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**USAID PLANNING TEAM ON IEC AND
SYSTEMS REFORM FOR SUSTAINABLE IMMUNIZATION
IN THE RUSSIAN FEDERATION**

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ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
BASICS	Basic Support for Institutionalizing Child Survival Project
BCG	Bacillus Calmette-Guerin Vaccine
CDC	Centers for Disease Control and Prevention
DPT	Diphtheria, Pertussis, and Tetanus Vaccine
ENI	Europe and Newly Independent States (region)
EPI	Expanded Programme on Immunizations
IEC	Information, Education, and Communication
IFRCRCS	International Federation of Red Cross and Red Crescent Societies
KAP	Knowledge, Attitude(s), and Practice(s)
MOH	Ministry of Health
NGO	Non-governmental Organization
NIS	Newly Independent States
OYB	Operating Year Budget
REACH	Resources for Child Health Project
SES	Sanitary and Epidemiological Station
TA	Technical Assistance
UNICEF	United Nations Children's Emergency Fund
USA	United States of America
USAID	United States Agency for International Development
WHO	World Health Organization

Team Members

In response to a request from USAID/Moscow for assistance in defining how best to promote efficient, high quality, and accessible health services in the Russian Federation, the Office of Health and Nutrition supported a team of three technical experts to visit Russia from March 20 through March 31, 1995. This design team included Dr. Murray Trostle, G/PHN/HN/CS; Mr. Robert Steinglass, BASICS technical officer for EPI; and Ms. Raisa Scriabine, IEC technical expert. Also participating in this activity were Ms. Jane Stanley and Ms. Natasha Voziianova from the USAID mission in Moscow.

The team conducted extensive interviews with numerous officials in the Russian health system and reviewed a substantial amount of written material to reach their conclusions. The team also had discussions with staff from the World Health Organization, UNICEF, and CDC in preparation for this trip. (See Appendix 1 for a list of persons contacted.)

Situation Analysis

Since the collapse of the Soviet Union in 1991, the Russian Federation moved from a centrally-planned economy to a more democratic, market-based system. This transition produced significant disruptions in the manner in which services such as health care are delivered. One indicator for the decline in health services in Russia is life expectancy. Since 1992, the average life expectancy for men has fallen from 62 to 59 years. A system that once held infectious diseases in check today fails to provide basic protection for children. From 1992 to 1993, pertussis (whooping cough) incidence increased by 164 percent, measles increased by 402 percent, and diphtheria increased by 396 percent. All three of these diseases are commonly prevented in nations which immunize their children with the basic EPI vaccines. Already the diphtheria epidemic in Russia is the largest the world has seen since World War II and shows no signs of abating. (See Appendix 2 for a summary of the diphtheria situation in Russia.)

Resources are scarce and the health care system is racked with inefficiencies. In addition, the transition away from an authoritarian society requires leaders to be more responsive to consumer needs and to adopt new methods of educating the public about health issues. They must now educate and convince consumers rather than command and dictate. The health care sector must create a market for its product and educate the public about the need for preventive services such as immunization.

The inability of the system to properly address behavioral issues is reflected in the response to the current diphtheria epidemic. Russian health officials and communications professionals increasingly recognize that saturating the general population with uniform leaflets, posters, and television spots is not an adequate or effective way to raise the level of popular awareness about health issues nor for promoting sound health behaviors. Communications material is more than just information; it is a process of understanding behaviors and addressing consumer needs.

As market forces begin to guide the Russian economy, new skills and functions need to be applied to health communications to compete for public attention in an increasingly sophisticated information market. Financial resource constraints in the federal budget force health communicators to streamline their efforts as they also strive to achieve maximal impact with fewer resources. In Russia, the labor intensive and costly system of using health workers as prime health educators through inter-personal communications cannot continue and is already breaking down. New economic circumstances mean new approaches to health communications are needed. In short, the changing environment has created the need for programs that are consumer-driven to produce measurable and concrete results.

Serious systems inefficiencies that do not make maximum use of available resources also impact negatively on the country's ability to respond to health problems. For example, health workers have inherited a long list of medical contraindications to immunization which are a legacy of the early days in vaccine research when vaccines were less pure than they now are. Application of these inappropriate contraindications leads to delayed and low immunization coverage levels as well as missed opportunities to immunize, which results in unnecessarily high rates of vaccine-preventable diseases. Another systems inefficiency is that managers have at their disposal a wealth of local data which has been collected with great expenditure of time and labor, yet these data are rarely used for improving program management.

To enhance the quality and accessibility of preventive and curative health services, attention must be given to correcting systems inefficiencies, as well as making better use of new and effective communications strategies. These changes in the way in which the health sector functions are critical to establishing an ability to address any public health problem whether it be bad diets, alcoholism, smoking, or infectious diseases. Recognizing the extent of reform that is needed, the USAID/Office of Health and Nutrition is proposing a program of assistance that would provide state-of-the-art technical expertise in areas of IEC, as well as in selected systems issues that relate to the establishment of effective and efficient immunization services.

