vaccine availability and utilization is reported to the RSES by all city and district Polyclinics on a weekly basis.

### **A. Strategies**

Campaign implementation strategies are evolving rapidly as the realities of the situation have become apparent.

The very limited supplies of vaccines and syringes, along with the scheduled trickle of vaccine deliveries, have lead to the planning of district-by-district immunization campaigns. In opposition to this campaign strategy has been the need to distribute the available vaccines

equally among all districts in quantities insufficient for mass immunization. Some priority is being given to those districts with larger numbers of diphtheria cases in 1994.

Social mobilization at a national level has proved counterproductive as a result of the shortage of vaccine supplies. In January and February 1995, both the national media and local mobilization were used to create demand for immunization. Public confidence in the health services was seriously damaged when no vaccine was available at health facilities during the media campaign. The use of the national media in district-by-district campaign operations is not appropriate.

The recent ten day district level campaign in the capital identified a number of failed and slightly more successful strategies. The original district level campaign plan called for the use of three locations, all day and evening, in the central polyclinic. Routine immunization of children continued at the pediatric clinics, as vaccine supplies allowed.

Of the 62 percent of the 54,000 adult target population who received diphtheria vaccines during the campaign, only 13,400 attended the clinic even after telephone reminders and the distribution of leaflets and flyers to households. After one week of low facility utilization, a one week outreach immunization campaign was run, house to house, every evening from 7:00 PM to 10:00 PM, with an additional 20,000 doses given. Twenty thousand or 38 percent of the target population remained unimmunized.

Primary case contact prophylaxis activity has been uncoordinated and of low priority. Recent meetings have led to the development of a strategy for contact prophylaxis, based on teamwork between epidemiologists and clinicians.

#### **IV. CONSTRAINTS ON DIPHTHERIA CONTROL ACTIVITIES**

Serious constraints have been identified on the successful control of the diphtheria epidemic in the Republic of Moldova.

##### **A. Vaccines**

The timely provision of adequate supplies of vaccines is a major constraint on the campaign to control diphtheria. Immunization is one of the two major mechanisms for the prevention and control of diphtheria in the Republic of Moldova.

Major increases in diphtheria are expected in the autumn with the arrival of cooler weather and the reopening of schools.

The scheduled delivery of vaccines by UNICEF, funded by the Government of Japan, is inadequate for a timely immunization campaign ahead of the expected season. Approximately

11 percent of the needed diphtherial vaccines<sup>9</sup> for adults will have arrived in Moldova by early September 1995.<sup>10</sup> Latest information indicates that another 2.2 million doses of Td, funded by USAID and procured by UNICEF, will arrive at the end of August and help relieve the shortage.

## **B. Antibiotics**

There is a shortage of antibiotic supplies at all levels of the health system. While included in the WHO/UNICEF appeal for Moldova, the supplies required are greatly underestimated,<sup>11</sup> with procurement remaining to be initiated.

## **C. Safe Injections**

Poor injection safety and hazardous injection waste disposal have been identified as a serious problems by previous Technical Assistance missions.

In terms of the diphtheria campaign, the problems can be simply stated:

- *What will be done to assure the **safe** single use and disposal of more than six million disposable needles and syringes?*
- *What will be done to prevent disease transmission and physical injury from the improper use and disposal of more than six million disposable needles and syringes in the environment?*

At the national level RSES, there is an awareness and understanding of the parameters of the problem and of many of the longer term solutions.

At the district and clinical level of the immunization program, health professionals fail to see the problem and insist that current risky practices are safe.

While translations of the recent WHO-recommended *Policy on the Safety of Injections in Immunization Programmes* have been circulated at higher levels of the health system, a great deal of work remains to be done to yield any improvement in this potentially disastrous situation.

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<sup>9</sup> See Appendix C, Revised vaccine estimates for the diphtheria campaign.

<sup>10</sup> See Appendix D, UNICEF FAX, dated 26 June 1995, from H.S. Kwon, UNICEF Supply Division, on Arrival of Vaccines funded by Government of Japan.

<sup>11</sup> See Appendix E, Contact Prophylaxis and Case Management Supply Requirements Projection.

The rapid implementation of the planned shift to re-sterilizable plastic syringes and the associated steam sterilizers and quality assurance measures, along with the necessary field training of health workers, should be carried out in the early 1996 phase of the diphtheria control effort.

#### **D. Coordination and Teamwork**

##### **Ministry of Health**

The major constraint identified is the management of primary contacts of diphtheria cases; these should be identified and receive a single dose of Benzathine Penicillin as prophylaxis. The operational separation of epidemiological, and curative, and preventive health services leaves an estimated 19 of 20 primary contacts untreated with antibiotics.

Under current practices, each diphtheria case is identified by a clinician, who reports it to the Raion level epidemiologist. The epidemiologist then identifies the primary contacts, takes bacteriological and serological samples for laboratory testing, and refers the contacts for prophylaxis.

Patients referral compliance is poor at best, and is further limited by the limited availability of antibiotics at health facilities. Only hospitals maintain some supplies of antibiotics.

An additional operational constraint is that, if antibiotics were supplied to health facilities, they would be used for a variety of purposes and would not always be available for primary contact prophylaxis.

To identify an operational mechanism to solve this problem, a successful meeting was held with the chiefs of Preventive and Curative Health Services, and Senior Pediatricians and Epidemiologists, and their deputies.

A solution was proposed for the duration of the epidemic, by senior officials of the Ministry of Health, Division of Curative and Preventive Services, and calls for teamwork in contact identification by Raion level Epidemiologists who would carry antibiotic supplies, and District Doctors carrying out antibiotic prophylaxis from house to house. An order is being drafted, and is expected to be approved immediately. A joint seminar for clinicians and epidemiologists to introduce this methodology will be conducted by the Republican Epidemiological and Sanitary Station.

Recent information<sup>12</sup> provided by the BASICS Moldova Activity Manager has indicated that the order to institute these new arrangements is in draft, but will not be issued unless or until antibiotic supplies are ensured.

### **Multisectoral**

The national level Chief Medical Officers of the Republican Health Services are responsible for the use of the national media and social mobilization for the mass campaign. The committee members are senior medical or scientific officials under the chairmanship of the Minister of Health. No other government departments, including the MOH's own IEC and logistics professionals, the media, non-governmental organisations, or health service users are represented.

The Ministry of Education operates almost all of the education institutions in the country, and has day-to-day contact with nearly half of the population. A high proportion of diphtheria cases occurred in closed institutions and schools run by the MOE. The Ministry also operates its own health service for students and staff of its larger facilities. In discussions with a senior official of the Ministry of Education, it was clear that a high level of cooperation and coordination between the MOH and the MOE was possible and desirable.

A significant proportion of diphtheria cases occurred among workers in primary industries and agricultural cooperatives, and in the defense forces. Collaboration and cooperation needs to be established for both achieving the immunization targets and for obtaining material and logistical support for the campaign.

A large NGO and private voluntary organization (PVO) sector has developed in Moldova in recent years. In discussions with BASICS Moldova Operations Coordinator, it was clear that there is the will and nascent capacity among the NGOs and PVOs to support and participate in social mobilization activities at both national and local levels.<sup>13</sup>

### **Donors**

Many donors offered and are providing assistance to the national diphtheria campaign and to the national immunization programme. Some conflict in time and resource requirements is inevitable. It is of concern that a planned two week training course on an unrelated subject for Epidemiologists in September 1995 will occur at a time when diphtheria control activities will

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<sup>12</sup> Personal communications, July 21, 1995.

<sup>13</sup> See Trip Report, June - July 1995, by Marcia Rock, BASICS Moldova Activities Coordinator.

be rapidly increasing. Another concern is the unilateral change in vaccine orders made by UNICEF without consultation with Moldovan authorities.

A review of donor activities and a donor coordination committee chaired by the Ministry of Health would provide a forum for solving problems as they arise, and provide a focus for donor assistance planning, collaboration, and cooperation.

Donors will also need to develop their own formal and informal coordination mechanisms for sharing information and resources to enable effective and efficient assistance to the Government of the Republic of Moldova.

#### **E. Public cooperation and IEC**

The experience of the recent diphtheria immunization campaign activity in Chisinau has demonstrated a lack of public interest and public cooperation in immunization for the prevention of diphtheria.

Anecdotal data suggests that the worldwide press reports in the 1980s on vaccine damage to children as a result of pertussis immunization, carried in the Moldovan press in recent years, has generated public fear of immunization. High immunization refusal rates and the continuing reluctance of medical practitioners to accept reduced contraindications reflects this fear.

Health information and health promotion material for the public are highly technical, detailed, and unattractive.<sup>14</sup> The materials seen lack clear health messages and appear to be misdirected information for health professionals. Locally produced health information broadcast on radio and television are similar and use the "talking heads" format. Exceptionally, some high production value, WHO-produced, AIDS and STD videos have been broadcast in English with local language "talk-overs." Continued free media access and limited production assistance are assured for the near future.

In 1995, the production and distribution of paper-based communications materials have been halted by MOH budgetary constraints.

Raion Epidemiologists and other health officials have expressed a desire for technical assistance in producing information and messages for the public.

Technical assistance should be provided to strengthen the technical capacity of the MOH to enable the development and production of clear diphtheria control campaign and immunization information for the public.

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<sup>14</sup>Appendix F contains 1994 and 1995 diphtheria control public information materials.

Equipment and materials should be provided for the limited production of small posters and handouts for use in the diphtheria control campaign.

NGOs are located throughout Moldova and would be a useful resource to obtain public cooperation.

Legislation on mandatory diphtheria immunization requirements for school entry may be of some long-term use in maintaining high coverage in future generations.

#### **F. Medical Practitioner Compliance**

In discussions at senior MOH levels, officials expressed the concern that there may be very limited compliance by clinicians, with the reduced contraindications for diphtheria immunization.

Fear of vaccine damage to children is an element in the circle of public non-compliance with immunization policies, and the application of excessive contraindications by clinicians.

Legislation indemnifying medical practitioners, and providing for compensation of parents of vaccine damaged children for the additional costs of child care, may provide public health benefits. Technical assistance in this area may be useful in the long term.

#### **G. Laboratory Diagnostics**

Of the 165 cases for which there were complete data, 82 cases were confirmed bacteriologically, while 13 were confirmed serologically. There were 410 carriers confirmed by bacteriological and serological methods.

A review of the laboratory supplies situation indicated that there are adequate supplies of culture media and reagents at the RSES laboratories. There are supply shortages in Transdnistrian Moldovan Republic, with a specific request for cystein being made without quantity details.

Antibiotic sensitivity testing, which should be done routinely to follow trends in antibiotic resistance, is not being carried out as a result of shortages of antibiotic test disks.

The laboratory diagnostics supplies requirement needs follow up.

#### **H. Information Systems**

A review of the immunization status of 1995 diphtheria cases enabled the identification of some serious constraints on the recording, reporting, analysis, and use of information for action.

A tremendous quantity of information is collected at service delivery levels and collated or consolidated at district level. Immunization coverage and disease case reports are forwarded to the RSES for analysis.

Immunization service delivery data collection uses a variety of duplicated records, with at least four entries recorded for each dose of vaccine given. It is not entirely clear that all of this information is used for action, though some is used for client recall with limited compliance. Parenthetically, client recall for immunization studies in other countries has indicated that recall schemes increase coverage by approximately 10 percent.

Immunization target populations are calculated by each city or district health facility on the basis of registered clients, less the number of contraindicated clients. Anecdotal data suggests that not all of the population is registered at health facilities, particularly as there has been an increase in mobility and migration. Subtracting the contraindicated clients serves to inflate coverage reports and removes the normal basis of comparability.

The review of diphtheria case reports was complicated by the lack of recording and reporting standards. Of 280 cases notified in the first six months of 1995, only 170 case reports were held by the RSES. Cases notified by the Transdnistrian Moldovan Republic were not reported to the RSES. Of these 170 cases reported, only 165 included patient age data - some by year of birth, some by date of birth, and others by age at the time of presentation. Immunization status was reported by diphtherial vaccine received, most with the date of each dose, while others were reported without dates. While a standard form for cases and another standard form for carriers was to be used, four other forms, with a different set of data, were used for about 25 percent of cases.

During the BASICS mission, two forms were developed and agreed for immunization supply inventory control. A routine inspection reporting form for international vaccine deliveries was also developed and agreed.

The standardization and implementation of the use of these standard forms have been limited and compromised by the inavailability of paper and the lack of capacity to reproduce the forms for distribution and use.

The equipment and materials proposed in section IV.E., for the limited production of small posters and handouts for use in the diphtheria control campaign, could be used for printing the standard forms.

Technical assistance should be considered in information management and standards, and in the use of computers for information management.

## **I. Planning**

A review of the National Immunization Plan, and the Additional Measures on the Control of Diphtheria indicated a serious misunderstanding of planning and the use of plans. This was confirmed in discussions at the central and district levels.

As discussed in section II. above, these national level plans provide guidance and the appropriate context for activity plan development. Set out as orders, objectives, targets, and responsibilities are established, while leaving the actual implementation activity unplanned.

It is a feature of the past and contemporary bureaucratic culture in the NIS that orders or decrees are seen as the equivalent of activity.

Continued technical assistance in immunization program activity planning would enable long term sustainability.

## **V. IMPLEMENTATION PLANS**

Like many aspects of development in the NIS, implementation planning and the planning of activities at operational levels of the health system are relatively new. Formerly reserved for central bureaucracies, the planning function and planning skills need to be moved to the district and sub-district for effective, and more efficient management and organization.

To enable this operational level activity planning, skill development and a standardized set of planning tools were provided to senior district health personnel.

### **A. Activity Planning Workshop**

An activity planning workshop was held on July 4, 1995; participants included 46 District and municipal Epidemiologists and Chief Medical Officers, three staff of the Medical University, one from the Moldovan Railway Organization. The workshop was facilitated by three senior epidemiologists from the RSES, five BASICS interpreters, and the three person BASICS technical team.

The purpose of this workshop was to develop a detailed plan of activities for EPI and diphtheria control for the remainder of 1995 and to the end of 1996. All plans were to be in the context of the National Immunization Plan, and the Additional Measures on the Control of Diphtheria Order 267.

The workshop was intended for Epidemiologists from all Raion SES's, the national EPI and diphtheria control program managers, and selected Pediatricians.

The activity planning included, but was not limited to, the following:

- Training of Staff
- Management
- Stock control
- The vaccine cold chain
- Cost effectiveness and cost benefits
- Procurement of supplies and equipment
- Social mobilization
- EPI manual
- Donor Coordination
- Serological studies
- Adaptation of local research methodologies to WHO standards
- Other operational aspects of EPI and diphtheria control

The initial set of proposed activities was suggested by the Deputy Minister of Health as priorities for BASICS support, while other elements were added by the BASICS team. The workshop process itself enabled the participants to define additional needs and activities.

The workshop participants were provided with planning tools to assist in the planning process.

The following materials<sup>15</sup> were produced in English and in translation in both Romanian and Russian. Each participant was provided with a complete set in their preferred language. In addition, the work sheets for the Directions in Health exercise and the Plan of Action forms were provided in sufficient quantities to allow the development of drafts and final action plans.

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<sup>15</sup> The workshop materials are attached as Appendix J.

<b>PLANNING WORKSHOP MATERIALS</b>
WORKSHOP PROGRAMME HEALTH STATUS PROJECTION EXERCISE PROBLEM PRIORITIZATION EXERCISE EXTERNAL FACTORS EXERCISE PLANNING TERMS PLANNING STEPS: PROCEDURAL GUIDELINES DIRECTIONS IN HEALTH FORM PLAN OF ACTION FORM BUDGET ESTIMATES GUIDELINES

These materials were adapted from materials produced elsewhere for use in provincial health planning,<sup>16</sup> and previously had been used by four countries in the Western Pacific Region.

### **B. Workshop Outcomes**

The workshop produced a consensus on the health situation in Moldova, and the problems which will need to be solved, to enable the control of diphtheria and the improvement of the national immunization program.

In the first exercise, the Health Status Projection, the participants were asked to rate the health status of various population groups. While this exercise was largely a means to introduce a new approach to thinking about the health situation, the consensus developed is of interest.

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<sup>16</sup> Thomason, J.A., Karel, S.G., Bass, A.G., Kitau, R., *Unit E, Provincial Health Planning: Papua New Guinea Department of Health, University of Papua New Guinea Faculty of Medicine*, World Health Organization, John Snow Inc. Child Survival Support Project, Port Moresby,

## POPULATION GROUP GROUP RATING <sup>17</sup>

### RURAL

Children	GOOD TO FAIR
Adult Women	FAIR TO POOR
Adult Men	FAIR TO POOR
Elderly	POOR TO VERY POOR

### URBAN UNEMPLOYED

Children	FAIR TO POOR
Adult Women	FAIR TO POOR
Adult Men	POOR TO VERY POOR
Elderly	POOR

### URBAN EMPLOYED

Children	GOOD TO FAIR
Adult Women	FAIR
Adult Men	GOOD TO POOR
Elderly	POOR TO VERY POOR

In the exercise on Problem Prioritization, the *Major Problems* identified by the participants were (in no particular order):

- Immunization Coverage
- Diphtheria Campaign
- Lack of Training of the Staff
- Supplies of Vaccine and Syringes
- Quality of Bacterial Preparations
- Vaccine Cold Chain
- Local Authority Support Mechanisms
- Legal Support
- Public Cooperation
- Correct and Safe Injections
- Additional Supplies
- Contact Prophylaxis
- Finance of Immunization
- Laboratory Diagnostics
- Sterilization of Injection equipment

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<sup>17</sup> See Appendix J, Health Status Projection, for definitions of the ratings.

The participants found the setting of priorities difficult, with all problems ranked as the highest priority level which must be solved first.

Related to these identified problems, these *Social and Environmental Factors* were identified:

- Health Conditions
- Public Apathy and Activity
- Standards of Medical care
- Working Conditions and Power Cuts
- Training of Specialists
- Lack of Good Information
- Lack of Roads and Transportation

The participants had difficulty with the identification of service delivery factors and only identified the following:

- Appropriate Syringes
- Training of Specialists

The participants also had difficulty with the identification of Planning and Management Factors, though the four that follow are clearly the most important:

- Staffing
- Financing
- Equipment
- Correct Planning

In the External Factors exercise, the participants identified the likely external factors which may have significant effects on their plans:

- Political Changes
- Natural Disasters
- Industrial Accidents
- Pandemics
- Migration
- Economic Changes
- International Relations

### **Directions in Health**

Using the *Directions in Health*<sup>18</sup> form, a group 1995 to 1996 Strategic Plan and consensus were developed.

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<sup>18</sup> See Appendix J, *Directions in Health* planning form.

GOALS	OBJECTIVES	STRATEGY	INDICATORS
Immunization Coverage 96 percent	To complete immunization of infants to 96 percent and adults to 95 percent by the end of 1995	Register children, train medical staff, provide vaccines, provide information, improve cold chain, improve vaccine distribution, improve epidemiological tracking and identification and treatment of contacts	Sufficient collective immunization - 90 percent by serology
Eliminate Diphtheria	(objective not set)		Absence of cases

### Action Planning

In the short time available for the workshop, it was not possible for the participants to complete the action planning exercise. In the event, 18 draft Plans of Action were produced and are attached in translation in Appendix J, Part 2.

It was agreed that completed Plans of Action would be submitted to the RSES at the end of July 1995, with the monthly statistical reports.

The participants displayed a reasonable understanding of the planning terms and approaches introduced. Two main difficulties emerged during the action planning exercise:

- Confusion between an **order** and an **activity**, often seen as equivalent; and,
- Lack of knowledge of the cost of materials, goods, or services.

### C. Follow-up

Activity Plans will be completed by the workshop participants, and submitted to the RSES at the end of July 1995. These plans will require a review by both the National Authorities and by BASICS.

The RSES may need to negotiate and modify some of the planned activities and responsibilities assigned in each district plan.

BASICS may need to identify resource requirements which would not be met by the Government of Moldova but which could be reasonably met by BASICS or other donors.

The BASICS Activities Manager in Moldova is providing liaison and follow up on the completion of the Plans of Action. It is expected that copies will be obtained and translations made.

## **D. Monitoring**

A monitoring plan will need development and follow up by both the RSES and BASICS.

## **VI. RECOMMENDATIONS**

1. The urgent provision of vaccines, antibiotics, and antitoxin, and syringes and the means for their safe disposal, must be secured in a timely manner to enable the control of the diphtheria epidemic in Moldova. While donor, including USAID and GoJ funding is committed, procurement has not been completed and needs to be followed up with UNICEF.
2. A re-evaluation of the diphtheria control immunization schedule should be conducted. Whether three doses of Td vaccine for the population aged 30 to 50 years, or one dose of DT for the five to seven year olds, and one dose of Td for those aged eight to 19, addresses the relative risk should be re-evaluated.
3. The draft order on teamwork in contact identification should be approved immediately. This would involve Raion level Epidemiologists who would carry antibiotic supplies, and District Doctors carrying out antibiotic prophylaxis from house to house.
4. The rapid implementation of the planned shift to re-sterilizable plastic syringes and the associated steam sterilizers and quality assurance measures, along with the necessary field training of health workers, should be carried out in the early 1996 phase of the diphtheria control effort.
5. Multi-sectoral collaboration and cooperation should be established for both achieving the immunization targets, and for obtaining material and logistical support for the campaign. Other government ministries such as the Ministry of Education, as well as major industrial and agricultural cooperatives, NGOs, and the private voluntary sector, should be included in a National Diphtheria Task Force.
6. A review of donor activities should be conducted and a donor coordination committee chaired by the Ministry of Health established to provide a forum for solving problems as they arise, and provide a focus for donor assistance planning, collaboration, and cooperation. Donors will also need to develop their own formal and informal coordination mechanisms for sharing information and resources to enable effective and efficient assistance to the Government of the Republic of Moldova.
7. Technical assistance should be provided to strengthen the technical capacity of the MOH to enable the development and production of clear diphtheria control campaign, and immunization information for the public. Equipment and materials should be provided for

the limited production of small posters and handouts for use in the diphtheria control campaign.

8. The concern that there may be very limited compliance by clinicians, with the reduced contraindications for diphtheria immunization, raises the question of the achievability of the mass immunization coverage targets. Legislation indemnifying medical practitioners and providing for compensation of parents of vaccine damaged children for the additional costs of child care may provide public health benefits. Technical assistance in this area may be useful.
9. The provision of technical assistance should be considered in information management and standards, and in the use of computers for information management. The equipment and materials (proposed in section IV.E. and in recommendation 7 above), for the limited production of small posters and handouts for use in the diphtheria control campaign could be used for printing the standard forms.
10. Continued technical assistance in immunization program activity planning would enable long-term sustainability.
11. Activity Plans will be completed by the workshop participants and submitted to the RSES at the end of July 1995. These plans will require a review by both the National authorities and by BASICS. The RSES may need to negotiate and modify some of the planned activities and responsibilities assigned in each district plan. BASICS may need to identify resource requirements which would not be met by the Government of Moldova, but which could be reasonably met by BASICS or other donors.
12. An activity monitoring plan will need development and follow up by both the RSES and BASICS.
13. A thorough epidemiological evaluation of the 1994 and 1995 diphtheria cases, case immunization status,<sup>19</sup> and vaccine efficacy in Moldova should be conducted at the end of the first quarter of 1996.

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<sup>19</sup> For discussion, see Appendix G, Immunization Status of Diphtheria Cases: 1 Dec. 1994 - 4 June 1995.

## **APPENDICES**

## **Appendix A**

Order No. 267 of 2 June 1995, "On Additional Measures for Eradication of Diphtheria Epidemics in the Republic of Moldova" Minister of Health, Republic of Moldova

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## DIPHTHERIA CONTROL IN THE REPUBLIC OF MOLDOVA

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Ministry of Health  
Republic of Moldova

Order No. 267 of 2 June 1995  
Kishinev

### ON ADDITIONAL MEASURES FOR ERADICATION OF DIPHTHERIA EPIDEMICS IN THE REPUBLIC OF MOLDOVA

Hereby, in connection with the diphtheria epidemics in the Republic of Moldova, I  
APPROVE:

1. Programme of additional actions for diphtheria prevention and control for the period of the epidemic spread of this infection. (see Annex 1).
2. Coordination Committee for Diphtheria Prevention and Control (see Annex 2).
3. Budget of the campaign of diphtheria control
4. Position of the inspector-specialist on immunoprevention in the central apparatus of the MOH of Moldova.
5. Weekly statistical reporting on the progress of immunization among the population.

#### ORDER:

1. The Heads of the Chief Directorates of the MOH doctors V.Volovei, E.Paladi, V.Goroshenko and Rusu-Lupan), directors of scientific research institutes doctors E.Gladun, M.Popovich), chief medics of the republican medical centers doctors V.Diatishin, E.Kotsaga), rector of Kishinev State Medical University doctor I.Ababii:
  - 1.1. To ensure implementation of the planned actions in the projected timelines along with the necessary methodological and practical assistance to implement the Programme.
  - 1.2. To organize in June-July of this year a scientific-practical conference, with participation of the Republic's scientists on the problems of diphtheria diagnostics, treatment, prevention and control.
  - 1.3. To organize at the chairs of qualifications improvement, starting from 1995, seven day courses on organization and implementation of immunization of population for physicians, pediatricians and family doctors.
  - 1.4. To work out, within the month of May of this year, in accordance with the WHO requirements a Ministry draft document, defining a standard case definition of a diphtheria case.

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## DIPHTHERIA CONTROL IN THE REPUBLIC OF MOLDOVA

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- 1.5. To assign the T.Chorba Infectious Diseases Hospital (V.Detishin) as a methodological and consultative center on immunization; and Center of Health Protection for Mother and Child (E.Gladun) with appropriate specialists in charge covering every city and district.
2. Association "Moldovapharm" (D-r I.Rybak) is to take measures to ensure steady supply of anti-diphtherial serums, antibiotics and other medicines for treatment of diphtheria patients to the medical facilities, as well as bicilline and erythromicin for preventive treatment of the contacts in the outbreak areas.
3. To the Chief Medics of the Republican health facilities (doctors V.Babaleu, V.Diatishin, E.Gladun, E.Kotsaga, V.Borsch):
  - 3.1. To provide the methodological support of the mass campaign for immunization against diphtheria, procurement and distribution of vaccines and serums in the territories in accordance with the requirements.
  - 3.2. Together with the Republican mass media to take the necessary measures for social mobilization of the population for conducting the mass immunization.
4. The Centre of Medical Statistics (doctor G.Rusu) is to take measures for printing the immunization registration forms (f.No.063-Y and f.No.064-Y), for the needs of the cities and the districts, respectively.
5. To the heads of city (municipal) bodies and facilities of health care, chief medics of municipal and district centres of hygiene and epidemiology.:
  - 5.1. To make proposals on the supplementary actions to eradicate the diphtheria epidemics that are to be considered at the sessions of anti-epidemic committees at the local executive bodies of power and mayor's offices.
  - 5.2. To work out the concrete steps and functional descriptions of those implementing the mass vaccination of the population, that is to be completed within 10 days since the date of receipt of the necessary amount of the vaccines.
  - 5.3. Set up at the city and district polyclinics the immunologic committees with the in-staff position of an immunologist doctor, responsible for the immunization of the children and adults with frequent and chronic diseases.
  - 5.4. To undertake, along with the mass media additional measures on social mobilization of medical employees and the population to implement the programme of diphtheria elimination.
  - 5.5. For the period of the epidemic to submit to the RHEC (tel. 72-96-00, 72-96-03, 72-81-32, 73-57-68) a weekly report as per Annex No.5 on the progress of the mass vaccination of the population.

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**DIPHTHERIA CONTROL IN THE REPUBLIC OF MOLDOVA**

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5.6. Before December 1, 1995 to submit to the MOH the data on the status of implementation of this order.

Control over the implementation of the order to be entrusted to the Deputies Minister doctors M.Magdei and P.Kimirchuk.

Minister (signature) Timofei Moshniaga

Annex No.1  
to the Order of  
the Minister of Health of Moldova  
No.267 of 2 June 1995

## PROGRAMME

### OF THE ADDITIONAL ACTIONS TO CONTROL THE DIPHTHERIA EPIDEMICS IN THE REPUBLIC OF MOLDOVA

Despite the earlier taken measures to prevent and control diphtheria in the Republic of Moldova the epidemic process of this infection expanded in September-October 1994, with dozens of registered cases. The year ended with 376 cases of the disease and 617 cases of hosting of toxicogenic strains of diphtheria. In this current year cases of diphtheria were registered as well. In January to April of 1995 231 patients and 292 carriers were registered. 19 people died of diphtheria in 1994, and in only the first four months of this year 10 people died.

The Republic is in the continuing state of diphtheria epidemics.

The epidemics progresses on the background of low collective immunity caused by:

- inadequate and irregular supply of vaccines and syringes to the Republic in the last three years.
- use of certain vaccines with the low potency antigenic component and with incorrect scheduling in the period between 1988 and 1994.
- low coverage of the population with anti-diphtherial immunization, especially adult population.
- some drawbacks in organization of immunization and fictitious records of allegedly accomplished vaccinations in the general health care network.

Development of the epidemics and high mortality from diphtheria was exacerbated by the inadequate supply of the health and sanitary-epidemiological facilities with serums, antibiotics, diagnosticums, disinfectants, transport and fuel.

In order to eliminate the epidemics of diphtheria and to implement the Government Decree of June 3, 1994 on "Approval of the National Immunization Plan" through announcing in the Republic of Moldova" of the state of epidemics it is necessary:

1. To ensure implementation of additional measures to immunize the public based on the following scheme:
  - 1.1. Children below 3 (1992-1995) should be covered with DPT vaccination at least 95%.
  - 1.2. Children below 3, when justifiably denied DPT are to be immunized with DT.
  - 1.3. Children below 2 vaccinated with Td receive an additional dose of D twelve months after the previous vaccination.
  - 1.4. Children from 3 to 7, incl. the first grade (1995-1996 school year) receive an additional dose of DT with the interval of no less than 6 months since the previous vaccination.

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## DIPHTHERIA CONTROL IN THE REPUBLIC OF MOLDOVA

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- 1.5. Children from 8 to 14 (1981-1987) receive an additional dose of 5LF (or Td) with the interval of 6 months since the previous vaccination.  
Children at 11-14, initially vaccinated with Td, 2 months after receiving 5LF (or Td) are vaccinated with an additional dose of Td.
- 1.7. Children at 15 receive booster of Td as per immunization schedule.
- 1.8. Adults, at the age of 30 to 50, incl. those immunized once in 1994-95 receive additionally the second and the third dose of Td. Second dose is received at least 1.5 months after the first one, and the third dose is administered 6 months after the second inoculation, regardless the time passed after the first dose. Adults from this age group, not immunized in 1994-95 are to be vaccinated with two doses of Td with the interval of 45-60 days in between and a booster of one Td dose six months after the second dose.
- 1.9. Adolescents and adults of 16 to 29 and 51 to 60 years old are vaccinated with one dose of Td, except those vaccinated in 1994-95.
- 1.10. Adults above 60 are not planned for immunization, their vaccination is done only if epidemiologically indicated and applied for one.
2. To forbid use of Td for vaccination and first and second boosters at 22 and 24 months and 7 years of age.
  - 2.1. To ensure priority of boosters for the high risk groups.
  - 2.2. High risk groups are to be considered:
    - Health care workers, employees in the retail trade and public catering, transport, (educational) establishments for children and adolescents, secondary specialized and vocational schools, universities and colleges, tele-communications services, persons conducting asocial mode of life, persons often leaving the territory of Moldova, clergy.
4. To determine, that when antibody titre to diphtheria is equal or less than 0.015 ME all the persons are subject to vaccination:
  - Children below 7 - with two doses of DT with the 45 day interval, and with a booster with DT 12 months later.
  - Persons above 7 are vaccinated twice with Td or 5LF with the 45 days interval, depending on the presence of immunity to tetanus.Persons with titres 0.03-0.06 ME are to receive a booster if there is more than 2 years left till the next booster.  
To give boosters to the children below 6 to 7 DT (5LF) - toxoids are used, to persons above 7 - DT (5LF) - toxoids are used. Subsequent boosters are conducted according to the schedule.
5. To determine, that in the establishments of the closed type (infant orphanages, boarding schools, special needs children boarding schools), also in psychiatric

and tuberculosis hospitals, homes for old aged and invalids the admittance (hospitalization) of the specific contingent and staff hiring is done only after the laboratory examination for diphtheria and submitting data on the previous immunizations status. persons hospitalized without the data on vaccinations are to be immediately immunized. In the above mentioned facilities otolaringologic examination is to be conducted for all the persons in September-October, with the ensuing sanation of the chronic otolaringologic pathology. At the same time a preventive random bacteriological examination is held with diphtheria in view.

6. To classify all the cases of diphtheria and hosting into the indigenous and imported from outside of Moldova.
7. To determine, that the only contraindication to diphtherial vaccines in the time of epidemics can be strong allergic reaction to the previously administered dose of the preparation in question.
8. To return to the health facilities Forms 112, 25 and to ensure strict control over availability of the appropriate data about the vaccinations in them.
9. To improve the differential diagnostics of diphtheria to ensure concurrently with the bacteriologic sampling of anginas (with follicular, lacunar, and paratonsillary abscesses) intake of blood for serologic research of the immunity tension to diphtheria and tetanus.

In the case of positive bacteriologic result for diphtheria the second blood sample should be taken in 7 to 10 days after the previous one, with both paired serums to be examined to determine the level of antibodies to diphtheria.

If by the clinical indications the patient has to receive anti-diphtherial serum, then the collection of the second sample of blood will be done before administering the serum, if more than 4 days had passed after the first sample.

In case of complicated differential diagnostics of anginas with diphtheria concurrent collection of the material for diphtheria and pathogenic microflora (Staphylococcia, Streptococcia, Enteroococcia, gram-positive bacteria etc.) is to be accomplished.

10. To obligate the epidemiologist doctors to record in the diphtheria and other infections in-patients' cards the immunization status as well the conclusion on the diagnosis, based on the standard case definition.

Deputy Minister (SEAL) M.MAGDEI

**Annex No.2**

**to the Order of the Minister of the Republic of Moldova  
No.267 of June 2, 1995**

**Coordination Committee on  
Diphtheria Prevention and Control  
in the period of its epidemic proliferation.**

1. Timofei MOSHNIAGA - Minister of Health of RM - Chairman of the Committee
2. Mikhail MAGDEI - Deputy Minister of Health - Co-Chairman
3. Mikhail Vlasov - Chief Inspector - Doctor from the Chief Sanitary-Epidemiologic Directorate of the MOH.

**Members of the Committee:**

4. Victor VOLOVEI - Head of the Chief Directorate of Health Care, Prevention and Reforms in Health Care
5. Valentina MELNIK - Deputy Head of the Chief Directorate of Health Care, Prevention and Reforms in Health Care.
6. Ekaterina Stasi - Chief Pediatrician, MOH
7. Petru GALETSKI - Chief Microbiologist, MOH
8. Konstantin ANDRIUTSA - Chief Infectionist, MOH
9. Viorel PRISAKARU - Head of the Chair of Epidemiology, Kishinev State Medical University
10. Galina RUSSU - Head of the Chair of Children's Infectious Diseases, Kishinev State Medical University
11. Victor DIATISHIN - Chief Medic of T.Chorba Infectious Diseases Hospital
12. Vasilii SAKHOTSKII - Deputy Chief Medic of the Republican HEC

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## DIPHTHERIA CONTROL IN THE REPUBLIC OF MOLDOVA

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Annex No.3

to the Order of Ministry of Health of the Republic of Moldova  
No.267 of 2 June 1995

Estimate of expenses from the Republican Anti-epidemic Fund in the campaign of mass immunization of population and elimination of the diphtheria epidemics

thousands of lei

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1. Purchase of anti-diphtherial vaccine Td in the institute Pasteur Merriex "Serums and Vaccines", France

5,000,000 doses x 0.96 lei = 4,800,000 4,800.0

2. Acquisition of syringes for mass immunization of population

6,500,000 x 0.31 lei = 2,015,000 2,015.0

3. Obtaining anti-diphtherial serums (for 10% of projected cases number, i.e. 900)

90 x 453.9 lei = 40,851 40.9

4. Purchase of antibiotics and other life- essential medication for treatment of the ill  
900 x 907.8 lei = 817,020 817.0

- for treatment of the contacts (50% of the total number of the patients)

450 x 453.9 = 204,255 204.3

5. Acquisition of the refrigerators for vaccine storage

100 x 700 lei = 70,000 70.0

6. Diagnosticums, laboratory equipment, culture media, glass etc. - for examination of the ill

900 x 9 examinations/research x 100 lei 810.0

- for examination of the contacts

2,700 x 100 = 270,000 270.0

7. Expenditures on the social mobilization for mass immunization preparations  
184.0

8. Preparation of the health workers 115.0

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TOTAL expenses 9,326.2 thousand Lei

**DIPHTHERIA CONTROL IN THE REPUBLIC OF MOLDOVA**

Annex Nr.5

to the Order of Ministry of Health of the Republic of Moldova  
No.267 of 2 June 1995

**WEEKLY REPORT  
ON THE PROGRESS OF ANTI-DIPHTHERIAL CAMPAIGN  
OF IMMUNIZATION**

In the period from \_\_\_\_\_ to \_\_\_\_\_

Is presented by:

- Health facilities - to the Territorial Centers of Hygiene and Epidemiology - weekly, every Monday
- The Territorial Centers of Hygiene and Epidemiology - to the Republican Center of Hygiene and Epidemiology - weekly, every Wednesday

Age group	Total Population	Immunized with Td before 2 June 1995		Total immunized during the campaign, starting from 1 June 1995			
		1994	1995	1 dose DT	1st Dose Td	2nd dose Td	3rd dose Td
		01	02	03	04	05	06
3 - 6							
7							
8 - 10							
11 - 14							
15							
16 - 19							
20 - 29							
30 - 39							
40 - 49							
50 - 59							
>=60							
<b>TOTAL</b>							

- Number of those immunized during the campaign is to be submitted every week, with incrementation.
- Those immunized with several doses will be shown in each column, in accordance with the doses received.
- Data from columns 1, 2 and 3 will be reflected in every weekly report

AVAILABILITY OF VACCINES		DT	Td
Total of vaccine, received from June 1, 1995 (doses)			
Balance of vaccine by the time of compiling the report (doses)			

Head of the health facility \_\_\_\_\_

YPOC 3/19/1995 1333



MINISTERUL SANATATII  
AL REPUBLICII MOLDOVA  
МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ  
РЕСПУБЛИКИ МОЛDOVA

C E R I N

0206 95 Nr. 267

Dr. Chiriac  
I. Krumova

Cu privire la măsurile supli-  
mentare în lichidarea epi-  
demiei de difterie în Republica  
Moldova.