The opportunity that is provided by the diphtheria epidemic allows USAID to gain access to the health system and begin the process of training health staff to implement new approaches in IEC and systems reform. While the present focus will be on diphtheria, the behavior change methods that will be applied are applicable to all public health problems that are behavior oriented.

Objective:

The proposed approach is in support of the mission's program objective which calls for programs to:

“Improve the sustainability of social services and benefits.”

Furthermore, this approach will fulfill the program indicator which identifies the need for:

“Improved efficiency, quality, and access to health care services.”

The activities set forth will accomplish this by addressing the following issues:

- Develop a capability within the appropriate offices of the Russian health system to plan, conduct, and evaluate effective information, education, and communications activities in response to priority health issues; and
- Conduct appropriate activities to address priority systemic and local weaknesses within the Russian health system that inhibit the ability to deliver high quality and cost-efficient immunization services.

Activities

In order to maximize the impact of the proposed activities and achieve measurable results with respect to the control of diphtheria, the activities should be conducted on two levels - the federal level and the oblast level. It is proposed that IEC workshops be conducted in Moscow at the federal level in order to facilitate national plans of action. However, plans must be implemented in order to achieve results and so workshops should also be conducted in two oblasts, permitting the direct application of the new concepts in ways that should show impact on the diphtheria epidemic. Similarly, workshops at federal and oblast levels on contraindications should result in local plans to implement and monitor abbreviated lists of contraindications.

Information, Education, and Communications (IEC)

IEC programs are an increasingly important part of modern health services worldwide. In the former Soviet Union, however, IEC functions were centrally determined and implemented top-down by government agencies responsible for health care. Because health officials themselves were the designers and purveyors of popular information/communications, little emphasis was placed on consumer needs. As a result, health communications program design did not integrate audience segmentation, appropriate message design, pre-testing, nor behavioral research and behavior change theory.

For example, prior to the dissolution of the Soviet Union, the social environment made it unlikely that individuals would choose not to follow the regulations by not having their children immunized. Now, however, parents and health staff are questioning the importance of immunization, particularly for diseases which they have not witnessed or of which they are unaware have re-emerged, such as diphtheria.

Meetings conducted at the Ministry of Health (MOH) of the Russian Federation and the State Committee for Sanitary and Epidemiological Surveillance indicate that high priority is placed on

enhancing the effectiveness of health communications activities in Russia by integrating marketing-based methodologies and practices into program design. Specific requests for such training in health communications methods were made by the Federal Research Institute for Health Education and Health Promotion (MOH), the Republican Center for Preventive Medicine (MOH), the Moscow Center for Hygienic Education of the State Committee for Sanitary and Epidemiological Surveillance, and the Moscow Gabrichevsky Research Institute of Epidemiology and Microbiology.

In discussions, Russian health officials highlighted their need to build capacity to deliver communications services that are both driven by and respond to consumer needs. This includes the strengthening of skills in research, planning, and the implementation of targeted health communications programs.

Research

This function provides planners with accurate measures of how specific target audiences can be reached more easily through information by responding to questions such as: What barriers do audiences face in reaching program objectives? What kinds of appeals are people most likely to respond to? What sources of information are likely to be most influential? Communications research also tests and monitors materials and interventions to determine if they are working as expected.

Planning

This function integrates research analysis into the development of a strategic design that includes the selection of communications objectives, audiences, messages, and channels.

Implementation

This function integrates different forms of message delivery (e.g., personal communications, media advocacy and public relations, advertising, and other promotion techniques) into a strategic, goal-oriented effort that relies closely on testing, monitoring, and continual feedback to ensure maximum impact.

Structure of IEC Activities

A series of training-action workshops has been conceived to guide participants through the steps to be followed in taking the necessary decisions in planning, implementing, and evaluating educational communications activities for health that correspond to their own individual priorities. In the current structure of the government health services system, the MOH and the State Committee for Sanitary Epidemiological Surveillance, while possessing distinct authority for their respective sectors, often perceive themselves in a competitive situation for scarce resources and access to political power. To avoid duplication of effort and to achieve maximum impact in strengthening the capacity of the Russian government to conduct public health related IEC programs, it is vital that both the Ministry and the State Committee participate in USAID/BASICS conducted workshops.

The proposed workshops offer an opportunity for both agencies to work together with USAID/BASICS in a joint inter-agency coordinating committee which would collaboratively plan and implement the IEC training programs. Both agencies would benefit equally from the training sessions, share the training manuals produced, and begin working together in the elaboration of common IEC programs which can only help to strengthen the process of health education planning and development in Russia. (See Appendix 3 for a summary of the proposed IEC approach.)

Three workshops will be conducted both in Moscow and in two oblasts outside of Moscow. While training emphasis will be placed on diphtheria control, the workshops will be providing an effective methodology in health communications that can be applied to a broad range of health issues, including smoking cessation, alcohol abuse, AIDS prevention, and changing pediatricians' attitudes toward contraindications.

A core group of IEC trainers in both the MOH and the State Committee on Sanitary and Epidemiological Surveillance will be trained in Moscow. These trainers will then be able to refine their training skills in the workshops conducted at the oblast level.

Specific products of the workshops will include a knowledge, attitude and practice survey of attitudes toward diphtheria control on the national and oblast levels; IEC strategies to control diphtheria on national and oblast levels; a series of Russian language training manuals for public health communications; a set of designed and tested public health education materials to support the diphtheria control effort; and a set of indicators for routine monitoring of impact.

Participants in the various workshops will include health communications policy makers and professionals, staff from the MOH and appropriate affiliates, staff from the State Committee for Sanitary and Epidemiological Surveillance and their appropriate affiliate organizations, representatives of the Ministry of Education, and the media, as well as other organizations involved in the area of health education and communications, including NGOs, as applicable.

Workshops will be divided into modules that correspond to a particular theoretical subject or activity. Seminar guides and training manuals will be developed for each seminar/module. The workshops will combine theory with hands-on practice and include conducting focus groups, in-depth interviews, pre-testing communications products, and the design of strategic communications plans.

A brief summary of each workshop is provided below.

Workshop I: Introduction to Communications for Public Health

This three-day introductory workshop will be held in Moscow to introduce program managers and health communication professionals to the role that communications play in public health worldwide, with particular focus on effective health communications efforts in the United States.

The workshop will introduce the concepts and methods of conducting consumer-based IEC programs that can be relevant and applicable to Russia and examples will be given of the effective application of these methods. Participants from Russian health organizations will present educational materials which will be used for analysis and discussion to optimize staff effectiveness in responding to plan objectives, message design, and audience targeting.

This workshop will also serve as a planning forum for the subsequent series of training workshops.

Workshop II: Formative Research for Public Health Communications

After a brief review of workshop I, the second workshop will introduce participants to basic techniques in qualitative research for public health communications, including the use focus groups and in-depth interviews.

Practical hands-on experience will be gleaned as participants conduct practice focus groups and in-depth interviews with medical personnel and target population groups (high risk groups and homogenous groups of persons immunized and not immunized against diphtheria) in the Moscow area to understand the level of knowledge about the disease, as well as attitudes and practices that constrain the ability of the government to achieve appropriate levels of immunization coverage.

The workshop will be repeated in the two oblasts with MOH and State Committee trainers leading the sessions. Oblast level trainees (accompanied by USAID/BASICS and MOH/State Committee trainers) will conduct practice focus groups and in-depth interviews in selected rayons in the oblast. Findings will be analyzed as part of the training exercise. Such efforts not only contribute to strengthening research capacity, but will also provide valuable insight into knowledge, attitudes, and practices of medical personnel and other target audience groups.

The research results will be utilized in the subsequent workshop on public health communications planning and materials design.

Workshop III: Developing a Public Health Communications Plan and Designing Educational Materials

This workshop will build on the previous workshop by teaching the skills necessary for the design, implementation, and evaluation of public health communications programs.

The workshop will be designed to guide participants in four steps of the public health communications process: analysis (formative investigation), planning, pre-testing, and monitoring.

The workshop participants will work on diphtheria control as a priority topic for the elaboration of a national public health communications plan. The workshop will also produce drafts of print, television, and radio materials outlined in the public communications plan produced. These materials will have been pre-tested with target audiences groups.

The workshop will be repeated at the oblast level during which an oblast-level plan will be produced for diphtheria control and communications materials that are adapted to the specific oblast environment will be pre-tested.

This workshop will also focus on monitoring and evaluation techniques, including the development of appropriate measures of system performance.

A public health communications manual in Russian will be developed for use in the workshops and in subsequent training activities to be conducted by the MOH and the State Committee for Sanitary and Epidemiological Surveillance.

Systems Reforms

The MOH is proud of its past accomplishments in the field of immunization and disease control and consider that they have the diphtheria situation well in hand. They report that approximately 50 percent (60 million persons) of the adult population have received at least one booster dose of diphtheria-toxoid-containing vaccine in the past few years, 32 million in 1994 alone.

Given these impressive accomplishments, contacts at the MOH are very particular as regards the type of technical assistance which BASICS could provide for systems-strengthening or capacity-building. Consequently, technical assistance is generally less welcome in such areas of systems reform as policy formulation, planning and management, cold chain and logistics, and costing.

For example, vaccine shipped by surface over long distances in uninsulated containers is subject to losing its potency due to exposure to extremes of heat and cold. Even though an insulated shipping container has been developed and produced in Russia, it is not yet in use, thus putting valuable and limited supplies of vaccine at risk for damage.

The areas which have been identified for special technical collaboration include the reduction of contraindications and the introduction of routine monitoring for IEC.