În legătură cu epidemia de difterie în Republica Moldova,  
A F R C D:

1. Programul măsurilor suplimentare de profilaxie și  
combatere a difteriei în Republica Moldova în perioade  
epidemică (anexa 1).
2. Comitetul de coordonare a problemelor de profilaxie  
și combatere a difteriei (anexa 2).
3. Devizul de cheltuieli în campania de lichidare a  
difteriei.
4. C funcție în aparatul central al MS al RM de inspector-  
medic specialist în domeniul imunoprofilaxiei în cadrul  
Direcției principale curative în limita statelor ministerului.
5. Raportul statistic săptămânal pe imunizarea populației.

C R F C N:

1. Șefilor direcțiilor principale a Ministerului Sănătății  
al RM (dd.V.Valovei, L.Faladi, B.Goroșenco, I.Rusu-Lufan),  
directorilor instituțiilor științifice (dd.E.Gladun, M.Popovici),  
medicilor-șefi ai instituțiilor medicale republicane (dd.V.Pea-  
tișin, E.Cotața), rectorului USMC (I. Atabii):
  - 1.1. A asigura îndeplinirea măsurilor preconizate și în  
tereni stabiliți cu acordarea ajutorului metodic și practic  
necesar instituțiilor din teren pentru îndeplinirea programului.
  - 1.2. Cu concursul savanților din Republica Moldova de  
organiza în lunile iunie-iulie a.c. o conferință științifico-  
practică pe probleme de diagnosticare, tratament, investiga-

și combatere a difteriei.

1.3. La baza catedrelor de perfecționare de preven-  
ție începând cu a.1995 pentru terapeuți, pediatri, medici-generalişti  
în curs de 7 zile de reciclare în problemele de organizare și  
efectuare a imunizărilor populației.

1.4. În conformitate cu cerințele GKS-ului în decursul  
lunii mai a.c. a elabora proiectul documentului MS al RM de  
determinare a entității standard de caz la difterie.

1.5. A determina ca centru metodic și consultativ pe  
întrebările de imunoprofilaxie pentru populația adultă Spitalul  
de boli infecțioase T.Ciortă (V.Peațișin), pentru copii și  
adolescenți Centrul mamei și copilului (E.Gladun) cu specialiștii  
curatori pe fiecare oraș, raion.

2. Asociația "Moldovafarm" (d.I.Pîbac) a lua măsuri pentru  
asigurarea permanentă a instituțiilor medicale cu ser antidifte-  
ric, antibiotice și alte medicamente necesare pentru tratamentul  
bolnavilor de difterie, precum și a tratamentului preventiv  
profilactic cu tetraciclină și eritromicină a tuturor contactilor  
din focarele de difterie.

3. Medicilor-șefi a instituțiilor republicane (dd.V.Eștălișu,  
V.Peațișin, E.Gladun, E.Cotața, V.Borșci):

3.1. A asigura organizarea metodică a campaniei de imun-  
izare antidifterice în masă a populației, achiziționarea și  
repartizarea vaccinurilor și serurilor în teren conform necesi-  
tăților.

3.2. În comun cu organele mas-medii republicane a întreprinde  
măsurile de rigoare în mobilizarea socială a populației la  
efectuarea imunizărilor în masă.

4. Centrul de staționar medicală (d.Gb.Rusu) a lua măsuri  
de editare a formularelor de evidență a vaccinărilor populației  
(ff.0533, 0540, separat pentru necesitățile urbane și rurale).

5. Conducătorilor organelor și instituțiilor medicale  
orășenești, medicilor-șefi a spitalelor centrale naționale,  
medicilor șefi a centrelor de igienă și epidemiologie orășenești  
și naționale:

5.1. A înainta propuneri în executivile și primăriile  
locale de acordare la cererile antidifterice a programului  
suplimentar de lichidare a epidemiei de difterie.

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1.1. Copiii în vîrstă sub 3 ani - (a.n. 1992-95) se vor imuniza, conform calendarului cu vaccin DTP atingîndu-se o acoperire de 95% în fiecare grupă de vîrstă;

1.2. În cazul omiterii motivate de la vaccinare DTP a copiilor sub 3 ani, ei se vor vaccina cu vaccinul DTP conform deciziei consiliului medical;

1.3. Copiii în vîrstă de pînă la 3 ani, vaccinați primar cu anatoxina DT-M, se vor vaccina suplimentar cu o doză de vaccin DT cu interval nu mai mic de 12 luni de la doza anterioară;

1.4. Copiii în vîrstă de 3-7 ani, inclusiv clasa I (anul de studii 1995-1996) se vor imuniza cu o doză suplimentară de anatoxină DT cu un interval nu mai mic de 6 luni de la doza anterioară;

1.5. Copiii în vîrstă de 8-14 ani (a.n. 1991-97) se vor vaccina cu o doză suplimentară de AD-M (sau Td) cu interval nu mai de 6 luni de la doza anterioară;

1.6. Copiii, ce au împlinit 11-14 ani, care au fost vaccinați primar cu DT-M, peste 2 luni după imunizarea cu AD-M (sau Td) vor fi imunizați suplimentar cu a doua doză de DT-M (Td);

1.7. Copiii în vîrstă de 15 ani se vor revaccina cu DT-M (Td), conform calendarului;

1.3. Adulții în vîrstă de 30-50 de ani, care au primit o doză de Td (DT-M) pe parcursul anilor 1994-95 li se vor administra a doua doză suplimentară de Td (DT-M). Doza a doua se va administra cu un interval nu mai mic de 45 zile de la doza primită în 1995, a treia - peste 6 luni după a doua.

Adulții din aceste vîrste (30-50 ani), neimunizați în anii 1994-95, vor fi supuși vaccinării cu două doze de Td (DT-M) cu un interval de 45-60 zile între ele și revaccinării cu a doua doză de Td (DT-M) peste 6 luni după doza a doua;

1.9. Adolescenții și adulții în vîrstele de 16-29, 51-60 ani vor fi imunizați cu o doză de anatoxină Td (DT-M) cu excepția celor imunizați pe parcursul anilor 1994-95;

1.10. Adulții mai în vîrstă de 60 ani la revaccinare nu se planifică, imunizarea efectuîndu-se numai din indicații epidemiologice sau la adresarea persoanei pentru a fi imunizată;

2. A interzice aplicarea anatoxinei DT-M pentru vaccinarea primară și revaccinarea la 22-24 luni și 6-7 ani.

3. A asigura în primul rînd revaccinarea populației din grupele de risc. A considera drept grupe de risc:

- lucrătorii medicali, persoanelor din comerț și alimentație publică, transport, lucrătorii instituțiilor pentru copii și adolescenți, a instituțiilor de învățămînt mediu special și superior, serviciilor de comunicații și servicii sociale, persoanele cu un mod asocial de viață, celor cu deplasări frecvente peste hotarele țării, persoanelor din cadrul cultelor religioase;

4.A stabili, că persoanele, depistate cu titru de anticorpi 0,015 UI/ml. și mai mic, se supun vaccinării;

- copii sub 7 ani - cu 2 doze DT cu interval de 45 zile, cu revaccinarea ulterioară peste 12 luni cu DT;

- persoanele în vîrstă de peste 7 ani - cu 2 doze DT-M sau AD-M (în dependență de starea imunității la tetanos) cu interval de 45 zile.

Persoanele cu titru 0,03-0,06 UI/ml în dependență de starea imunității la tetanos, dacă pînă la revaccinarea calendaristică au rămas mai mult de 2 ani, se revaccinează cu o doză de DT (sau AD-M) în vîrsta de pînă la 7 ani, DT-M (sau AD-M) în vîrstă de peste 7 ani.

Revaccinările urmatoare se efectuează, conform calendarului în vigoare.

5.A stabili, că în instituțiile de tip închis (casele de copii, școlile internat, casele-internat de toate profilurile), precum și în staționările de psihic și tuberculoză, azilurile pentru bătrîni și invalizi, internarea și angajarea la lucru se efectuează numai după investigarea de laborator la difterie și prezentarea datelor despre imunizările anterioare. Persoanele internate fără imunizări sau date despre ele se imunizează imediat.

În aceste instituții în lunele septembrie-octombrie anual se efectuează controlul ORL a tuturor discipolilor cu sanarea ulterioară a patologiei ORL cronice. Concomitent se efectuează o investigație serologică profilactică la difterie.

6. A diferenția toate cazurile de difterie și portaj a germeniilor toxigeni în indigene și de import (din afara țării);

7. Unica contraindicație medicală pentru vaccinul antidifteric în starea de epitezie <sup>pentru adulți</sup> este numai o reacție alergică puternică la administrarea anterioară a acestui vaccin;

la ordinul MS al RM  
din 26.7 Nr. 2069

5.2. A determina sub control personal măsurile concrete, funcțiile executanților în realizarea vaccinărilor în masă a populației cu finalizarea lor în termen de 10 zile de la ziua primirii în teren a cantităților necesare de vaccin.

5.3. A crea în policlinicile orășenești și în <sup>centrale</sup> celele comisiilor imunologice, introducând în statele lor câte o funcție de medic-imunolog pentru asigurarea imunizării copiilor și adulților cu afecțiuni cronice și frecvent bolnavi.

5.4. A lua măsuri suplimentare în contact cu organele mas-medie locale în mobilizarea socială a lucrătorilor medicali și a populației la traducerea în viață a programului de lichidare a epidemiei de difterie.

5.5. A prezenta în toată perioada de epidemie săptămânal, telefonic la CRIE (72-96-00, 72-96-03, 72-21-32, 73-57-68) darea de seamă a cursului vaccinărilor în masă conform anexei 5.

5.6. A informa Ministerul Sănătății al RM până la 01.12.95 despre îndeplinirea ordinului dat.

Controlul îndeplinirii ordinului dat se atribuie vice-miniștrilor MS al RM dd. M. Maștei, F. Ghimirciuc.

PROGRAMUL

MĂSURILOR SUPPLEMENTARE DE COMBATERE A EPIDEMIEI DE DIFTERIE ÎN REPUBLICA MOLDOVA.

Necătfind la măsurile întreprinse anterior în profilaxia și combaterea izbucnirilor de difterie în Republica Moldova, procesul epidemic a luat proporții în septembrie - octombrie, a. 1994, înregistrând zeci de cazuri de difterie.

Anul s-a finalizat cu 376 de bolnavi difterici și 617 cazuri de portaj de bacili difterici toxigeni. Continuă înregistrarea cazurilor de difterie și pe parcursul anului 1995.

În lunile ianuarie-aprilie au fost înregistrați 231 bolnavi și 292 purtători. Din cauza difteriei au decedat în a. 1994-19 bolnavi, iar numai în 4 luni a.c. - 10 persoane.

Republica se află în stare de răspândire epidemică continuă a difteriei.

Epidemia dată evoluează în baza nivelului scăzut al imunității colective, forsat de:

- lipsa asigurării populației în ultimii 3 ani cu vaccinuri, seruri, seringi, preparate diagnostice, dezinfectanți la timp, și-n cantitățile necesare;
- administrarea unor vaccinuri cu eficiența diminuată și-n termeni neoptimali;
- efectuarea imunizărilor nedepășite și cu întârzieri a populației;
- persistența unor carențe de organizare și falsificări în activitatea serviciilor medicale din republică.

În scopul lichidării epidemiei de difterie și îndeplinirii Hotărârii Guvernului Nr. 564 din 03.09.94 "Cu privire la aprobarea Programului Național de Imunizări", prin declarare în Republica Moldova a stării de epidemie la difterie, e necesar:

1. A. asigura efectuarea măsurilor suplimentare de imunizare anti-difterică a populației, conform schesei:

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Ministru

Timofei Măreșca

8. A refăcut în instituțiile medicale cartelele F.112/u și O25/u și a asigurat evidența strictă în ele a datelor despre imunizările efectuate;

9. În scopul ameliorării diagnosticului diferenciat al difteriei, a asigurat paralel cu investigarea bacteriologică la difterie a bolnavilor cu angine (foliculare, lacunare, abscese paratonzilare), colectarea sângelui pentru examinarea serologică a stării de imunitate către difterie și tetanos. În caz de rezultat bacteriologic pozitiv la difterie al doilea ser va fi colectat peste 7-10 zile după priaul și ambele seruri perechi vor fi investigate pentru determinarea nivelului de anticorpi către difterie. Dacă din indicații clinice bolnavului se va administra ser antidifteric, colectarea probei a doua de sânge se va efectua înainte de administrarea serului, dacă de la colectarea primei probe au trecut mai mult de 3 zile.

În cazurile compuse de diferențiere clinică a anginelor de difterie a practica colectarea paralelă a materialului pentru investigații bacteriologice la difterie și microflora piogenă (stafilococi, streptococi, enterococi, bac.-pliocian, bacili gram-negativi, etc.);

10. A obligat medicii-epidemiologi în înscrisura în fișele bolnavilor ce stăpânesc cu difterie, alte infecții, datele despre imunizările bolnavilor și concluzii în privința diagnosticului, reeșind din definiția standard de caz.

Vice-ministru

Magdei E.V.

Comitetul de coordonare a problemelor profilaxiei și combaterii difteriei în perioada epidemică

- 1. Tirofei Moșneaga - ministrul Sănătății al RM, președinte
- 2. Mihai Magdei - vice-ministru al Sănătății RM, copreședinte
- 3. Mihail Vlasov - inspector principal al DFSE al MS RM, secretar

membrii comitetului:

- 4. Victor Valovei - șeful Direcției principale curative a MS al RM
- 5. Valentina Melnic - șef adjunct al Direcției principale curative a MS al RM
- 6. Ecaterina Stasi - pediatrul principal al MS RM
- 7. Petru Galățchi - microbiologul principal al MS RM
- 8. Constantin Andriucă - investiciștii principal al MS RM
- 9. V.Irisăcaru - șeful catedrei epidemiologie a USM
- 10. Galina Rusu - șefa catedrei boli infecțioase la copii a USM
- 11. V.Boatișin - medic-șef al Spitalului de boli infecțioase T.Corbă
- 12. Vasile Sohotchi - medic-șef adjunct al CRIS

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Anexa nr. 3  
la ordinul MS al RM  
nr. 167 de la 02.06 al 1995

Anexa nr. 5  
Приложение N.  
la ordinul M.S. al R.M. nr. 167 din  
к приказу МЗ РМ N. 167 от 02.06.95

Devizul de cheltuieli in compania  
de lichidare a difteriei din fondul antiepidemic  
republican

RAPORT SAPTAMINAL  
CU PRIVIRE LA MERSUL CAMPAНИЕI DE IMUNIZARE IMPOTRIVA DIFTERIEI

ЕЖЕНЕДЕЛЬНЫЙ ОТЧЕТ  
О ХОДЕ КАМПАНИИ ИМУНИЗАЦИИ ПРОТИВ ДИФТЕРИИ

Pe perioada de la \_\_\_\_\_ pina la \_\_\_\_\_  
За период с \_\_\_\_\_ по \_\_\_\_\_

lei

1. Procurarea vaccinului antidifteric  
Td la Institutul Pasteur Merveux  
"Seruri și vaccinuri" din Franța  
3.000.000 x 0,95 = 4.600.000 4.600,0
2. Seringi pentru administrarea  
vaccinului Td  
6.500.000 x 0,31 = 2.015.000 2.015,0
3. Procurarea antitoxinei difterice  
(10% de la numărul total de  
cazuri)  
90x453,91 = 40851 40,9
4. Antibiotice și alte preparate  
vitale - tratamentul cazurilor  
-tratamentul contactilor  
800x207,8 lei = 17020 / 406 817,0  
- tratamentul contactilor (50%)  
450x453,9 = 294.255 204,3
5. Procurarea frigiderelor  
100x700 lei = 70.000 70,0
6. Echipament de laborator, medii,  
diagnosticuri, seruri, sticlă  
etc.  
-bolnavi 900x9 invest. x100 lei = 810.000 810,0  
-contactii 2700x100 = 270.000 270,0
7. Mobilizarea socială a populației  
la imunizarea în masă 184,0
8. Pregătirea lucrătorilor medicali  
în teren (seminare, conferințe, etc.) 115,0

Total cheltuieli 9.325,2

Prezinta:  
-Institutiile medicale - Centrelor teritoriale de Igiena si Epidemiologie -saptaminal  
in fiecare luna.  
-Centrele teritoriale de Igiena si Epidemiologie - Centrului Republican de Igiena si  
Epidemiologie - saptaminal, prin telefon, in fiecare miercuri.  
Представляет:  
-Медические учреждения - территориальным Цетрам Гигиены и Эпидемиологии - еженедельно  
в каждый понедельник.  
-Территориальные Цетры Гигиены и Эпидемиологии - Республиканскому Цетру Гигиены и  
Эпидемиологии - еженедельно, по телефону, в каждую среду.

Grupul de virsta (ani) Возрастная группа (лет)	Total la evidenta populatie Всего на учете населения	Imunizati DT-m pina la 01.06.95 Привиты АДС-м до 01.06.95 г.		Au fost imunizati in total in perioada campaniei, incepind cu 01.06.95 cu: Получены всего прививки во время кампании, начная с 01.06.95.:			
		a. 1994 1994 г.	a. 1995 1995 г.	1 doza DT 1доза АДС	1 doza DT-m 1доза АДС-м	2 doze DT-m 2дозы АДС-м	3 doze DT-m 3дозы АДС-м
	01	02	03	04	05	06	07
3- 6					X	X	X
7					X	X	X
8-10				X		X	X
11-14				X			X
15				X		X	X
16-19				X			X
20-29				X			X
30-39				X			
40-49				X			
50-59				X		X	X
>=60				X		X	X
TOTAL							

Ordinea alcatuirii raportului:  
-Numarul persoanelor imunizate in campanie se va prezenta saptaminal in crestere.  
-O persoana, imunizata cu mai multe doze, va figura in fiecare coloana a vaccinarii respective.  
-Datele din coloanele 01, 02, si 03 se vor repeta in fiecare raport saptaminal.  
Составление отчета:  
-Число привитых лиц во время кампании должно представляться еженедельно, с нарастающим итогом.  
-Лица, иммунизированные несколькими дозами, будут включены в каждый отчет, соответственно указанным до:  
-Данные из колонок 01, 02 и 03 будут повторяться в каждом еженедельном отчете.

STAREA DE ASIGURARE CU VACCINURI ОБЕСПЕЧЕННОСТЬ ВАКЦИНАМИ	DT АДС	DT-m АДС-м
Cantitatea totala de vaccin, primita iscerind cu 01.06.95 (doze): Общее количество вакцин, полученное начиная с 01.06.95 г. (дозы):		
Cantitatea de vaccin, ramasa la momentul alcatuirii raportului (doz Количество вакцин, оставшееся на момент составления отчета (дозы)		

## **Appendix B**

Brief for Dr. Mikhai Magdei, Deputy Minister of Health, by the BASICS Mission Team,  
July 11, 1995

**Brief for Dr. Mikhail Magdei**  
Deputy Minister of Health  
Co-Chairman, Coordination Committee  
on Diphtheria Prevention and Control  
Republic of Moldova

by the BASICS Mission Team  
11 July 1995

The situation regarding vaccine preventable diseases, particularly diphtheria, in the Republic of Moldova is critically serious at the present time.

The BASICS Mission Team recognizes and appreciates the commitment of the Ministry of Health and the cooperation and hospitality of its officials.

The Government's request for BASICS assistance, discussed at our meeting of Thursday 22 June will be considered by BASICS in its planning meeting during the week of 17 July 1995.

The plan "On Additional Measures for the Eradication of Diphtheria Epidemics in the Republic of Moldova" is a strong and clear set of policies and directives, setting out responsibilities, supplies requirements, budgets, and monitoring procedures. Development of the national immunization plan should benefit from this plan.

A number of concerns arise from the team's assessment of the situation.

1. Vaccine supplies: The U.S. Government - USAID - has committed US\$ 600 thousand for the provision of diphtheria vaccines and syringes for safe injections, amounting to more than half of the requirement for the immunization campaign. Additional funding is being actively sought. The funding and procurement of these supplies is through UNICEF under the WHO/UNICEF International Appeal for the NIS. The concern is that the processing and procurement constraints will lead to delays in vaccine deliveries to Moldova leading to delays in the campaign.

2. Antibiotics for the prophylaxis of primary contact of diphtheria cases: The need for antibiotics is clearly defined in the Moldovan diphtheria control plan and in the WHO/UNICEF strategy. A projection of supply requirements has been made and submitted on the request of the Government of Finland through UNICEF.

3. Primary contact prophylaxis: In meetings with clinicians, epidemiologists, and senior health officials, it was confirmed that while primary contact prophylaxis is both policy and a correct diphtheria methodology, in practice this is only done to a small number of primary contacts. While partly limited by the availability of supplies, the major problem is that of the separation of the work of clinicians and epidemiologists in contact identification and prophylaxis. A solution was proposed for the duration of the epidemic, by Dr. V. Melnik, calling for teamwork in contact identification by Raion Epidemiologists bringing antibiotic supplies and with District Doctors carrying out antibiotic prophylaxis from house to house. An order is being drafted, should be approved urgently, and a joint seminar for clinicians and epidemiologists to introduce the methodology should be held.

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## DIPHTHERIA CONTROL IN THE REPUBLIC OF MOLDOVA

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4. **Social Mobilization:** The experience of the recent diphtheria immunization campaign activity in Kishinev has demonstrated a lack of public interest and public cooperation in immunization for the prevention of diphtheria. Non Governmental Organizations are widely distributed throughout Moldova and would be a useful resource to obtain public cooperation. Raion Epidemiologists and other health officials have expressed a desire for technical assistance in producing information and messages for the public. A request to BASICS for such assistance would be well received.

5. **Implementation plans:** A workshop on diphtheria and Immunization activity planning was held on 4 July 1995. Activity planning methodologies were introduced for the 46 Raion level Epidemiologists who attended. 18 draft concrete activity plans were prepared in the limited time available. All participants agreed to complete their costed district plans by the end of July 1995. It was agreed that these plans would be submitted to the RSES with their monthly reports. This needs follow up and plan consolidation to determine what additional resources will be required for the diphtheria campaign.

6. **Donor coordination:** Many donors have offered and are providing assistance to the national diphtheria campaign and the national immunization programme. Some conflict in time and resource requirements is inevitable. The team expresses its concern that a planned two week training course for Epidemiologists in September 1995 will occur at a time when diphtheria control activities will be rapidly increasing. Another concern is the unilateral change in vaccine orders made in Geneva without consultation with Moldovan authorities. A review of donor activities and a donor coordination committee chaired by the Ministry of Health would provide a forum for solving problems as they arise and provide a focus for donor assistance planning, collaboration, and cooperation.

7. **Legislation:** Mandatory diphtheria immunization requirements for school entry may be of some long term use in maintaining high coverage in future generations. Fear of vaccine damage to children is an element in the circle of public non-compliance with immunization policies and the application of excessive contraindications by clinicians. Legislation indemnifying medical practitioners and providing for compensation of parents of vaccine damaged children for the additional costs of child care may provide public health benefits.

8. **Stock control:** A stock control system has been developed and implemented in the RSES. It will be piloted in four Raions in 1995. While more work is still needed, its application nationally would enable more efficient use of expensive vaccines, syringes, and other immunization program resources. A Raion and district level training program is envisaged.

9. **Cold Chain data base:** A data base of equipment used for vaccine storage in facilities at all levels of the health system. When analysed, it will provide information on equipment needs, repair and replacement requirements, and will provide system wide information for use in the planned cost effectiveness study.

10. **Vaccine stores:** The national vaccine stores at the RSES is operating effectively. Safe vaccine storage capacity has been established. supervisory vigilance is required to maintain the high standards achieved. Some problems have been observed at Raion level stores and at health facilities which will require further training and additional equipment provision.

The BASICS team wishes, again, to thank our Moldovan colleagues for their excellent and open collaboration and hospitality.

## **Appendix C**

Revised Vaccine Requirements Estimates for the Diphtheria Immunization Campaign



**Appendix D**

Vaccine Delivery Schedule, UNICEF Fax on June 26, 1995

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Supply Division

Unicef Plads, Freeport  
DK-2100 Copenhagen Ø  
Denmark

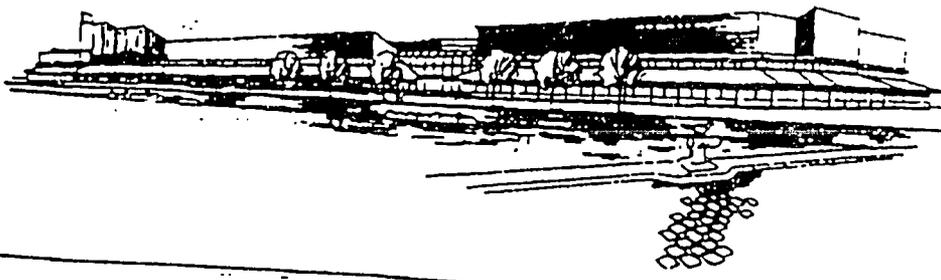
Telephone: 35 27 35 27

Telex: 19813 unicef dk

Telefax: 35 26 94 21

Cables: Unicef Copenhagen

TRANSMISSION



To: Mr. S. Spanner  
pt MOH, Moldova

26 June 1995

From: H.S. Kwon/P. Gjoelbo  
UNICEF Copenhagen

Subject: Arrival of Vaccines Funded by Govt. of Japan

Refer telephone conversation of today we can hereby state delivery status of vaccines against PRS/4048 - RP/MOL/950553 as follows

Item:	Vaccine:	Suppliers:	O/No.:	Quantity:	Arrival:	
1.	BCG w. dil.	Medeva, UK	CCS/951609 CCS/951610	7,700 x 20ds 7,700 x 20ds	12/04/95 Cancelled	12.04 154.000 ds
2.	DPT	P- Merieux	CCS/951611 CCS/951612	19,000 x 10ds 18,750 x 10ds	Under booking 04/09/95	05.07.95 190.000
3.	Meas. w. dil.	Immunology	CCS/951613 CCS/951624	6,000 x 10ds 5,500 x 10ds	19/05/95 04/09/95	20.05 - 60.000
4.	OPV w. drop.	SmithKline	CCS/951615	22,500 x 10ds 22,450 x 10ds	09/05/95 04/09/95	10.05 - 225.000
5.	Td for Adults	Serum Ind.	CCS/951696 ( CS/951697	47,000 x 10ds 46,800 x 10ds	24/07/95 04/09/95	✓ ✓
6.	DT	Swiss Ser.	CCS/951617 CCS/951618	800 x 10ds 800 x 10ds	30/03/95 04/09/95	27.06. 273.000 UNICEF ↓ CCX/95K

Due to delivery of above vaccine funded by Govt. of Japan all orders placed by UNICEF in 1995 have been cancelled except CCX/95R968 for 27,300 x 10ds DT; which will arrive Kishinev tomorrow 27 June 1995.

Hope above has clarified the situation.

Best regards

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**Appendix E**

**Contact Prophylaxis and Case Management Supply Requirements Projection**

DIPHTHERIA CONTROL IN THE REPUBLIC OF MOLDOVA

MOLDOVA DIPHTHERIA EPIDEMIC 1995

CONTACT PROPHYALAXIS AND CASE TREATMENT SUPPLIES REQUIREMENT

ITEM	FOR	QUANTITY TOTALS	UNIT PRICE	TOTAL PRICES
Syringes 2 ml	children	50,534	\$0.0288	\$1,455
Syringes 5 ml	adults	184,766	\$0.0340	\$6,282
Procaine penicillin G	vials of 3 million units	15,476	\$0.40	\$6,249
Benzathine penicillin	vials of 2.4 million units	69,090	\$0.40	\$27,512
Sterile water 5 ml		69,090	\$0.04	\$2,515
Sterile water 10 ml		15,476	\$0.04	\$610
Diphtheria Antitoxin	ampules of 10,000 units	7,106	\$16.36	\$116,261
Syringes 2 ml for diphtheria antitoxin		7,106	\$0.0288	\$205
Syringe Safe incinerator	for safe disposal	2,424	\$1.04	\$2,521
			TOTAL	\$163,609
			FREIGHT 10%	\$16,361
			UNICEF HANDLING FEE 6%	\$9,817
			GRAND TOTAL	\$189,787

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## DIPHTHERIA CONTROL IN THE REPUBLIC OF MOLDOVA

### DIPHTHERIA IN THE REPUBLIC OF MOLDOVA PROJECTIONS OF CASES AND PRIMARY CONTACTS for the years 1995 and 1996

	1994 diphtheria cases	Total primary contacts 2	Estimated average primary contacts 2	1995 Projected number of cases	1995 projected of primary contacts	1996 Projected number of cases	1996 Projected of primary contacts
	376		18,800	3,158	157,920	15,792	789,600
<b>ITEM</b>							
Syringes 2 ml		children		11,054	39,480	55,272	197,400
Syringes 5 ml		adults		66,326	118,440	331,632	592,200
Procaine penicillin G		vials of 3 million units		15,476		77,381	
Benzathine penicillin		vials of 2.4 million units			69,090		345,450
Sterile water 5 ml					69,090		345,450
Sterile water 10 ml				15,476		77,381	
Diphtheria Antitoxin		ampules of 10,000 units		7,106		47,376	
Syringes 2 ml for diphtheria antitoxin				7,106		47,376	
Syringe Safe incinerator		for safe disposal			2,424		12,239
<b>CONTACT PROPHYLAXIS AND CASE TREATMENT SUPPLIES</b>							

**Notes:**

1. Assumes 100% reporting and case contact investigation.
2. Based on SES epidemiologist's estimated average number of primary contacts (30-50) with the high end of this range being used for supply projections. In 1994 the reported number of primary contacts was 25,000 or 66.5 contacts per confirmed case.
3. Moldova outbreak reported rate of annual increase 1993 -1994 (8.4 fold). 1996 estimated at 5 fold.
4. Diphtheria antitoxin estimated as an average dosage assuming more frequent mild cases than extremely severe cases. An estimated 75% of cases will receive antitoxin.
5. 1996 projections assume that vaccines, syringes, and antibiotics are not provided and that immunization campaigns and primary contact prophylaxis are not carried out in 1995.

## **Appendix F**

**1994 and 1995 Diphtheria Control Public Information Materials**

4. Vaccinarea antidifterică se face după planul calendar:

a) prima vaccinare — la copii în vîrsta de 3, 4<sup>1/2</sup>, 6 luni.

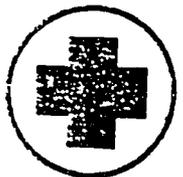
b) revaccinarea — la 22—24 luni, 6—7 ani, 14—15 ani apoi peste fiecare 5 ani pînă la vîrsta de 40 ani, după aceasta odată în zece ani.

Centrul Republican al Sănătății  
al Ministerului Sănătății al Republicii Moldova

Autor-alcătuitor Galina I. Rusu

# D I F T E R I A

(Agendă)



Difteria este o boală infecțioasă acută și transmisibilă, caracterizată prin inflamația fibrinoasă a mucoaselor și prin intoxicație generală. Agentul patogen (bacilul difteric) niherește în organism pe cale aeriană, prin contact direct și indirect, prin obiecte contaminate.

Perioada de incubație a difteriei este de 2—10 zile.

Tabloul clinic este determinat de localizarea anatomică a infecției: faringe, laringe, conjunctiva ochilor, mucoasa nazală, genitală etc. Localizarea faringiană a bacilului difteric este cea mai frecventă. Se întâlnesc forme mixte.

Sursa de infecție este numai omul bolnav și purtător de bacili difterici. Rolul epidemiologic al purtătorilor și bolnavilor de forme ușoare (sub formă de angină banală) de difterie prezintă un pericol mult mai mare decît bolnavii de forme bine manifestate.

Receptivitatea la difterie depinde de gradul de imunitate, obținută ca urmare a vaccinării, de starea sănătății în cazul unei infecții latente ori în perioada de convalescență.

Morbiditatea prin difterie la persoanele nevaccinate este foarte mare și crește după fiecare 5—8 ani. Perioada de morbiditate înaltă durează 2—4 ani, cînd se înregistrează un număr considerabil de forme grave ale acestei maladii. La persoanele vaccinate antidifteric morbiditatea scade treptat. Orice neglijare a vaccinării antidifterice creează goluri de imunitate specifică în populație, favorizînd apariția focarelor endemice.

De menționat că vaccinul antidifteric duce foarte rar la complicații și este mai puțin periculos pentru sănătatea copiilor decît difteria.

Angina difterică începe treptat cu o febră moderată, dureri în gît. Obiectiv se constată înroșirea amigdalelor și depuneri consistente pe suprafața lor, cu aspect de membrane false de culoare alb-sădăie. Peste 2—3 zile de boală membranele false devin deosebit de dure, se detașează cu greu, iar după detașare se produc sîngerări locale, apărînd din nou. Gangli-

onii limfatici cervicali superiori se măresc, devin puțin dureroși.

Dacă se administrează serul antidifteric starea bolnavului se îmbunătățește, temperatura scade, membranele false dispar după 3—4 zile.

Dacă bolnavul nu s-a adresat la medic în primele 2 zile de boală angina difterică evoluează spre o formă toxică, gravă.

Difteria faringiană toxică are un debut acut, crește brusc nivelul febrei (39—40°), apar frisoane, cefalee, dureri în gît, în abdomen, vomă repetată, adinamie. Membranele false apar pe suprafața amigdalelor, vălului palatin, palatinului dur. Respirația nazală este dereglată, bolnavul respiră cu gura deschisă. Din prima zi apare edemul cervical („gît proconcular”), care este nedureros, neconsistent, cu culoarea pielii neschimbată.

Odată cu progresarea procesului local crește gradul de intoxicare a organismului, apar complicații cardiovasculare (miocardita toxică), nervoase (mononevrite, polinevrite) etc.

Angina difterică netratată sau tratată tardiv cu ser antidifteric este extrem de gravă, soldîndu-se adeseori cu moarte.

În scopul diagnosticării precoce a difteriei fiecare bolnav de angină foliculară și lacunară este supus examenului bacteriologic la difterie.

Pentru prevenirea difteriei și a consecințelor ei **REȚINEȚI!**

1. La apariția febrei și a durerilor în gît trebuie să vă adresați de urgență la medic.

2. În perioada de creștere a morbidității prin difterie sporește și numărul de purtători de bacili difterici toxigeni, iar migrația mare a populației duce la răspîndirea infecției pe noi teritorii.

3. Fiecare poate să se îmbolnăvească de difterie, fie copil sau adult, dacă nu a fost vaccinat la timp. Vaccinarea este singura măsură eficientă. Cei vaccinați pot contracta doar o formă ușoară de difterie, fără complicații, iar la cei nevaccinați boala are forme grave.

# A PROTEJĂRII FAȚĂ DE UNELE BOLI INFECȚIOASE PERICULOASE PENTRU VIAȚĂ!

Pentru prevenirea bolilor infecțioase populației i se fac vaccinări de profilaxie, dintre care sînt obligatorii vaccinările contra tuberculozei, poliomielitei, difteriei, tusei convulsive, rujeolei, tetanosului. (Legea Republicii Moldova „Cu privire la asigurarea sanitaro-epidemiologică a populației”, aprobată prin Hotărîrea Parlamentului Republicii Moldova de la 16.06.93 nr. 1514-XII art. 23 p. 8).

Statul garantează copiilor și tuturor cetățenilor țării acordarea asistenței de imunizare gratuită cu vaccinuri eficiente, calitatea căror corespunde standardelor mondiale („Programul Național de imunizare” aprobat prin Hotărîrea Guvernului RM nr. 584 din 03.08.94).

Calendarul vaccinărilor profilactice aprobat prin ordinul Ministerului Sănătății al Republicii Moldova de la 01.06.94 nr. 100

Imunizarea impotriva	Virste, numărul administrărilor	
	Vaccinare	revaccinare
Hepatitei virale B	Incepînd cu primele 24 ore de viață, 3 administrări la 24 ore, 1 lună și 6 luni sau cu intervalul de 1 lună în caz de risc sporit de contaminare.	×
Tuberculozei	4—7 zile	la 6—7 ani în clasa întâi a școlii.
Poliomielitei	de la 3 luni, 3 administrări cu un interval de 1,5 luni (3; 4,5 și 6 luni).	prima — o administrare la 22—24 luni; a doua — o administrare la 6—7 ani, înainte de plecarea la școală.
difteriei, pertusei, tetanosului	de la 3 luni, 3 administrări cu un interval de 1,5 luni (3; 4,5 și 6 luni).	la 22—24 luni o admini- strare.
difteriei și tetanosului	×	la 6—7 ani înainte de plecare la școală; la 14—15 ani; maturi pînă la 40 ani — o dată în 5 ani, peste 40 ani — o dată în 10 ani.
Rujeolei	12 luni	×
Parotiditei epidemice	12 luni	×

Imunizările impotriva antraxului, leptospirozei, tularemiei, febrei tifoide și altor infecții se efectuează numai unor anumite grupuri a populației, activitatea cărora este legată cu un pericol sporit de contaminare.