Problem Statement on Contraindications

There is evidence that the social norm in favor of immunization is deteriorating. Many health workers have an exaggerated fear of the danger of vaccines and the inherent weakness of Russian children to safely mount an effective immune response. This reluctance results in the postponement or denial of immunization and is a major cause of the low levels of age-appropriate immunization. Despite the recent revision of the long list of medical

contraindications, it is expected that focus group research among pediatricians and neurologists will reveal that these negative attitudes and behaviors prevail. Even so, some progressive practitioners in Moscow have begun to offer special consultation centers where referred children with supposed contraindications can be vaccinated. These positive experiences need to be better documented in terms of safety, efficacy, and public health importance, and then disseminated and replicated. Educational materials from Western countries on vaccine safety, true and false contraindications, and rates of adverse reactions need to be translated into Russian and introduced to the medical community.

Activities Related to Contraindications

One outcome of the IEC activities will likely be the need to provide training to practitioners on true and false medical contraindications to immunization. One short workshop of two to three days, followed immediately by a larger seminar of one day, will be conducted by BASICS at the national level and at each of the selected demonstration oblasts. The Gabrichevsky Institute, which reports that it conducts training of MOH clinical specialists in this area, expressed an interest in participating. Professor Vladimir Tatochenko (Institute of Pediatrics and Academy of Medical Sciences), who recently conducted oblast-level courses and published a book on contraindications and reactions to vaccination, would also be interested in collaborating in this activity.

As with previous seminars on immunization policies conducted in six NIS countries since 1992 by REACH, world-renowned pediatricians and epidemiologists from the USA and other countries will exchange views with local experts in the same disciplines. This will be an excellent opportunity to involve CDC, as well. A contraindications-specific workshop already planned by BASICS for May 1995 in Kazakhstan and Kyrgyzstan will serve as a model. Many policy topics ripe for reformulation have already emerged from previous REACH and BASICS field experience in Central Asia, Moldova, and Georgia.

The expected products and outcomes will be:

- preparation and distribution of a modern revised, shortened, clarified, and operationalized list of valid and invalid medical contraindications to immunization,
- locally-elaborated plans to ensure effective implementation of the revised lists, including performance audits,
- plans for the establishment of specialized clinics for the referral of sick children, immunization, documentation, and dissemination of findings, and
- translation and dissemination into Russian of scientific justifications and educational materials on contraindications.

Routine Monitoring for IEC

Enormous quantities of data are collected by the medical system; however, little of it is analyzed, interpreted, or put to use for decision-making at the level of collection. As part of the IEC series of seminars, a training module will be prepared which will develop tools and indicators for

routine decentralized management and monitoring of program impact. Monitoring of existing quantitative data will enable managers to intervene, prevent late doses, and increase the proportion of infants immunized on time.

Some of the possible indicators related to diphtheria, for which primary data collection already routinely occurs at various levels, are listed below:

- comparison of primary diphtheria coverage versus oral polio vaccine coverage (to determine the extent to which parents fear injections for their children),
- comparison of primary diphtheria versus pertussis coverage (to determine the extent to which practitioners are improperly withholding DPT vaccination(s) due to false contraindications),
- comparison of BCG versus DPT1 (to determine the effectiveness of the referral of newborns from maternity hospitals to the health facility responsible for initiating the multi-dose series),
- comparison of DPT1 versus DPT3 by 12 months of age (to determine the frequency with which invalid contraindications are contributing to drop-out rates and/or the untimely completion of series), and
- comparison of the number of immunizations given during the summer months versus other times of year (to determine whether practitioners continue to doubt the ability of "weak" children to respond immunologically in hot months).

Routine attention to the above indicators will help MOH and SES staff to identify those administrative areas and individual health facilities where IEC or other measures directed either at the practitioners or the public will have to be strengthened to improve the quality of services. Some of these indicators may also identify systemic problems in the delivery of immunization services which will need to be explored by the authorities.

Additional TA will be needed after the oblast-level IEC seminars to implement and strengthen a routine system of data use for improved immunization program management. Computers and existing software may also be introduced if appropriate.

Participant Training

Given the high level of interest and commitment by Russian health agencies to adapting IEC methodologies, and the desire expressed by the MOH to have a core group of Russian staff trained as IEC trainers, six Russian health education professionals from the MOH and the State Committee for Sanitary and Epidemiological Surveillance will visit the United States for up to three weeks to observe how IEC campaigns are developed, managed, monitored, and evaluated on the federal and state levels in the United States. The participants will also observe the roles played by the private sector and advocacy groups.

Similarly, given the effective collaboration of various professional groups in the elaboration of immunization schedules, contraindications, and adverse risk monitoring, a group of up to six pediatricians and epidemiologists from the MOH and State Committee will visit the United States for up to three weeks to learn how the government in a pluralistic society seeks the input of different associations and professional bodies in formulating policy. Visits to the American Academy of Pediatrics, Advisory Committee on Immunization Practices (if in session), Centers for Disease Control and Prevention, and state immunization offices could be arranged to enable participants to see the involvement of federal, state, and professional bodies.

Implementing Mechanism

In order to assist the USAID mission in Moscow provide assistance to the Russian Federation for the strengthening of public health programs and health services, the USAID/Center for Population, Health, and Nutrition, Office of Health and Nutrition is proposing to utilize technical expertise from the Center's primary central project for child survival activities - the BASICS project. The BASICS project is a five-year contract with the Partnership for Child Health Care, Inc. (a consortium of John Snow, Inc., Management Sciences for Health, and the Academy for Educational Development) to support activities to reduce infant and child illness and death worldwide.

BASICS offers technical assistance in the full range of child survival interventions, including immunization programs, and programs to control acute respiratory infections, diarrheal diseases, malaria, and malnutrition. A central feature of the BASICS project is its mandate to improve the effectiveness of child survival programs by strengthening the health systems on which they depend. By developing new approaches to service delivery, training and supervision, logistic and supply systems, IEC, and management information systems, BASICS promotes sustainability through its support of the rational development of the health delivery system.

BASICS improves the effectiveness and sustainability of child survival programs by collaborating with governments, NGOs, and other international health agencies to accomplish the following:

- integration of child survival services
- promotion of behavior change
- establishment of public-private sector partnerships
- development of sustainable vaccination programs
- development of appropriate case management
- monitoring and evaluation of activities in terms of costs, processes, and outcomes
- improvement of child survival among high-risk populations

The primary methods of assistance applied by BASICS are:

- project design assistance
- technical assistance
- training
- policy development and support
- information

Methods of Assistance

The primary method for achieving the desired objectives is the provision of technical assistance by highly qualified experts in the area of focus. These experts will work in one-on-one relationships, group settings, and through various training activities (e.g., seminars, workshops, demonstrations, field activities, etc.).

Assistance can also be provided through short-term participant training activities. This training can be in-country, regional, or United States based, as the need demands. The training will expose the individual to new methods of operation and broaden the person's knowledge of specific issues. All training will be of short duration, and will be coordinated with other agencies and organizations to maximize the impact of limited resources.

Finally, some limited commodity assistance may be necessary. This will be of a very limited nature and will be done in close coordination with mission and agency procurement regulations.

Criteria for Selection of Oblasts

Focus oblasts will be selected collaboratively among the MOH, State Committee, USAID/Moscow, and BASICS according to the following criteria:

- willingness of MOH and SES authorities to collaborate,
- receptivity to external technical assistance,
- political commitment at the highest levels of the oblast government to control epidemic(s) rapidly,
- complementary efforts of other partner agencies, such as CDC,
- flexibility of authorities to entertain innovative approaches to IEC, prevention and control, and case management,
- reported diphtheria, but an incidence rate not yet at epidemic levels
- population size equal to, or greater than, the national average,
- immunization coverage against diphtheria among adolescents and adults lower than the national average, and
- availability of vaccine supply, syringes, antitoxin, and antibiotics.

One focus oblast will be selected from among the four Siberian oblasts -- Novosibirsk, Tomsk, Kemerovo, Altay Krai -- included under the ZdravReform project. The second focus oblast will be located nearer to Moscow.

Institutional Collaboration in Russia

The institutional partners on the Russian side will include both the Ministry of Health and the State Committee for Sanitary and Epidemiological Surveillance. (The State Committee for Sanitary and Epidemiological Surveillance was a part of the Ministry of Health until four years ago.) The relationship between the State Committee and the MOH appears to be mutually adversarial even though cooperation does take place on the technical level. Ministry of Health officials have noted that the Parliament is currently exploring a proposal to re-integrate the State Committee into the MOH structure.

For the IEC component, a joint MOH and State Committee planning group will be formed to enable both agencies to participate, in tandem, in all phases of the planning and implementation efforts. Training in market-based public health communications will be provided to both agencies. Ministry of Health and State Committee institutes involved in health education will be active participants in the program, including the Federal Research Institute for Health Education and Health Promotion (MOH) and the Moscow Center for Hygienic Education and the Gabrichevsky Research Institute of Epidemiology and Microbiology (State Committee).

Coordination with Other Agencies and Projects

Every effort will be made to coordinate activities with other USAID-funded projects in Russia that are working in related areas or who could benefit from exposure to the activities conducted by BASICS. These will include, but not be limited to, ZdravReform, a USAID project which assists with financing, management, and organization initiatives in the health services sector in the NIS, and with a women's reproductive health project currently being developed in Russia by The Johns Hopkins University School of Hygiene and Public Health. Through the Office of Health and Nutrition of the USAID Global Bureau and the ENI Bureau, BASICS will work with international organizations, such as the World Health Organization and UNICEF, to coordinate approaches and activities in Russia.

An important target for interagency coordination is the linkage with the CDC in Atlanta. BASICS will complement the role of CDC at national and oblast levels. CDC brings a world-renowned epidemiological capacity for communicable disease control and public health surveillance. BASICS brings a proven track record -- begun in 1992 in the Central Asian Republics by REACH -- in providing on-the-ground technical support for the implementation of immunization programs.