● Centrul Republican al Sănătății al M.S. al Republicii Moldova

# СВОЕВРЕМЕННО ПРОВЕДЕННЫЕ ПРОФИЛАКТИЧЕСКИЕ ПРИВИВКИ — ГАРАНТИЯ ЗАЩИТЫ ОТ РЯДА ОПАСНЫХ ДЛЯ ЖИЗНИ ИНФЕКЦИОННЫХ ЗАБОЛЕВАНИЙ!

Для предупреждения инфекционных заболеваний населению проводятся профилактические прививки, обязательными из которых являются прививки против туберкулеза, полиомиелита, дифтерии, коклюша, кори, столбняка. (Закон Республики Молдова «О санитарно-эпидемиологическом обеспечении населения», утвержденный Постановлением Парламента РМ от 16.06.93 № 1514-XII ст. 23 п. 6).

Государство гарантирует детям и всем гражданам страны безвозмездную иммунизацию эффективными вакцинами, качество которых соответствует мировым стандартам (Национальная Программа иммунизации, утвержденная Решением Правительства РМ № 584 от 03.08 94).

Календарь профилактических прививок, утвержденный приказом Минздрава Республики Молдова от 01.06.94 № 100

Иммунизация против	Возраст, кратность	
	Бакцинация	Ревакцинация
Вирусного гепатита В	С 24 часов жизни, проводится 3-хратно: 24 часа, 1 и 6 месяцев или с интервалом в 1 месяц при высоком риске заражения.	×
Туберкулеза	4—7-й день жизни.	в 6—7 лет в первом классе школы.
Полиомиелита	с 3-х месяцев, проводится 3-хкратно с интервалом в 1,5 месяца (3; 4,5 и 6 месяцев)	первая — однократно в 22—24 месяца, вторая однократно в 6—7 лет перед поступлением в школу.
Коклюша, дифтерии, столбняка	с 3-х месяцев, проводится 3-хкратно с интервалом в 1,5 месяца (3; 4,5 и 6 месяцев)	в 22—24 месяца однократно
Дифтерии и столбняка	×	в 6—7 лет перед поступлением в школу; в 14—15 лет. Взрослым до 40 лет 1 раз в 5 лет, старше 40 лет — 1 раз в 10 лет.
Кори	12 месяцев	×
Эпидемического паротита	12 месяцев	×

Иммунизация против сибирской язвы, лептоспироза, туляремии, брюшного тифа и других инфекций проводится только отдельным группам людей, работа которых связана с высоким риском заражения.

## **Appendix G**

**Immunization Status of Diphtheria Cases: December 1, 1994 through June 4, 1995**

## DIPHTHERIA CASE IMMUNIZATION STATUS

Diphtheria in the Republic was largely brought under control following the wide scale immunization of its population beginning in the early 1960s. In the early 1980's there was a relatively small outbreak of diphtheria which was soon brought under control. From the mid-1980s there were only sporadic cases reported, with no diphtheria cases reported during the period from 1986 to 1990. The number of reported diphtheria cases increased from 14 in 1991 to 22 in 1992, and 35 in 1993.

In 1994, 376 confirmed cases were reported and of these 19 patients died. Case fatality was about 5%. 84% of the reported cases occurred in the autumn and winter months beginning in September with the cooler weather and the opening of the school year. A reported 25,000 primary contacts were identified and screened. Among the primary contacts, 617 carriers were confirmed by bacteriological and serological methods.

In the period 1 January through 30 June 1995, 280 cases and 11 deaths from diphtheria have been notified along with 410 confirmed carriers among an estimated 14,000 primary contacts. The case fatality rate appears to have fallen to 3.9%, possibly as a result of increased immunization activities and improved case management.

Of the 165 cases for which there was complete data 82 cases were confirmed bacteriologically, while 13 were confirmed serologically. 410 Carriers were confirmed by bacteriological and serological methods. Of these 410 confirmed carriers, 185 or 45% had received one or more doses of diphtherial vaccines.

A review of the immunization status of 1995 diphtheria cases enabled the identification of some serious constraints on the recording, reporting, analysis, and use of information for action.

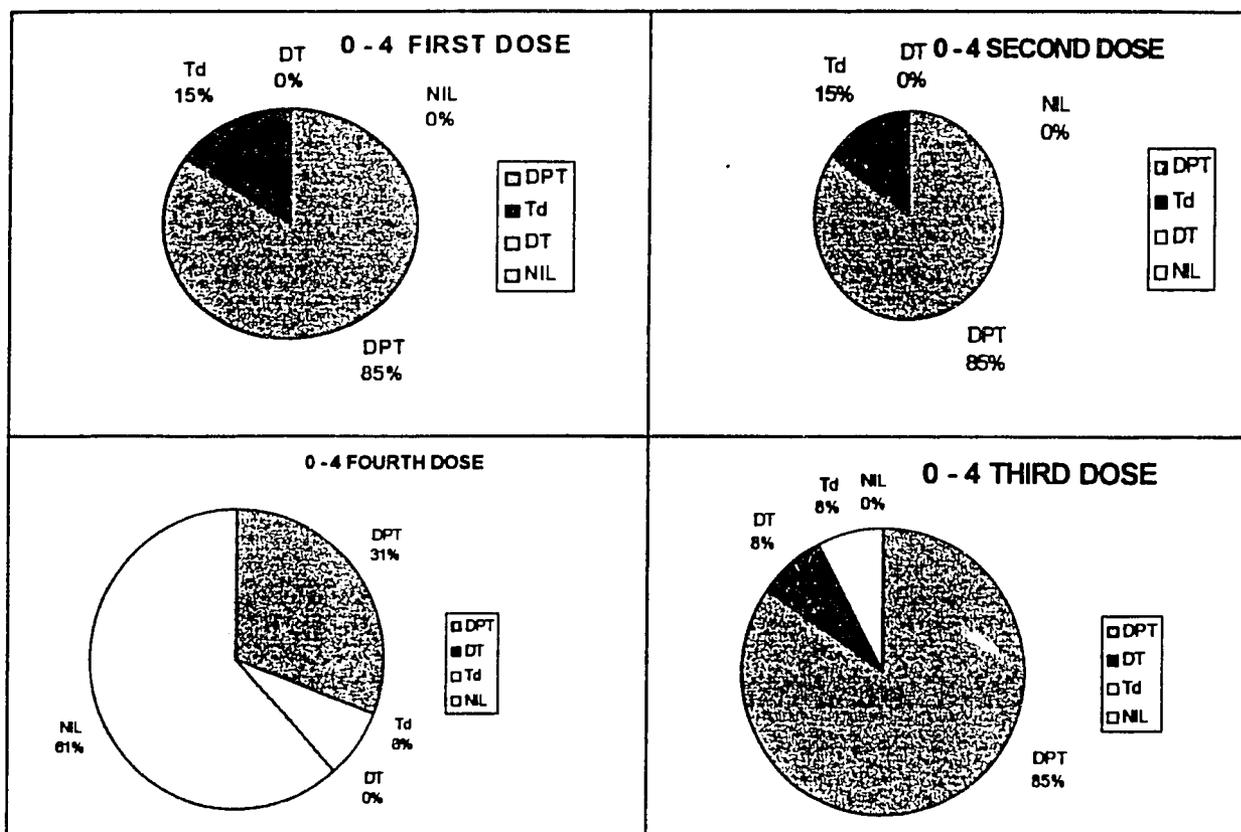
The review of diphtheria case reports was complicated by the lack of recording and reporting standards. Of 280 cases notified in the first six months of 1995, only 170 case reports were held by the RSES. Cases notified by the Transdnistrian Moldovan Republic were not reported to the RSES. Of these 170 cases reported, only 165 included patient age data - some by year of birth, some by date of birth, and others by age at the time of presentation. Immunization status was reported by diphtherial vaccine received, most with the date of each dose, while others were reported without dates. While a standard form for cases and another standard form for carriers was to be used, four other forms with a different set of reporting requirements were used for about 25% of cases.

In the pages which follow, the immunization status of the diphtheria cases for which data appeared complete is presented in graphical and tabular form by age group and dose.

## DIPHTHERIA CONTROL IN THE REPUBLIC OF MOLDOVA

### IMMUNIZATION STATUS: CHILDREN 0 - 4 YEARS

The immunization status for diphtheria cases (n=13) in children from 0 to 4 years of age is shown in the following graphs:



In children 0 to 4 years of age, 85% of the cases received three doses of DPT, while 31% had received a booster dose prior to infection. This appears to be a far higher proportion of immunized cases than in the Ukraine, where about 30% of cases were reported to be fully immunized\*, and what would be expected with a vaccine of about 80% efficacy\*. For all of 1994, 43.4% of all cases were fully immunized, while 49.6% of children 3 to 9 years of age were fully immunized according to the national immunization schedule.

In this age group, the cases are likely to have received vaccines produced by both Russian and European manufacturers.

It is of concern that an apparently high proportion of cases (85%) have received 3 doses of DPT vaccine. The use of Td vaccine (15% to 18%) in children is also of concern.

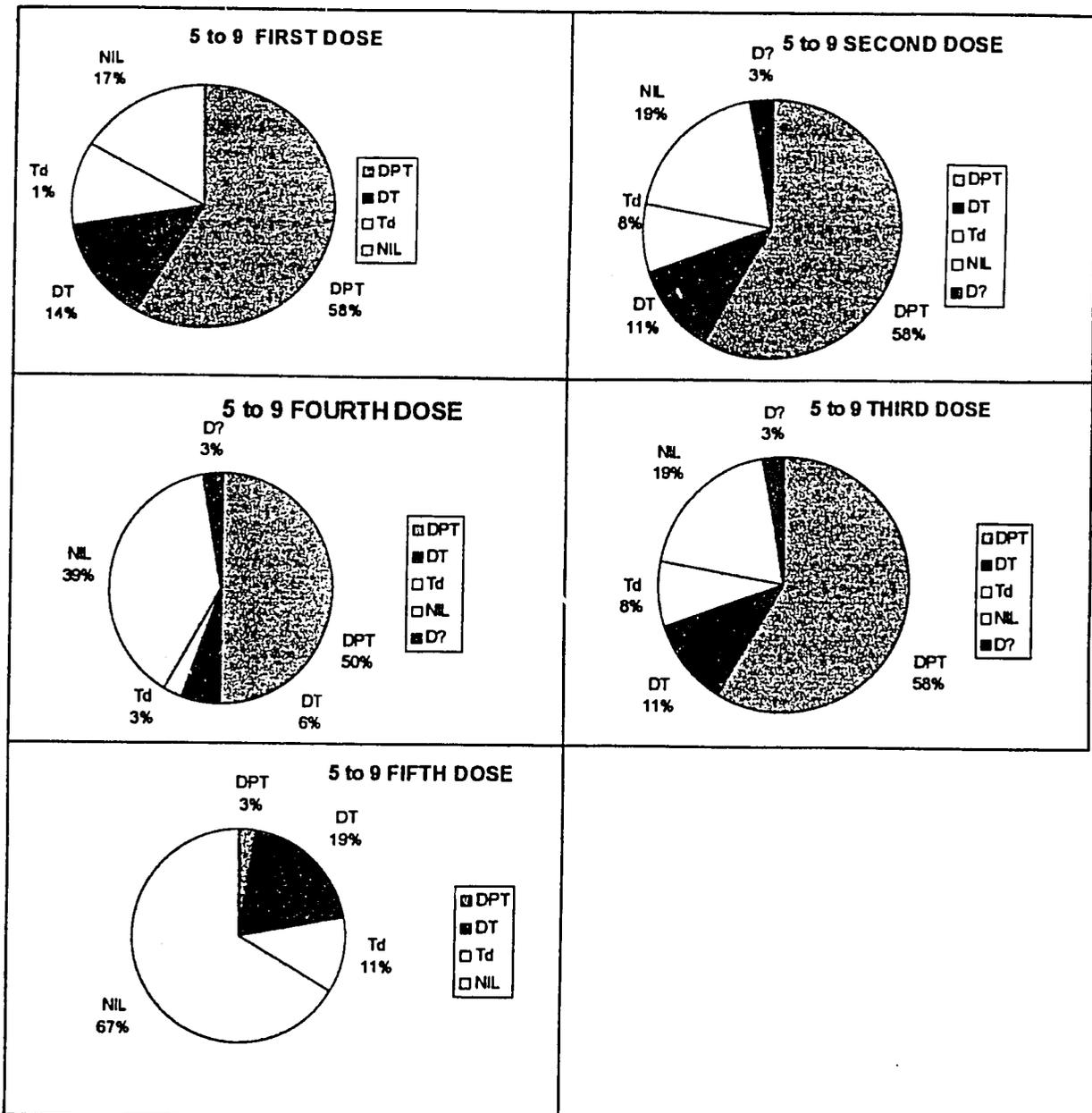
\* Hardy, Iain, CDC, Report of Travel to Ukraine, April 10-29 1995

\* Orenstein, W.A., et al, Field Evaluation of Vaccine Efficacy, Bulletin of the World Health Organization, 63 (61) 1055 -1066 (1985)

# DIPHtheria CONTROL IN THE REPUBLIC OF MOLDOVA

## IMMUNIZATION STATUS: CHILDREN 5 - 9 YEARS

The immunization status for diphtheria cases (n=36) in children from 5 to 9 years of age is shown in the following graphs:



In children 5 to 9 years of age, 58% of the cases received three doses of DPT, while 50% had received a DPT booster dose and 33% had received a second booster dose of DPT, DT, or Td prior to infection. This appears to be a far higher proportion of immunized cases than in the Ukraine, where about 30% of cases were reported to be fully immunized\*, and what would be expected with a vaccine of about 80% efficacy\*.

\* Hardy, Iain, CDC, Report of Travel to Ukraine, April 10-29 1995

\* Orenstein, W.A., et al, Field Evaluation of Vaccine Efficacy, Bulletin of the World Health Organization, 63 (61) 1055 -1066 (1985)

## DIPHTHERIA CONTROL IN THE REPUBLIC OF MOLDOVA

For all of 1994, 43.4% of all cases were fully immunized, while 49.6% of children 3 to 9 years of age were fully immunized according to the national immunization schedule.

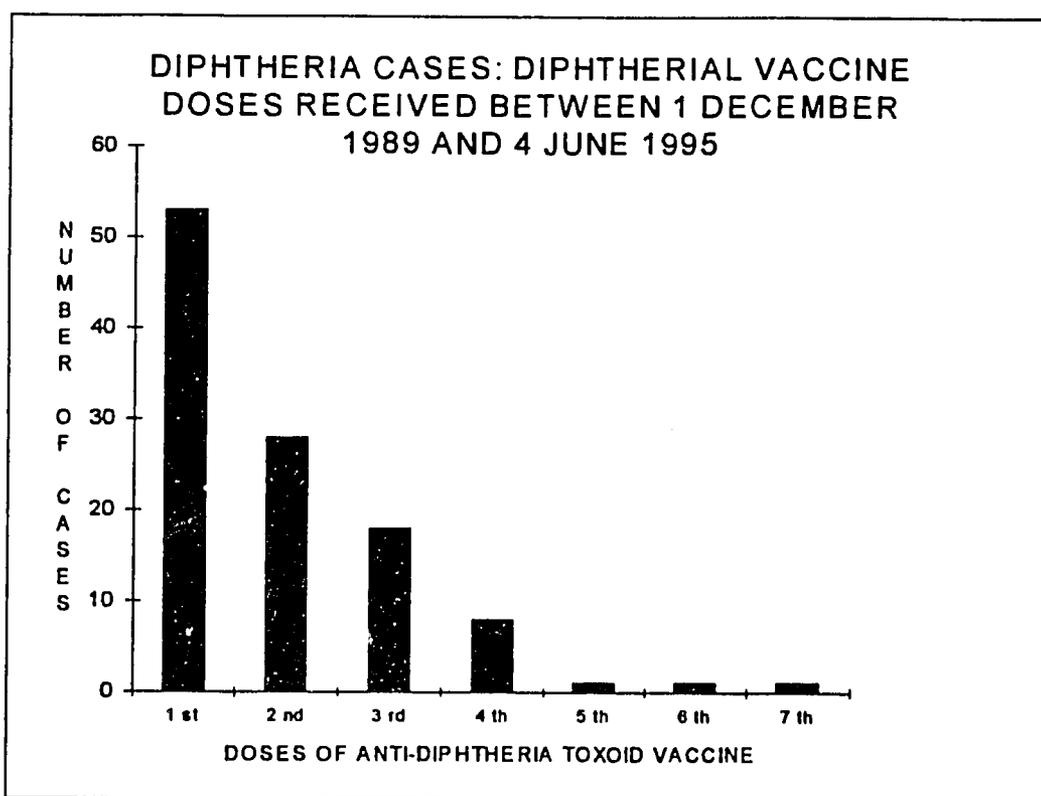
### IMMUNIZATION STATUS: OTHER AGE GROUPS

The immunization status of all other age groups were reviewed. The tabulated data follows in the next two pages. Up to the age of 24 years, between 85% to 60% (in the 20 -24 year old group) had completed the primary series and received at least two booster doses of a diphtherial toxoid containing vaccine.

For the cases above 25 years, immunization records were incomplete and frequently lacked date information.

### RECENT VACCINE DOSES

At the BASICS team meeting at Bath, U.K. it was decided to review recent vaccine doses in cases to seek to identify vaccine sourcing as a parameter in the current epidemic. Vaccine doses since 1989 are summarized in the graph below.