BASICS and CDC will consult closely with each other on a regular basis in both the United States and Russia in implementing their respective workplans. In fact, an important criteria for the selection of oblasts in which to work will be the involvement of CDC in the same oblasts. BASICS will collaborate with CDC on focused oblast-level efforts for diphtheria prevention and control and coordinate workplans so that both programs make the maximum use of each other. A likely division of labor would have CDC taking the lead in the training in clinical and laboratory diagnosis, as well as in the management, investigation, control, and surveillance of suspected and confirmed cases of diphtheria. BASICS would take the lead in IEC activities and in conducting systems reform activities such as seminars to reduce medical contraindications to immunization, and improved oblast-level management information systems related to immunization.

Program Timing

The timing of activities will depend on a number of events. One critical event that needs to take place before engaging in activities is the transfer of funds to the BASICS contract from the ENI Bureau. If funds are transferred as "designated core" funds into the BASICS "C" contract, it will permit activities to begin as sooner than would a delivery order which needs to be negotiated. In this case, it is estimated that preparation activities could start as early as June 1995. BASICS will also need to identify appropriate consultants to conduct the work. Discussions will need to be conducted with Russian officials to establish the actual times for the workshops.

Proposed Budget Summary

The following budget estimate assumes that funding for this activity will be through an OYB transfer to the BASICS core contract under the framework of “designated core.” If this is not the case, then this estimate will need to be reconfigured. The total estimated price of activities is \$1,468,350.

Personnel

IEC workshops	\$231,900	
Activity preparation	52,800	
Technical assistance (16 person months)	<u>140,800</u>	
Sub-total		\$425,500

Travel and Per diem

International air travel	\$115,500	
Local travel	182,750	
US travel (participant training)	4,800	
Per diem	<u>364,800</u>	
Sub-total		667,850

Training Materials Development and Printing

IEC materials	\$75,000	
System reform materials	<u>40,000</u>	
Sub-total		115,000

Interpreters and translation 60,000

Miscellaneous supplies 50,000

TOTAL \$1,468,350

APPENDICES

APPENDIX 1
LIST OF PERSONS CONTACTED

LIST OF CONTACTS

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Ministry of Health and Medical Industry

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Ministry of Health and Medical Industry

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Ministry of Health and Medical Industry

Reshat Khalitov, Head
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Ministry of Health and Medical Industry

Alexander Tzaregorodtsev, Deputy Minister
Ministry of Health and Medical Industry

Inna Tymachakovskaya, Information Specialist
Ministry of Health and Medical Industry

Mikhail Narkevich, Deputy Chief
Department of Infectious Diseases
Ministry of Health and Medical Industry

Gennady Onischenko, Deputy Chairman
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Arkady A. Yasinsky, Chief
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APPENDIX 2
SUMMARY OF THE DIPHTHERIA SITUATION IN RUSSIA

Diphtheria Problem Statement

In the Russian Federation, the diphtheria epidemic began in 1990 in Moscow and has spread progressively over the entire country, with all administrative regions reporting cases. Following three decades of excellent control of the disease, reported cases have increased from 603 in 1989, to 39,703 in 1994, including 1104 fatal cases. All age groups are affected, with children aged less than 14 years accounting for an increasing fraction of cases in Russia (34 percent of the total in 1994). Unless effective control measures are rapidly accelerated, at the current rate of annual increase the number of cases in 1995 could exceed 100,000 in Russia alone.

Already this outbreak in Russia is the largest which the world has seen since World War II. By comparison, less than five diphtheria cases per year have been reported in the United States since 1980. None of the 50 countries of the European region of WHO, excluding the individual NIS countries, reported more than 100 cases of diphtheria in 1994, with the vast majority reporting less than five cases.

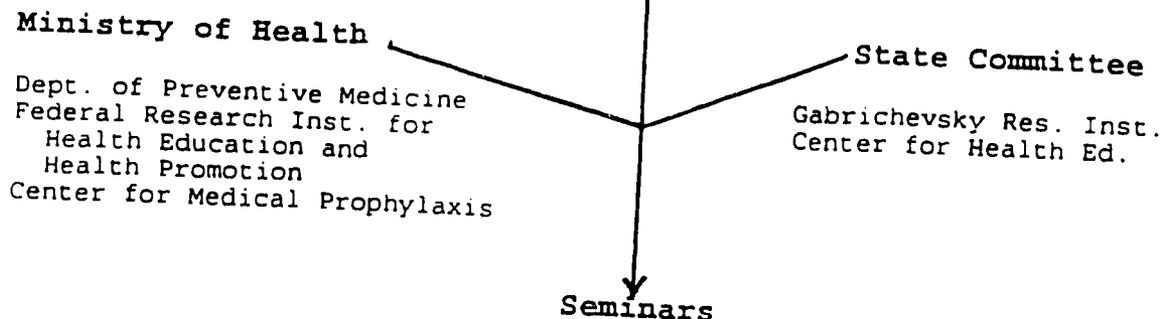
The epidemic has spread throughout the former Soviet Union. In most countries, the number of reported cases has been increasing by two to five-fold each year. The epidemic poses a grave threat to all industrialized countries, including the United States where approximately 50 percent of adults remain susceptible. Already 20 imported cases have been reported in neighboring central and western European countries.