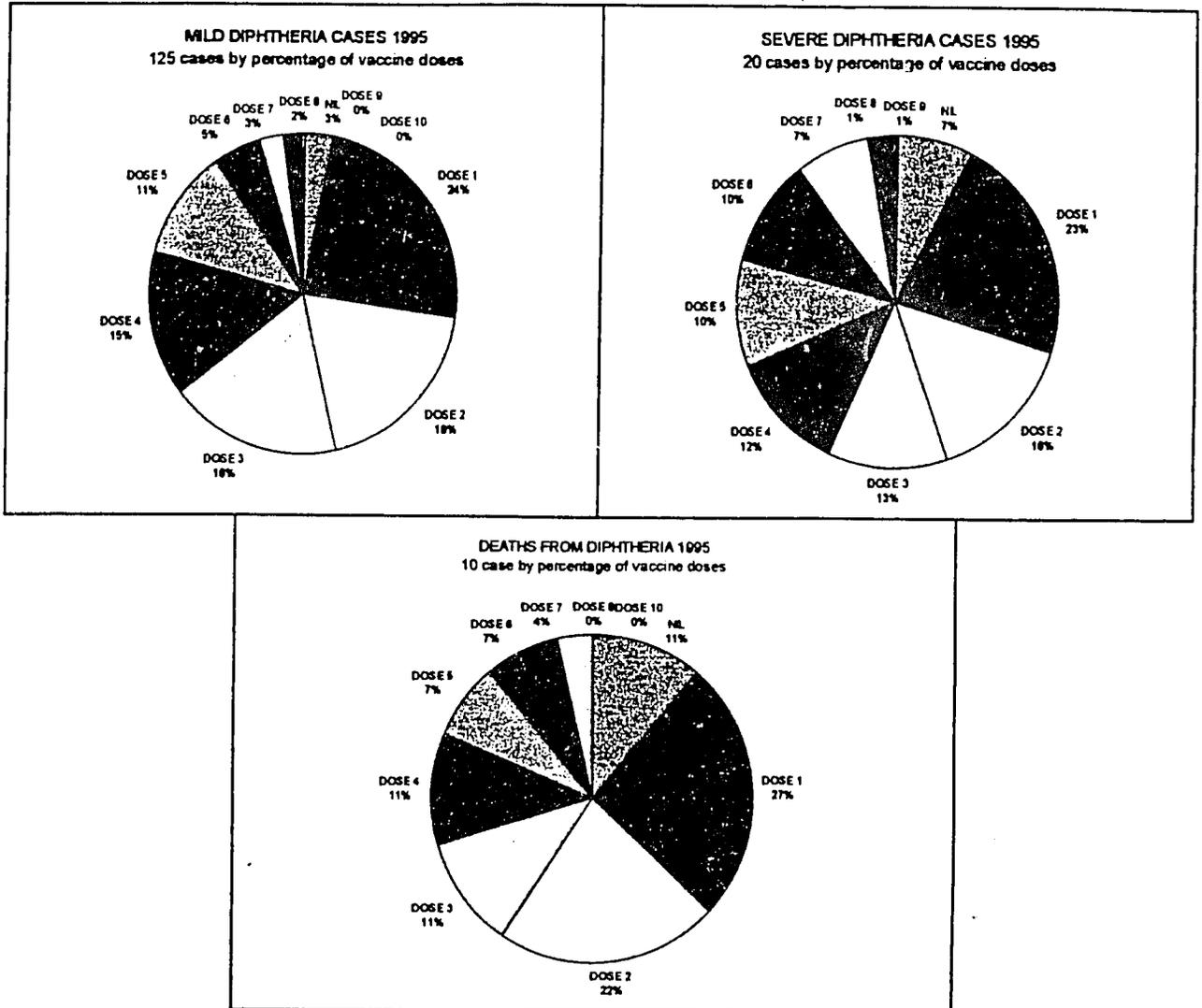


It was not possible to distinguish vaccine by source or manufacturer for these 53 cases with recent diphtheria vaccine doses. It would be reasonable to assume that a rising proportion of vaccine doses from European producers was given in the later doses in the series over this period.

# DIPHTHERIA CONTROL IN THE REPUBLIC OF MOLDOVA

## IMMUNIZATION STATUS AND SEVERITY OF CASES

The immunization status and severity of the 1995 cases were reviewed. No apparent pattern is discernible. It is possible that further statistical analysis may be useful, it was beyond the scope of this exercise.



- Recommendation: A thorough epidemiological evaluation of the 1994 and 1995 diphtheria cases, case immunization status, and vaccine efficacy in Moldova should be carried out at the end of the first quarter of 1996.

## DIPHTHERIA CONTROL IN THE REPUBLIC OF MOLDOVA

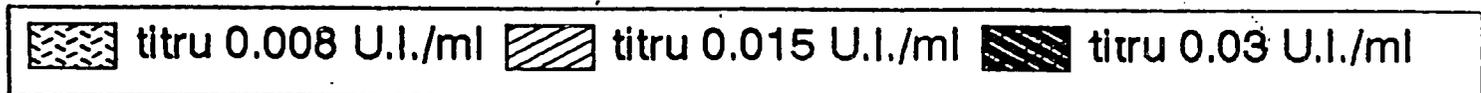
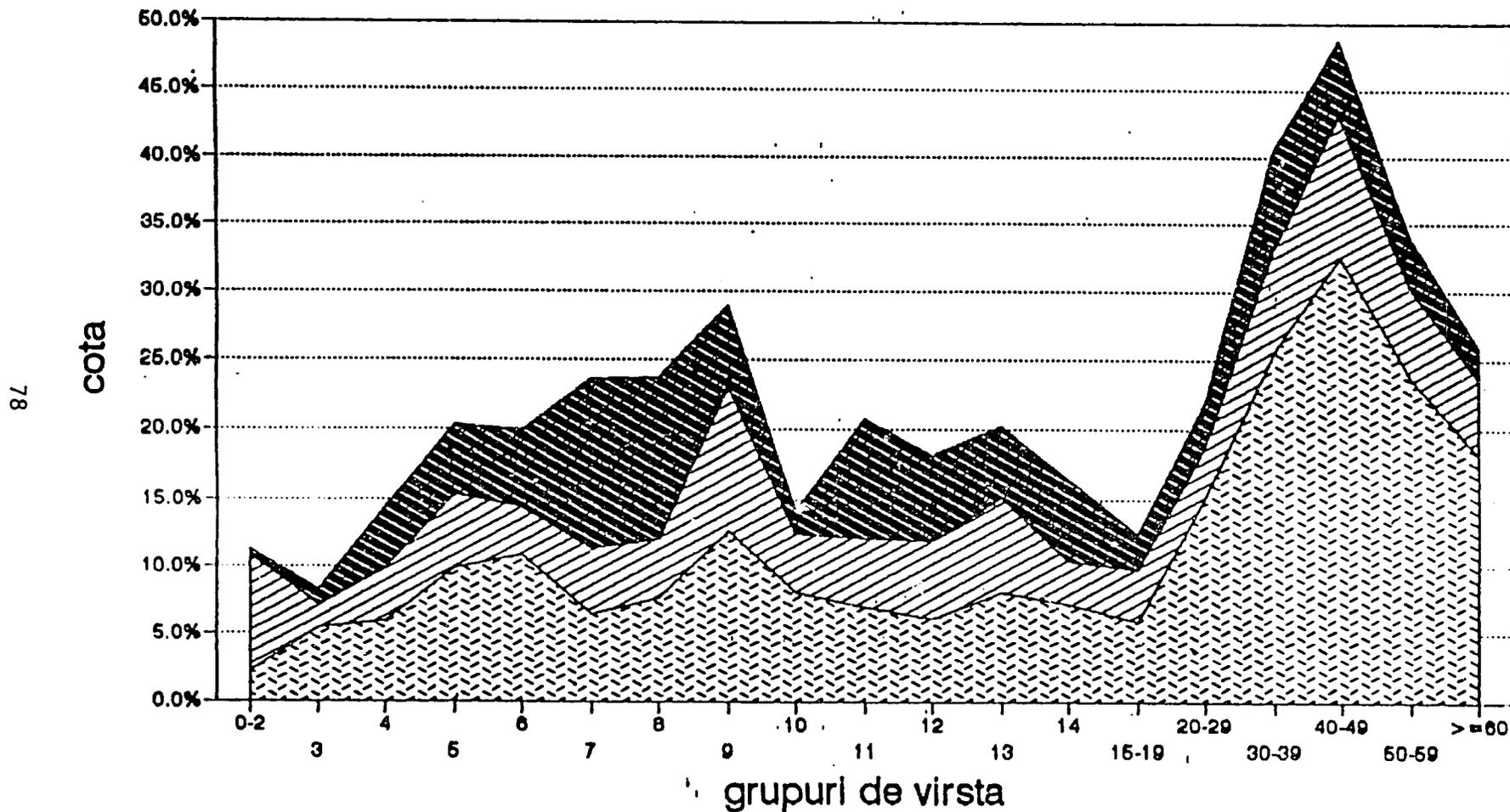
### DIPHTHERIA CASES SUMMARY 1 DECEMBER 1994 THROUGH 4 JUNE 1995

0 - 4 YEARS		CASES		SEVERITY UNKNOWN		0		CONFIRMATION			DOSE ONE		DOSE 2		DOSE THREE		DOSE FOUR		DOSE FIVE		DOSE SIX		DOSE SEVEN		DOSE EIGHT		DOSE NINE		DOSE TEN		
FROM	TO	TOTAL		SEVERE	DEATH	CLINICAL	BACTO	SERO	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td		
		13		1	1	7	9	3	11	2	0	11	2	0	11	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	
				0					DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
				0					DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
				12					NIL			NIL		NIL			NIL		NIL		NIL		NIL		NIL		NIL		NIL		
5 - 9 YEARS		CASES		SEVERITY UNKNOWN		6		CONFIRMATION			DOSE ONE		DOSE 2		DOSE THREE		DOSE FOUR		DOSE FIVE		DOSE SIX		DOSE SEVEN		DOSE EIGHT		DOSE NINE		DOSE TEN		
FROM	TO	TOTAL		SEVERE	DEATH	CLINICAL	BACTO	SERO	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td		
		38		0	0	22	33	4	21	5	4	21	4	3	21	2	2	18	1	0	0	0	0	0	0	0	0	0	0	0	
				0					DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
				0					DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
				30					DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
									DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
10 - 14 YEARS		CASES		SEVERITY UNKNOWN		6		CONFIRMATION			DOSE ONE		DOSE 2		DOSE THREE		DOSE FOUR		DOSE FIVE		DOSE SIX		DOSE SEVEN		DOSE EIGHT		DOSE NINE		DOSE TEN		
FROM	TO	TOTAL		SEVERE	DEATH	CLINICAL	BACTO	SERO	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td		
		34		2	1	20	29	1	25	3	2	24	3	1	22	2	1	18	0	15	1	0	0	0	0	0	0	0	0		
				2	1				DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
				2	1				DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
				27					DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
									DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
				5					DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
15 - 19 YEARS		CASES		SEVERITY UNKNOWN		1		CONFIRMATION			DOSE ONE		DOSE 2		DOSE THREE		DOSE FOUR		DOSE FIVE		DOSE SIX		DOSE SEVEN		DOSE EIGHT		DOSE NINE		DOSE TEN		
FROM	TO	TOTAL		SEVERE	DEATH	CLINICAL	BACTO	SERO	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td		
		24		2	1	13	22	0	13	2	3	13	0	0	12	0	0	12	0	12	0	8	0	0	0	0	0	0	0		
				2	1				DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
				2	1				DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
				22					DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
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				1					DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
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				1					DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
20 - 24 YEARS		CASES		SEVERITY UNKNOWN		1		CONFIRMATION			DOSE ONE		DOSE 2		DOSE THREE		DOSE FOUR		DOSE FIVE		DOSE SIX		DOSE SEVEN		DOSE EIGHT		DOSE NINE		DOSE TEN		
FROM	TO	TOTAL		SEVERE	DEATH	CLINICAL	BACTO	SERO	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td		
		10		1	1	6	7	1	7	3	1	8	3	1	6	4	1	6	1	5	1	0	0	0	0	0	0	0	0		
				1	1				DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
				1	1				DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
				8					DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
									DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
				1					DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
25 - 29 YEARS		CASES		SEVERITY UNKNOWN		0		CONFIRMATION			DOSE ONE		DOSE 2		DOSE THREE		DOSE FOUR		DOSE FIVE		DOSE SIX		DOSE SEVEN		DOSE EIGHT		DOSE NINE		DOSE TEN		
FROM	TO	TOTAL		SEVERE	DEATH	CLINICAL	BACTO	SERO	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td	DPT	DT	Td		
		3		0	0	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
				0	0				DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
				0	0				DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
				2					DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
									DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
									DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
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									DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
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									DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
									DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
									DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
									DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL		
									DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT	Td	NIL	DT										



# STRUCTURA IMUNITATII LA DIFTERIE

## CONFORM DATELOR C.R.I.E DIN A.1994



**Appendix H**  
**Consultant Scope of Work**

**Scope of Work**

**Bath - Bass, Spanner and Rock will carry out the following:**

- meet with BASICS consultants Anthony Battersby and Rachel Feilden at their home, to discuss the information they have obtained in developing the Moldova National Immunization Plan and in carrying out a study of the costs and effectiveness of immunization services in Moldova;
- discuss 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 carried out under USAID/BASICS;
- discuss the status of the Moldova National Plan for Immunization as background for preparing a detailed implementation plan for diphtheria control, and for determining strategies to conduct a national diphtheria campaign in September;
- discuss USAID-endorsed strategies for diphtheria control and specifically how these are to be further implemented in the coming months in Moldova.

**Moldova**

**Bass will carry out the following:**

- conduct a needs assessment of the national immunization system to determine areas where support is most needed in order to conduct a successful national diphtheria campaign in September, just prior to when diphtheria incidence is expected to be highest;
- meet with officials of the health ministry and the Republican Sanitary Epidemiology Station on the status of the National Immunization Plan, including the progress and constraints encountered in implementation;
- achieve a working knowledge of Moldova's immunization systems, and begin development of a detailed implementation plan for long-term diphtheria control integrating the USAID-endorsed strategies within a plan for Moldova;
- analyze data, prepare and submit a report.

**Spanner will carry out the following:**

- continue work begun on vaccine logistics and management training through a review of the existing systems for routine vaccine forecasting, stock control and distribution of vaccine and commodities;

- provide 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, meet with local USAID officials, prepare preliminary findings and recommendations and provide briefing to USAID mission prior to departure;
- analyze data, prepare and submit a report.

**Rock will carry out the following:**

- assess progress of technical, operational and administrative support provided through USAID/BASICS, to help determine the priority and schedule of assistance to be provided for the remainder of project year two and project year three;
- work along with Bass in campaign preparations, to identify where support for the September diphtheria campaign would be most effective, including a review of their capacity for IE&C support, and securing timely delivery of vaccine at the national level;
- with Bass, Spanner, meet local representatives of partner agencies, exchange relevant program information and begin discussions on inter-agency coordination;
- meet local USAID officials upon arrival, brief them of the nature and purpose of the assignment.

## **Appendix I**

### **Draft State Department Cable on the Consultant Findings**

Proposed Cable to be sent:

TO: ACTION OFFICE NIS 03  
CC: HEAL 04  
PLEASE PASS TO BASICS

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

CONSULTANT ACTIVITIES INCLUDED: REVIEW OF DIPHTHERIA CASE DATA, POLICIES, STRATEGIES, PLANS, SUPPLY REQUIREMENTS, AND CURRENT CONTROL ACTIVITIES IN THE FIELD. WORKSHOP WAS HELD ON 4 JULY 1995 PROVIDING TECHNICAL ASSISTANCE TO RAION (DISTRICT) OFFICIALS DEVELOPMENT OF IMPLEMENTATION PLANS FOR DIPHTHERIA EPIDEMIC CONTROL. CORDIAL RELATIONS DEVELOPED WITH UNICEF AND OTHER HEALTH SECTOR DONORS.

BASS'S FINDINGS FOLLOW:

1. THE NATIONAL DIPHTHERIA EPIDEMIC CONTROL PLAN WAS APPROVED BY MOH/GRM ON 2 JULY 1995 AND REMOVES EARLIER POLICY CONSTRAINTS ON ADMINISTRATION OF VACCINE ON A WIDE SCALE. PLAN LARGELY FOLLOWS WHO/UNICEF STRATEGY RECOMMENDATIONS.
2. FIRST MAJOR CONSTRAINT IDENTIFIED IS THE TIMELY PROVISION OF ADEQUATE SUPPLIES OF VACCINES, SYRINGES FOR SAFELY ADMINISTERED DOSES OF VACCINE, ANTIBIOTICS FOR PRIMARY CONTACT PROPHYLAXIS AND TREATMENT OF CASES, AND DIPHTHERIA ANTITOXIN TO PREVENT DEATHS FROM DIPHTHERIA. THERE HAS BEEN A RECENT INCREASE IN NOTIFIED CASES, WITH MAJOR INCREASES EXPECTED IN AUTUMN FROM SEPTEMBER 1995. BASICS - USAID AND OTHER DONOR ACTION URGENT.
3. SECOND MAJOR CONSTRAINT IDENTIFIED IS THE MANAGEMENT OF PRIMARY CONTACTS OF DIPHTHERIA CASES WHO SHOULD BE IDENTIFIED AND RECEIVE A SINGLE DOSE OF BENZATHINE PENICILLIN AS PROPHYLAXIS AS PER WHO/UNICEF STRATEGY. THE OPERATIONAL SEPARATION OF EPIDEMIOLOGICAL AND CURATIVE SERVICES LEAVES AN ESTIMATED 19 OF 20 PRIMARY CONTACTS UNTREATED WITH ANTIBIOTICS. SUCCESSFUL MEETING HELD WITH CHIEFS OF PREVENTIVE AND CURATIVE HEALTH SERVICES AND SENIOR PAEDIATRICIAN TO IDENTIFY AN OPERATIONAL MECHANISM TO SOLVE THE OPERATIONAL PROBLEM. JOINT ORDER TO BE WRITTEN, APPROVED, DISTRIBUTED, WITH A JOINT

SEMINAR TO BE HELD TO EXPLAIN JOINT DIPHTHERIA CONTROL ACTIVITIES. THIS WILL REQUIRE FOLLOW UP.

3. THIRD MAJOR CONSTRAINT IS LACK OF PUBLIC CO-OPERATION AND INTEREST IN DIPHTHERIA IMMUNIZATION FOR PROTECTION AS DEMONSTRATED IN RECENT LOCAL IMMUNIZATION CAMPAIGN IN THE MOLDOVAN CAPITAL DESPITE USE OF TV AND OTHER MEDIA. INFORMATION FOR THE PUBLIC IS BOTH HIGHLY TECHNICAL AND UNATTRACTIVE. TECHNICAL ASSISTANCE IN THE DEVELOPMENT OF CLEAR CONSISTENT MESSAGES AND FORMATS IS NECESSARY TO ACHIEVE HIGH IMMUNIZATION COVERAGE.
4. INTERNAL SUPPLY MANAGEMENT CONSTRAINTS & VACCINE COLD CHAIN EFFECTIVENESS IS BEING ADDRESSED BY BASICS CONSULTANT SOREN SPANNER.
5. THE RESULT OF SUPPLY CONSTRAINTS HAS LED TO THE ADOPTION OF A DISTRICT BY DISTRICT CAMPAIGN STRATEGY. THIS WILL BE TOO SLOW A PROCESS TO SUCCESSFULLY CONTROL DIPHTHERIA IN THE UPCOMING SEASON.
6. SIGNIFICANT NGO ACTIVITY AND POTENTIAL IDENTIFIED BY BASICS MOLDOVA COORDINATOR MARCIA ROCK. WHEN VACCINE SUPPLY IS IN PLACE NGO SOCIAL MOBILIZATION SUPPORT DESIRABLE.
7. MOH ACTIVE & COMMITTED TO ERADICATE DIPHTHERIA AND IMPROVE NATIONAL IMMUNIZATION PROGRAM. ALL TA INITIATED ACTIVITY WOULD BENEFIT FROM FOLLOW UP.