In late 1994, a plan was formulated jointly by WHO and UNICEF, in collaboration with USAID, CDC, and IFRCRCS which outlines the strategies necessary for the control of diphtheria. The plan was approved by representatives of the NIS countries in January 1995. The MOH of Russia had already developed a plan along with WHO in May 1994 which, in principle, embodies most of the strategies and targets of the subsequent WHO/UNICEF plan. The plan calls for the mass vaccination of children and adults. In Russia, there remains an urgent need for decisive action at all governmental, non governmental, and administrative levels to control the epidemic, without which the epidemic can otherwise be expected to peak again during August-December 1995.

APPENDIX 3
SUMMARY OF THE PROPOSED IEC APPROACH

**Coordinating
Committee**

- USAID/BASICS
- Ministry of Health
- State Committee for Sanitary Epidemiologic Surveillance



- I. Introduction to Health Communication
- II. Formative Research for Public Health Communication
- III. Developing a Strategic Communication Plan and Designing Education Materials

Seminar Objectives

1. Strengthening IE&C capacity at the national and oblast levels.
2. Fostering collaboration between the MOH and the State Committee.
3. Impact on the development of national health education policy.
4. Training of trainers in IE&C formative research

Seminar Products

1. National level IE&C program for diphtheria control
2. Oblast level IE&C program for diphtheria control
3. "KAPS" (knowledge, attitude and practice survey) to support diphtheria control
4. Training manuals for health communication in Russian
5. Trained IE&C staff in the MOH and State Committee
6. Indicators development for monitoring

APPENDIX 4

WHO/UNICEF STRATEGY FOR DIPHTHERIA CONTROL IN THE NIS

24



**Consultation on Diphtheria Prevention and
Immunization Programmes in NIS**

Berlin, 18-20 January 1995

CMDS.06.MT.06/8-E

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13 January 1995

Original: English

WHO/UNICEF strategy for diphtheria control in the NIS

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PROVISIONAL (15 December 1994)

WHO/UNICEF Strategy for Diphtheria Control in the NIS

1. Introduction

The current diphtheria situation in all Newly Independent States of the former USSR must be considered to be very serious, and makes coordinated international support for the diphtheria-epidemic countries a priority. The following 'WHO/UNICEF Strategy for Diphtheria Control in the NIS' has been developed in close cooperation with USAID and CDC/USA. The programme is not intended to duplicate WHO's technical recommendations on diphtheria control, but to coordinate the actions taken by WHO, UNICEF, and other governmental and nongovernmental organizations to provide resources for the implementation of recommended measures.

The strategies outlined in this document are applicable to all Newly Independent States of the former Soviet Union that are experiencing epidemic diphtheria. At this time, additional donor support is required by Central Asian Republics (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan), the Caucasian republics (Armenia Azerbaijan and Georgia), Belarus, Moldova and Ukraine. The Baltic countries, Estonia, Latvia, and Lithuania, are being supported by the Nordic Consortium. The Russian Federation has indicated that it is self-sufficient with regard to vaccine, antitoxin and antibiotics.

2. **Reasons for the resurgence of epidemic diphtheria in the NIS are:**
- a gap in immunity among adults;
 - low immunization coverage among infants and children in many areas, insufficient immunity in some children due to primary immunization using the low-potency Td vaccine (ADS_{mensch});
 - large population movements in recent years which probably contributed to the spread of *C. diphtheriae* throughout the former USSR.

In addition, coordinated and aggressive anti-epidemic measures, especially mass immunization of adults, were not instituted or were implemented with delay in some countries. Pediatricians and other physicians were often insufficiently sensitized to the dangers of the disease and the urgent need for proper diagnosis, case management and management of close contacts. The general public were insufficiently informed of the dangers of diphtheria and the benefits of immunization. Finally, supplies of vaccine, antitoxin and antibiotics were lacking in many countries.

3. **Recommended strategies**

It is not the purpose of this strategy paper to describe the full scope of public health actions including surveillance, diagnostics, prevention and control measures and social mobilization necessary to control epidemic diphtheria in the NIS. This is described in detail in the WHO 'Plan of Action for the Prevention and Control of Diphtheria in the European Region' and the WHO Manuals for the 'Management and Control of Diphtheria' and for the 'Laboratory Diagnosis of Diphtheria'. The purpose of this paper is to describe the prevention and control strategies with regard to immunization, treatment of cases and prophylaxis of close contacts, and the resulting needs for

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vaccines, antitoxin, antibiotics, syringes and needles, in order to allow the epidemic countries and the donor community to act on principles commonly agreed upon.

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

- early diagnosis and proper management (immediate treatment and hospitalization) of diphtheria cases**
- rapid investigation of close contacts and their standardized treatment to prevent secondary cases**
- ensuring high population immunity through immunization.**

3.1 Treatment of cases

Bacteriological examination may take several days. If diphtheria is suspected, specific treatment with antitoxin and antibiotics must be initiated immediately while bacteriological investigations are still pending. Antitoxin treatment is still the mainstay of treatment; antibiotic therapy is also required to eliminate the organism and prevent spread of the disease.