EMBASSY REQUESTS RETURN VISITS BY BASICS CONSULTANT ALLAN G. BASS TO PROVIDE ADDITIONAL TA IN SUPPORT THE PREPARATION AND IMPLEMENTATION OF THE DIPHTHERIA CONTROL CAMPAIGN AND THE STRENGTHENING OF THE NATIONAL IMMUNIZATION PROGRAM.

**Appendix J**

**Part One**

District Diphtheria Campaign Planning Workshop: Participants, Materials, Draft Plans

# **MOLDOVA SES and BASICS ACTIVITY PLANNING WORKSHOP**

4 JULY 1995

CHISINAU

An activity planning workshop will be held on 4 July 1995 at the Republican SES in Chisinau.

The purpose of this workshop is to develop a detailed plan of activities for EPI and diphtheria control for the remainder of 1995 and to the end of 1996.

Areas included in the workshop will include, but not be limited to, the following:

- Training of Staff
- Management
- Procurement of supplies and equipment
- Cost effectiveness and cost benefits
- The vaccine cold chain
- Stock control
- Social mobilization
- EPI manual
- Donor Coordination
- Serological studies
- Adaptation of local research methodologies to WHO standards
- Other operational aspects of EPI and diphtheria control

The workshop participants will be provided with planning tools to assist in the planning process.

Participants will include Epidemiologists from all Raion SES's, the national EPI and diphtheria control programme managers, and selected Pediatricians.

- Please bring a list of all of the health facilities and health personnel, by category, working in your Raion.
- Please bring information on the expected annual number of new born children for each facility and the expected hours of electricity availability.

## THE PROGRAMME

10:00 am	Introduction: EPI and Diphtheria Control the Situation and Strategies	RSES
11:00 am	Developing Objectives	BASICS
12:00	Strategies and Activities	BASICS
1:00 pm	LUNCH	
2:00 pm	Activity Planning	Group Work
3:30 pm	Presentation of Selected Activity Plans	Participants
4:00 pm	Closing	RSES

## PLANNING TERMS

- **GOALS**

A **GOAL** is a general statement of where you want to be or what you want to achieve.

- **OBJECTIVE**

An **OBJECTIVE** is a goal made more specific by making it measurable and giving it a time limit.

- **STRATEGY**

A **STRATEGY** is a broad statement of how you will reach the objective.

- **INDICATOR**

An **INDICATOR** is a measure of what has been achieved.

- **ACTIVITY**

An **ACTIVITY** is what will be done to achieve the objective.

- **ACTION OFFICER**

An **ACTION OFFICER** is the person responsible for managing or carrying out the activity

- **TIME-FRAME**

The **TIME-FRAME** is the date when the activity begins and the date by which the activity is expected to be completed.

- **BUDGET COST ESTIMATE**

The **BUDGET COST ESTIMATE** is the estimated total cost of the activity

- **PRIORITY**

The **PRIORITY** is the ranking of importance of the activity. a priority of “1” indicates the activity is of the greatest importance, while a priority of “5” indicates that the activity is of the lowest importance.

- **FUNDING SOURCE**

The **FUNDING SOURCE** is the name of the source of the money to carry out the activity. This may be regular government budgets, donor contributions, or funds obtained from fees or other sources.

# HEALTH STATUS PROJECTION

## INTRODUCTION

This exercise is designed to predict likely changes in the health status of the population as a result of the diphtheria epidemic.

## PURPOSE

To reach agreement on the projected health status of identified rural and urban population groups by the end of 1996. This will be considered in the context of the current diphtheria epidemic.

## GROUP EXERCISE (30 minutes)

In this health status projection exercise, you will be asked to make predictions as to the likely health status of key population groups in the next two years for the country. For the purpose of this exercise the population has been divided into 12 groups.

RURAL	Children	Adult Women	Adult Men	Elderly
U R B A N UNEMPLOYED	Children	Adult Women	Adult Men	Elderly
U R B A N EMPLOYED	Children	Adult Women	Adult Men	Elderly

## INSTRUCTIONS

Each workshop participant will individually rate the health status of each of the population groups (10 minutes). Use the form on the following page and write a rating number in each of the boxes.

After each individual participant rates the health status of the population groups, the participants of each workshop group will agree on a collective rating for each population group. (five minutes)

Use the form on the following page and write a rating number in each of the boxes.

## HEALTH STATUS PROJECTION

### RATINGS:

Please rate the health status of each of the population groups according to the following health status categories and write your rating in the table below.

1. EXCELLENT: This group is very healthy. Most illnesses are minor and self limiting in nature. Most meaningful curative care is due to accidents.
2. VERY GOOD: Most of this group is healthy most of the time. Illnesses are minor and infrequent. There are low levels of communicable and non-communicable diseases which may require curative care along with a normal accident rate.
3. GOOD: This group is mainly healthy but experience some minor illness and diseases and a low level of more serious diseases and a normal accident rate.
5. FAIR: This group suffers from a few more serious communicable and non-communicable diseases and a normal accident rate.
6. POOR: This group suffers a lot of ill health. A group ranked in this category will experience frequent minor and major diseases and illnesses which require curative care, including a high population ratio of hospitalization.
7. VERY POOR: This group has very poor health. This group experiences high levels of major and minor illnesses, requiring curative care and resulting in significant disability. There is a high population ratio of hospitalization.

POPULATION GROUP	YOUR RATING	GROUP RATING
RURAL		
Children		
Adult Women		
Adult Men		
Elderly		
URBAN UNEMPLOYED		
Children		
Adult Women		
Adult Men		
Elderly		
URBAN EMPLOYED		
Children		
Adult Women		
Adult Men		
Elderly		

At the end of this exercise, each workshop group will present a three minute summary of their ratings of each population group and provide a brief explanation of the reasons for these ratings. (15 minutes)

# PROBLEM PRIORITIZATION EXERCISE

## INTRODUCTION

This exercise provides participants with the opportunity to review their own knowledge of the current problems of diphtheria control and the immunization program using their own expertise, knowledge, and data. It further assesses the adequacy of the health system to respond to the problems identified.

In the past an exercise such as this would be considered self criticism leading to the punishment of individuals and the hiding of problems. When problems are hidden, solutions are difficult or impossible to find and implement. The accumulation of unsolved problems can lead to the collapse of essential services. In this brave new world we must identify problems and the factors contributing to those problems. This process leads to the development of solutions through the setting of priorities, goals, objectives, strategies, and detailed plans of activities for implementation.

This process will enable the participants to identify the major challenges ahead in the control of diphtheria and to set priorities for action.

## PURPOSE

To reach agreement on the top priorities in diphtheria control and immunization.

## PROCESS AND INSTRUCTIONS

1. **GROUP DISCUSSION:** Each group will identify the major problems in controlling diphtheria and providing effective immunization services. Write the major problems in the MAJOR PROBLEMS column on the column in the PROBLEM ANALYSIS form. Some identified problems have been suggested on the form. You should use your expertise and experience to add to the list and modify the suggested problems. (20 minutes)
2. **GROUP DISCUSSION:** Review the problems identified and decide on the relative importance of each problem. Rank the problems using this scale:
  - 1 = Most important: must be solved to enable the programme
  - 3 = Moderately important: should be solved soon
  - 5 = Least important: should be solved but not immediately critical

Write the ranking number in the PRIORITIES column on the PROBLEM ANALYSIS form. (10 minutes)

3. **GROUP DISCUSSION:** Each group should identify and consider the SOCIAL AND ENVIRONMENTAL factors, the SERVICE DELIVERY factors, and the

PLANNING AND MANAGEMENT factors which relate to the major problems.  
Write the factors in the spaces provided on the PROBLEM ANALYSIS form.

4. PRESENTATION:

A representative of each group will present a 6 minute summary of the major problems identified, their priority ranking, and the main factors contributing to the problems. (30 minutes)

PROBLEM ANALYSIS:  
DIPHTHERIA CONTROL AND IMMUNIZATION PROGRAMME

MAJOR PROBLEMS	PRIORITY	SOCIAL AND ENVIRONMENTAL FACTORS	SERVICE DELIVERY FACTORS	PLANNING AND MANAGEMENT FACTORS
immunization coverage				
immunization campaign				
supplies				
cold chain				
public co-operation				
contact prophylaxis				

# EXTERNAL FACTORS EXERCISE

## INTRODUCTION

There are many factors which affect health programmes. Many are under your control - such as the mobilization of medical personnel or the distribution of vaccines. Other factors are under the control of other parts of the Ministry of Health, the national Government, local Government, or the community. You may manage or influence the plans, decisions, budgets, and even the actions taken at these levels. These are INTERNAL FACTORS.

Other factors are not under your control, either nationally or locally, but may have profound and serious effects on your health programmes. In some rare circumstances you or your government may have some limited influence on external decisions. Natural disasters are beyond your control. These are called EXTERNAL FACTORS.

## PURPOSE

To enable participants to be aware of EXTERNAL FACTORS and take important external factors into account when planning programmes and activities.

## PROCESS AND INSTRUCTIONS

1. **INDIVIDUAL WORK:** Each workshop participant will prepare a list of 10 external factors using the form below in the YOUR LIST column. (5 Minutes)
2. **GROUP WORK:** Each group will agree on the 10 most important and likely external factors and list them in the form below in the GROUP column. (10 Minutes)
3. **PLENARY DISCUSSION:** A representative of each group will read the group's EXTERNAL FACTORS list. A summary will be made on the black board and a combined list will be produced. (15 minutes)

## EXTERNAL FACTORS

	YOUR LIST	GROUP LIST
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

# PLANNING STEPS

## 1. SITUATION ANALYSIS

- An analysis of the diphtheria and immunization situation was presented at the beginning of the workshop
- Use the findings of the PROBLEM ANALYSIS exercise to identify and prioritize problems for planning strategies and activities.

## 2. DIRECTIONS IN HEALTH FORM

- Review the problems identified on the PROBLEM ANALYSIS exercise
- Identify the high priority problems and decide on a GOAL which addresses the problem and write it on the form in the GOALS column
- For each goal set an objective which making the goal measurable and time limited. Write the objectives in the OBJECTIVES column next to the related goal.
- Use your experience and guidance from the national level to decide on a strategy for achieving the objective. Write the strategy in the STRATEGY column next to it's related objective.
- Identify an measurable INDICATOR which will show when the objective has been achieved or completed. Write the indicator in the INDICATOR Column next to the related strategy.

Use the definitions contained in the PLANNING TERMS notes attached to the planning forms.

## 3. PLAN OF ACTION FORM

- Write the information required in the heading boxes on the form

DIVISION is the location and section that you are responsible for.

PROGRAMME AREA is the part of the programme for which you are preparing a plan.

PAGE is for you to write the page number. If you are using more than one page for a single objective, write the total number of pages after the "of".

DIPHTHERIA CONTROL IN THE REPUBLIC OF MOLDOVA

**DIRECTIONS IN HEALTH**

**TWO YEAR STRATEGIC EPI PLAN**

**PROGRAMME PLAN >>>**

**1995 to end 1996**

**GOALS**

**OBJECTIVES**

**STRATEGY**

**INDICATORS**

**DIPHTHERIA CONTROL IN THE REPUBLIC OF MOLDOVA**

<b>DIVISION &gt;&gt;</b>		<b>PLAN OF ACTION</b>				<b>PAGE</b> <b>of</b>	
<b>PROGRAM AREA &gt;&gt;&gt;</b>		<b>DIPHTHERIA CONTROL</b>			<b>YEARS: 1995 to end 1998</b>		
<b>OBJECTIVE</b>				<b>STRATEGY</b>			
ACTIVITIES RELATED TO THIS OBJECTIVE	ACTION OFFICER NAME	TIME-FRAME FROM      TO	BUDGET COST ESTIMATE	PRIORITY	FUNDING SOURCE	INDICATOR	

Write the Objectives and strategies from the DIRECTIONS HEALTH form in the boxes on the PLAN OF ACTION form.

One objective and its related strategy is written on each PLAN OF ACTION form. Use a new form for each objective.

- Decide, with your workshop group, the best activities to implement your strategy and reach your objective. List the activities in the Activities column.
- Decide who will be responsible for each activity in your section and write it on the form next to the activity in the ACTION OFFICER column.
- Decide when the activity will start and when it should be finished. Write the dates in the TIME FRAME column on the same line with the activity.
- Estimate the costs of the activity and write it in the BUDGET COST ESTIMATE column on the same line as the activity. Please refer to the BUDGET ESTIMATES notes for details.
- Set a PRIORITY for each activity using the same number scale as you did in the PROBLEM ANALYSIS exercise.
- Identify where the money for this activity will come from and write it in the FUNDING SOURCE column.
- Identify an measurable INDICATOR which will show when the activity has been achieved or completed. Write the indicator in the INDICATOR Column next to the related activity.

After the end of this workshop you will need to revise your PLANS OF ACTION when you return to your place of work. After you have revised it you will need to seek approval on the activities and the use of funds.

- Your are requested to submit final drafts of your PLANS of ACTION to The National Diphtheria Committee by the end of July 1995 for comment and to obtain possible additional support.

# BUDGET ESTIMATES

## DEFINITION

A budget is a comprehensive plan, based on activities, which is expressed in monetary terms and corresponds to the funding available. A budget assists managers by:

- identifying activities required to reach planning objectives in quantitative terms
- providing a basis for evaluating financial performance for control purposes
- permitting early warning of cash shortages and surplus
- creating an awareness of the importance of costs within the section
- facilitating cost containment

In summary, a budget provides managers with the means to:

- co-ordinate the many activities that take place
- motivate section heads and other managers to achieve established objectives
- evaluate performance

## STEPS IN PREPARING A BUDGET

There are five basic steps in budgeting:

1. Prepare an Activity Plan
2. Determine resources (staff, materials, supplies, equipment, transport, etc.)
3. Prepare detailed costs of the resources required
4. Match costs with available resources
5. Modify activities to fit available resources

## PROCEDURES

### **1. Prepare an Activity Plan**

Use the plan you prepared during the planning workshop.

### **2. Determine required resources**

List all of the resources (staff, materials, supplies, equipment, transport, etc.) that you will require to carry out the activity.

**3. Prepare detailed costs**

Using the list of required resources to carry out each activity, estimate the costs of each activity

**4. Match available resources to costs**

Look at the expected level of funding and see if you are able to cover the costs of all activities. List all sources of funding including National Government and Local Government, and donor projects, and any other sources of funds.

**5. Modify activities to fit available resources**

Once you have identified the costs of activities and matched those costs with the available funds you may need to modify your plan of activities. Go back to your original activity plans and prioritize each activity within each objective. When you have done that you can determine which activities are of a low priority and can be rescheduled, reduced, or dropped from this year's activity plan. Determine which activities can not be carried out and then match all activities with resources.

**Appendix J**  
**Part Two**

District Diphtheria Campaign Planning Workshop: Participants, Materials, Draft Plans

List of the Planning Workshop Attendees

July 4, 1995

Medical University - Volnyanskaya, Ivanova, Romanchuk  
Republican SES - Sakhotskii, Benesh, Melnik  
Kishinev SES, Eidemiologic Dept. - Mineskurte, Karosh, Mian, Rybak,  
Niagu, Kererush  
Epid.Dept. of the Moldavian Railways - Velichko

Beltsi - Grushco, Panchioha  
Tiraspol - Serdiukov, Pechul

DISTRICTS

Vulcanesti - Gitsoi, KAtsaska  
Glodeni - Shashkovskii, Loupashcu  
Grigoriopol - Derman, Kirsta  
Donduseni - Bercu  
Drocia - Melentii, Turcumel  
Cainari - Pynaru (Chief Medic)  
Edinets - Cheban  
Cahul - Rendsan  
Cantemir - Kadsan (Chief Medic)  
Causeni - Talmasan, Byrsan  
Comrat - Rybalco  
Hincesti - Pasca  
Kriuleni - Manol  
Yaloveni - Mokanu  
Leovo - Savca  
Nisporeni - Roshca  
Anenii Noi - Kotiatsa  
Oknitsa - Ryska  
Orhei - Otstalov, Pilterian  
Resina - Senkevich  
Rybnitsa - Sanica  
Soroca - Gurchinskii  
Straseni - Roshca

Stefan Voda - Lukianova  
Telenesti - Danilescu  
Ungeni - Leva  
Falesti - Pachkovskii  
Floresti - Khotirca  
Chadyr Lunga - Evdoshenco  
Sholdanesti - Liakhu  
Chimislia - Gongu

Dondugani Distr.

BERKUL

DIVISION >>		PLAN OF ACTION				PAGE of	
PROGRAM AREA >>>		YEARS 1995 to 1996					
OBJECTIVE			STRATEGY				
To reduce diphtheria morbidity thru vaccination of the population			1. Provision of vaccines, trimestrial 2. Provision of syringes 3. Cold chain issues 4. Training cadre 5. Public information				
ACTIVITIES RELATED TO THIS OBJECTIVE	ACTION OFFICER NAME	TIME-FRAME FROM TO	BUDGET COST ESTIMATE	PRIORITY	FUNDING VOTE	INDICATOR	
1. Planning public immunization as per census	Head Dist. doctor Epidemiologist	annual					
2. Ensuring adequate supply of required vaccines and syringes.	SES	monthly					
3. Creating appropriate conditions for normal functioning of the cold chain.	Chief Medic of the Distr.	as per requirement					
4. Training staff involved in implementation of the immunization plan, with ensuring attestation at the workplaces.	Chief Medic of the Distr. Chief Medic of the SES Epidemiologist	once a year					
5. Strict control over implementation of the programme, when needed and	Epidemiol. Head. Assistan	monthly					

III

6. Informing the public through mass media
7. Analysis of the actions and stock balance in the end of the year and planning for the next year.

Floreskito Distr.

BOBYRCA

DIVISION >>		PLAN OF ACTION			PAGE of	
PROGRAM AREA >>>					YEARS 1995 to 1996	
OBJECTIVE			STRATEGY			
To cover 96% children and 95% adults with vaccination						
ACTIVITIES RELATED TO THIS OBJECTIVE	ACTION OFFICER NAME	TIME-FRAME FROM TO	BUDGET COST ESTIMATE	PRIORITY	FUNDING VOTE	INDICATOR
1. Training staff	BOBYRCA	Aug 1 - Sep 1		3		
2. Taking exams	1 - - -	1 - - -		3		
3. Distribution of vaccines	1 - - -	Aug 1 - 3		3		
4. Validating storage conditions	1 - - - + Chief Medicine Deputy Chief Medicine	During the campaign				
5. Public information	Sanitary Education Medicine	1 - - -		1		
6. Control over the progress of the campaign with attestation exams at different levels	Epidemiologist Pediatricians	twice a month		3		
7. Supply of necessary equipment, supplies etc.	Pharmacy office	before the campaign		1		

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M. ROSTICA

DIVISION >> Strazeni Distr.		PLAN OF ACTION				PAGE of	
PROGRAM AREA >>> Diphtheria		YEAPS 1995 to 1996					
OBJECTIVE			STRATEGY				
By late 1995 to cover 96% of children and 95% of adults with anti-diph.							
ACTIVITIES RELATED TO THIS OBJECTIVE	ACTION OFFICER NAME	TIME-FRAME FROM TO	BUDGET COST ESTIMATE	PRIORITY	FUNDING VOTE	INDICATOR	
1. Various workshops with responsible health workers (in charge)	D. POCHINOK D. ROSTICA	Aug to Sept.	Expenses on paper pens	1	Distr.	Attestation of health workers 8-10, 98%	
2. Distribute vaccines syringes to the medical district (area)	DANCO I.	quarterly		1	Republ.	115%	
3. Provide ... with cold chain equipment, repairs of the refrigerators	ROSTICA	October		1	Republ., Distr.	100%	
4. Organize propaganda about vaccination importance	VRJNCHANKA					Poll - knowledge among public - 60%	
5. Prepare a summary on the issue for	MAROVA	IV					

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LEFTER, Calarash Distr.

DIVISION >>		PLAN OF ACTION				PAGE	of
PROGRAM AREA >>>		Diphtheria				YEARS 1995 to 1996	
OBJECTIVE				STRATEGY			
By late 1995 to cover 96% of children & 95% of adults							
ACTIVITIES RELATED TO THIS OBJECTIVE	ACTION OFFICER NAME	TIME-FRAME FROM TO	BUDGET COST ESTIMATE	PRIORITY	FUNDING VOTE	INDICATOR	
1. Conduct a series of workshops with responsible health workers	Deputy Chief Medic PHU Head of Division LEFTER V.	August and September		1	Distr.	Attestation of health workers with mark 8, 98%	
2. Distribute vaccines & syringes in as per requirements.	LEFTER V.	August, quarterly		1	Republican	Provide 115%	
3. Propaganda on diphtheria and role of vaccination among the population of the district (radio, newspapers, evenings of questions & answers)	DOBROVICH LEFTER	August, September		3	Distr. Republican	To reach 85% of knowledge among the public, as per poll	
4. To have broken refrigerators repaired	Mayor MORARI V.	before Aug. 10		1	1-1	100%	
5. Prepare summary for RSES	LEFTER	Dec.		5	Distr.		

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Vulcanesti Distr.

L. LETSOI

DIVISION >> Epidemiology		PLAN OF ACTION				PAGE	of
PROGRAM AREA >>> Diphtheria		YEARS 1995 to 1996					
OBJECTIVE			STRATEGY				
Liquidation of diphtheria to the minimum			Epid. Surveillance				
ACTIVITIES RELATED TO THIS OBJECTIVE	ACTION OFFICER NAME	TIME-FRAME FROM TO	BUDGET COST ESTIMATE	PRIORITY	FUNDING VOTE	INDICATOR	
1. Seminars & workshops with health workers	Chief Epidemiologist L. LETSOI	thru Sept. 94	From local & Republican	1	Local & Republ. budget		
2. Ensure vaccines & med. equipment (syringes)	Republican <del>SES</del>	thru Sept 94	---	1	---		
3. Census	Luzun I.I.	thru Oct. 94	local budget	1	local budget		
4. Organize teams for vaccination	Deputy Chief Pediatrician	Aug. 10/20 1994/1995	---	1	---		
5. Ensure transport	Chief Medic SKAPOVALOV	1994-1995	---	1	---		
6. Inform the public about the task(goal)	LETSOI L.L. DETIANENCO TICHUENCO	1994-95	local & Republ. budgets	1	---		
7. Accounting, reporting	Chief	to 6 94-					

A. TALMAZAN

Kauseni Distr.

DIVISION >>		PLAN OF ACTION				PAGE of	
PROGRAM AREA >>>						YEARS 1995 to 1996	
OBJECTIVE			STRATEGY				
Eradication of the indigenous cases of diphtheria and reaching coverage of 96-98%							
ACTIVITIES RELATED TO THIS OBJECTIVE	ACTION OFFICER NAME	TIME-FRAME FROM TO	BUDGET COST ESTIMATE	PRIORITY	FUNDING VOTE	INDICATOR	
1. Regular supply of vaccine, as per plan, incl. syringes	V. BABALAU	once in trimestre (?)		1			
2. Imm. coverage of children - 96% of adults - 95%	Chief Medic SES, MOLDOVAN	up to October 1996					
3. To take complete and quality measures against the epidemics	Epidemiologist A. TALMACH	as per indications		1			
4. Conduct classes with pediatrician, therapist, passing credits, incl. on cold chain equipment	Deputy Chief Pediatrician	annually in the 1 trimestre					
5. Adequate provision of refrigeration equipment	V. BABALAU	before 1 trimestre 1996					

DIVISION >>		PLAN OF ACTION				PAGE of	
PROGRAM AREA >>>						YEARS 1995 to 1996	
OBJECTIVE			STRATEGY				
ACTIVITIES RELATED TO THIS OBJECTIVE	ACTION OFFICER NAME	TIME-FRAME FROM TO	BUDGET COST ESTIMATE	PRIORITY	FUNDING VOTE	INDICATOR	
6. To conduct a full and quality census and imm. planning 7. Sanitary Education	Chief Medic <del>Dr. SES</del> D. Moldovan	annual					
	Chief Medic, SES LICHIAN A.						
	Chief Medic of the	permanent					

Orhei Distr.  
P. KRISTALOV

DIVISION >>		PLAN OF ACTION				PAGE of	
PROGRAM AREA >>>						YEARS 1995 to 1996	
OBJECTIVE				STRATEGY			
Immunize 96% children and 95% adults							
ACTIVITIES RELATED TO THIS OBJECTIVE	ACTION OFFICER NAME	TIME-FRAME FROM TO	BUDGET COST ESTIMATE	PRIORITY	FUNDING VOTE	INDICATOR	
1. Training and attesting the cadre	Epidemiology Curative medicals	1 month					
2. Adequate supplies of vaccines	RSES	3 months					
3. Timely supply of vaccines	RSES, Distr. SES	1-1					
4. Supplies with refrigerators, vacc. carriers, cold chain monitors	RSES Mayor's office	6 months					
5. Obtaining catalogues (registers?) to log in the target groups	RSES	3 months					
6. Informing the population	SES	1 month					

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SOROSA Distr.

DIVISION >>		PLAN OF ACTION			PAGE of		
PROGRAM AREA >>>					YEARS 1995 to 1996		
OBJECTIVE		STRATEGY					
ACTIVITIES RELATED TO THIS OBJECTIVE		ACTION OFFICER NAME	TIME-FRAME FROM TO	BUDGET COST ESTIMATE	PRIORITY	FUNDING VOTE	INDICATOR
Immunization Syringes Refrigerators Diagnosticums Cultural media(?) Fuel		Chief Medical Officer	July-August	15,000 lei			95-98%

OBJECTIVE  
 ↓ Reduce diphtheria morbidity  
 ← Reach 95% (?) coverage

STRATEGY  
 Collective immunity - 90%  
 Liquidate morbidity before 1 (?)

ACTIVITIES RELATED TO THIS OBJECTIVE	ACTION OFFICER NAME	TIME-FRAME FROM TO	BUDGET COST ESTIMATE	PRIORITY	FUNDING VOTE	INDICATOR
Goals Timely identification of cases	ESC (Epid. Surv. Cent.)			Imm. coverage		What has been accomplished with regard to the objectives & the goals
Courses for health workers how to use diphtheria inoculations		August-Sept.	1000			
Workshop for health workers, incl. SES	ESC	August	1000			
Laboratory examination of quincy cases, contacts, preventive examinations	ESC, health facilities	regularly	3000			
Making immuniz. plans for 1996	TSURKAN	October				
Request for biopreparations	ESC	October	6000			
Equipment with refrigerators		1-1	3000			
Repairs of cold chain equip.		July	800			

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KIRETA D.T.

Grigoriopol

DIVISION >> Epidemiologic		PLAN OF ACTION				PAGE	of
PROGRAM AREA >>> Grigoriopol		YEARS 1995 to 1996					
OBJECTIVE			STRATEGY				
Preventing from indigenous (local) cases of diphtheria			Epid. surveillance, widely informing the public, mobilization of all health workers				
ACTIVITIES RELATED TO THIS OBJECTIVE	ACTION OFFICER NAME	TIME-FRAME FROM TO	BUDGET COST ESTIMATE	PRIORITY	FUNDING VOTE	INDICATOR	
1. Organize sustained epid. surveillance over diphtheria infection	DERMAN N.H.	from July 1	No money available from the Budget		National budget		
2. Organize and conduct a series of lectures, discussions over the local radio on diphtheria prevention	Kifte D.T. DIDENKO R. KARALLOV S.	Once a week from July 1 to Sept. 1					
3. Have a permanent column in the Distr. newspaper on diphtheria control issues	KIRETA D.	from July 1 Once in 2 weeks					
4. To obtain the required quantity of vaccines genuine	KIRETA D. TSURKAN R.	July					

GAISAN N.1.

DIVISION >>		PLAN OF ACTION				PAGE	of
PROGRAM AREA >>>		Kahul Distr.				YEARS 1995 to 1996	
OBJECTIVE		STRATEGY					
Reduction of morbidity down to sporadic cases		training of medical staff, census, planning, provision of refrigerators & vaccines!					
ACTIVITIES RELATED TO THIS OBJECTIVE	ACTION OFFICER NAME	TIME-FRAME FROM TO	BUDGET COST ESTIMATE	PRIORITY	FUNDING VOTE	INDICATOR	
- Workshop with area nurses, (therapeutic & pediatric areas) on planning tactics.	Chief Medics, SUBs, SVAs, Heads of Therapeutic & Pediatric Divisions	July 20-30	100 lei	3	local budget		
- Workshop with Chief Medics of SUBs, SVAs, Heads of Therapeutic & Pediatric Divisions of polyclinics	epidemiologist	July 18	100 lei	1	1-1		
- Census	Med. staff of areas (med. districts)	Aug. <del>July</del> 15-30	200 lei	3	1-1		
- Planning immunization	med. district Therapists & Pediatricians	Sept. <del>July</del> 10-25	200 lei	1	1-1	100% coverage of the population	
- Provision of refrigeration equipment villages Tataresti, Holuboc, Sissac, Trifesti	Mayor's office	III-IV quarters	2800 lei	5	1-1	100% provision of refrig. equipment	
- Provision of vaccines and syringes to	RSES	quarterly		1	Republic. budget	95% imm. coverage	

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Dubossary Distr.

DIVISION >>		PLAN OF ACTION			PAGE of			
PROGRAM AREA >>>					YEARS 1995 to 1996			
OBJECTIVE			STRATEGY					
ACTIVITIES RELATED TO THIS OBJECTIVE			ACTION OFFICER NAME	TIME-FRAME FROM TO	BUDGET COST ESTIMATE	PRIORITY	FUNDING VOTE	INDICATOR
1. Vaccines 2. Syringes 3. Fuel (gasoline) 4. Disinfection means 5. Med. document 6. Refrigerators for health facilities 7. Diagnosticums for RSES 8. Culture media					\$ 50,000		local & Republican budgets	to the goal & objective

District: GRASHKA, Beltsi

DIVISION >>		PLAN OF ACTION				PAGE	of
PROGRAM AREA >>>		YEARS 1995 to 1996					
OBJECTIVE		STRATEGY					
Before Jan. 1, 1996 to cover with immunization 95% of adults and 98% of children		determine the number of those to be immunized. determine imm. dates means and resources. Setting up imm. teams, providing them with transportation organizing epid. surveillance, records & accounting					
ACTIVITIES RELATED TO THIS OBJECTIVE	ACTION OFFICER NAME	TIME-FRAME FROM	TO	BUDGET COST ESTIMATE	PRIORITY	FUNDING VOTE	INDICATOR
1. Conduct workshops, exams	Epid. Dept. Head of Poly	July 5-10			1	RSES	
2. Inform the public	Local radio, TV	July 5-15					
3. Census of the population							
- Finish immunization by Dec. 15							
- Set up imm. teams (10) for children -	Durkia I.T.	by July 6					
- Same for adults (10)	Ketrari V.T.	By July 6					
- Imm. rooms in poly-clinics	Durkia, Ketrari	1	1				
- Provide teams with transportation	Mayor's orders	1	1				
- Distribution of vaccines	SES (Dist.?)	1	1				
- Report on accomplished immunizations	Teams, working in companies & organizations	Weekly, on Mondays by 10 a.m.					
- Control over the progress of immunization	SES (Dist.)	Weekly					

SENCHEVICHI V.F.

DIVISION >>		PLAN OF ACTION				PAGE	of
PROGRAM AREA >>> Diphtheria		YEARS 1995 to 1996					
OBJECTIVE		STRATEGY					
By late 1995 cover 96% of children and 95% of adults with vaccination		See preceding tables					
ACTIVITIES RELATED TO THIS OBJECTIVE	ACTION OFFICER NAME	TIME-FRAME FROM TO	BUDGET COST ESTIMATE	PRIORITY	FUNDING VOTE	INDICATOR	
1. Decision of the local SES to implement the goal	Head of Epidemiology	From July 3 to July 10	Cost of vaccine - 12,000 lei	1	Republ. budget - 9000 lei	Exclusion of indigenous cases and eradication of morbidity in general	
2. Orders of the Chief Medic. of the District and the local SES to those in charge	1-1	Seminars July 4-10		1	Local budget - 3000 lei Sponsors - 2000 lei		
3. Workshops with those in charge	Senkevich	Imm. campaign after receipt of vaccine Sept 5-20		1			

**Appendix K**  
**Agenda for the Initial Working Session: BASICS and the RSES**

**EPI AND DIPHTHERIA CONTROL SUPPORT**

**TOPICS FOR DISCUSSION: 26 JUNE 1995**

1. **ACTIVITY PLANNING**

Recognizing that the Government of Moldova has a national EPI plan, and responding to the problems, priorities, and request for BASICS assistance made by Dr. Magdei, Deputy Minister for Health on 22 June 1995 at a joint RSES - BASICS meeting, a plan of activities should be developed.

It is proposed that a joint planning exercise be undertaken during the week of 26 June and completed during the week of 3 July 1995. This exercise should include all of the National personnel responsible for EPI and diphtheria control.

The process will lead to the elaboration of the implementation of the National Immunization Plan and of BASICS program of support to Moldova's EPI.

· Activity plans which should be developed include:

- 1.1. Training of Staff
- 1.2. Management
- 1.3. Procurement of Supplies and Equipment
- 1.4. Serological studies
- 1.5. Adaptation of local research methodologies to WHO standards
- 1.6. Cost effectiveness and cost benefit study

· The BASICS team suggests that further plan areas may include:

- 1.7. The Vaccine cold chain and stock control
- 1.8. Social mobilization and multi-sectoral co-ordination.
- 1.9. EPI Manual
- 1.10. Donor Co-ordination
- 1.11. Other operational aspects of the EPI and diphtheria control

## 2. SUPPLIES

While recognizing the current financial constraints, the success of the EPI and diphtheria control depends on the availability of vaccines, antibiotics, antitoxin, and syringes and needles in sufficient quantity.

- During the team's visit, a review of existing stocks and expected deliveries would enable informed action to assist in securing appropriate humanitarian assistance.

## 3. VISITS

- The BASICS team would like to visit the facilities conducting the diphtheria control campaign in Chisinau, and health facilities in Transdnestria and other areas where diphtheria incidence rates are high.

## 4. MEETINGS

The BASICS team would like to meet with senior officials to discuss the potential for multi-sectoral collaboration in social mobilization in the national EPI and diphtheria campaign.

- Ministry of Information and Communications
- Ministry of Education
- Ministry of Labour
- Ministry of Agriculture

## 5. DATA

- The BASICS team would like to review the case investigation reports for diphtheria cases in the current epidemic to seek to identify the relationship of cases to cold chain conditions and vaccine failure.

**Appendix L**  
**BASICS Contacts in Moldova**

List of main contacts and Senior Officials met during the mission of Allan Bass, BASICS Consultant, in Moldova.

NAME	TITLE	ADDRESS	TOWN RAION	PHONE FAX
Dr. Mikhai Magdei	Vice Minister of Health	Ministry of Health st. NÎNCEȘTI 1,	277028,Chisinău, MOLDOVA	72-99-93
Dr. Victor Babalau,	Chief Medic of the Republican Sanitary and Epidemiological Station (RSES)	RSES, st. Gh. Asachi 67 a	277028,Chisinău, MOLDOVA	72-66-47 73-53-86 Fax: 72-97-25
Dr. Vasily Sohotski	Deputy Chief Medic of the Republican Sanitary and Epidemiological Station (RSES)	RSES, st. Gh. Asachi 67 a	277028 Chisinău, MOLDOVA	72-96-91
Dr. Anatoly Melinik	Head of Antiepidemic Department of the RSES	RSES, st. Gh. Asachi 67 a	277028 Chisinău MOLDOVA	72-81-32
Dr. Oleg Benesh	Epidemiologist, RSES	RSES, st. Gh. Asachi 67 a	277028 Chisinău, MOLDOVA	73-57-68
Dr. Victor Volovei	Chief of Curative and Preventive Medicine Department, Ministry of Health	Ministry of Health st. NÎNCEȘTI 1,	277028 Chisinău MOLDOVA	72-96-96 72-96-53
Dr. Valentina Melnik	Deputy Chief of Curative and Preventive Medicine Department, Ministry of Health	Ministry of Health st. NÎNCEȘTI 1,	277028 Chisinău, MOLDOVA	72-97-05
Dr. Vasily Borsch	Chief, Republican Centre for Health (Information) MOH	RSES, st. Gh. Asachi 67 a	277028 Chisinău, MOLDOVA	72-96-33
Dr. Ruria Golovcova	Head of Department of Propaganda & Mass Media, Republican Centre for Health (Information) MOH	RSES, st. Gh. Asachi 67 a	277028 Chisinău, MOLDOVA	73-58-11

NAME	TITLE	ADDRESS	TOWN RAION	PHONE FAX
Mr. Simeon Musteata	Prime Deputy Minister of Education	Piata Marii Adună Nationale, 1	277033, Chisinău Moldova	(8-0422) 233474 233519 FAX: (8-0422) 233474
Victor Savin	Director of Health Department of Chisinau City Council	st. Bucuresti, 35	277061 Chisinău, MOLDOVA	23-70-98 23-26-66
Dr. Ion Chebotar	Vice Principal Doctor of the Centre of Hygiene & Epidemiology, Chisinau City Council		277005 Chisinău, MOLDOVA	22-52-54
Dr. Nikolai Andrushenko	Chief Medic of Raion SES		Tiraspol	(233) 3-34-92 (233) 6-15-17
Dr. Peter Tkachenko Chief Medic of Raion SES		Slobodzia	(257) 2-49-64 (257) 2-49-65	
Stephan Toma	Resident Programme Officer, UNICEF Moldova	Str. 31 August, 131,	Chisinău, 2777012, Moldova	223-052 222-420 Fax: 223-052 EMAIL: UNICWD.MOLD@undp. org