3.1.1 Diphtheria antitoxin

The dose of antitoxin to be administered depends upon the site and extent of the diphtheritic membrane, the degree of toxicity, and the duration of illness. A single dose of 10,000 to 100,000 units, depending on the severity of the illness, is given. There is no clear evidence that doses above 100,000 units provide additional benefit. The whole of the intended antitoxin treatment

should be given immediately. The following table (proposed by Krugman S. et al, 1992, slightly modified) provides an example of recommended doses for various clinical situations. This scheme is widely used in many countries of the world. However, there may be variations recommended by manufacturers of antitoxin and by national health authorities.

Table. Dosage of antitoxin recommended for various types of diphtheria

Type of diphtheria	Dosage (units)	Route
Nasal	10 000 - 20 000	Intramuscular
Tonsillar	15 000 - 25 000	Intramuscular or intravenous
Pharyngeal or laryngeal	20 000 - 40 000	Intramuscular or intravenous
Combined types or delayed diagnosis	40 000 - 60 000	Intravenous
Severe diphtheria (e.g. with extensive membranes and/or severe oedema (bull-neck diphtheria))	40 000 - 100 000	Intravenous or part intravenous and part intramuscular

3.1.2 Antibiotics

Antibiotic treatment is necessary to eliminate the organism and prevent spread; it is not a substitute for antitoxin treatment. The antibiotics of choice are penicillin or erythromycin. The recommended dose regimens are as follows:

Penicillin, preferably intramuscular procaine penicillin G (25 000 units/[kg/d] for children and 1.2 million units/d for adults, in two divided doses) or intravenous erythromycin (40 - 50 mg/[kg/d], in four divided doses, with a maximum of 2 g/d) until the patient can swallow comfortably, at which point erythromycin may be given orally in the same dosage, or oral penicillin V (125 - 250 mg four times daily) may be substituted. Antibiotic treatment should be continued for 14 days.

3.1.3 Immunization

Clinical diphtheria does not necessarily confer natural immunity. Patients with diphtheria should therefore be vaccinated before discharge from hospital.

Partially vaccinated or unvaccinated cases should receive a dose of a diphtheria-toxoid-containing vaccine immediately and if necessary, complete a full primary course.

3.2 Treatment of close contacts

Anyone who in the previous seven days has been in close contact with a case of diphtheria caused by toxigenic C. diphtheriae should be considered at risk. Contacts of cases due to non-toxigenic C. diphtheriae or C.ulcerans are not at risk.

Close contacts include the following:

- Household members
- Friends, relatives and caretakers who regularly visit the home
- Kissing/sexual contacts
- School classroom contacts
- Those who share the same room at work
- Health care staff exposed to oropharyngeal secretions of the case.

Surveillance for close contacts All close contacts should be identified, and clinically monitored for symptoms and signs of diphtheria for seven days from the date of the last contact with the case.

Culture If diagnostic facilities are available, close contacts should have nasopharyngeal cultures for diphtheria. Antibiotic prophylaxis should NOT be dependent on the results of such cultures, but identified carriers of toxigenic *C. diphtheriae* should be isolated and receive follow up cultures after treatment to ensure that the organism has been eliminated.

Penicillin prophylaxis Close contacts should be given penicillin, preferably a single dose of intramuscular benzathine penicillin (600,000 units for children < 6 years of age and 1.2 million units for persons \geq 6 years of age), for reasons of compliance. Alternatively, oral erythromycin (40 mg/[kg/d]) for children and 1 g/d for adults, in divided doses) may be given for 7 to 10 days.

Immunization of all close contacts The immunization status of close contacts should be assessed and it must be ensured that all immediately receive one dose of a diphtheria toxoid-containing vaccine (DPT or DT for infants, preschool children, and children in the first year of school; and Td for older individuals), unless within the last 12 months they have documented evidence of having completed primary immunization or having received a booster. Persons who have not completed primary immunization should continue to receive the needed additional doses.

4.3 Immunization

4.3.1 Routine Immunization

The first priority is achieving and maintaining high vaccination coverage of children through routine immunization:

- every district of a country should achieve at least 95% coverage with the full course of primary immunizations (DPT4) by 2 years of age;

- booster dose(s) of a diphtheria-toxoid-containing vaccine should be given according to the national immunization schedule to children of school age, aiming to achieve at least 95 % coverage. DT is recommended for children at school entry or in the first year of school, and Td is recommended for older children.

4.3.2 Immunization Campaigns

4.3.2.1 Country-wide immunization campaigns for children, adolescents and adults

If the whole country or several regions of the country has reported diphtheria cases and/or diphtheria outbreaks, the following immunization strategy must be implemented as soon as possible.

- Immunization campaigns should be carried out in all preschool institutions, schools and higher educational institutions (technical institutes and universities). A single dose of diphtheria-toxoid containing vaccine should be given immediately to all persons attending such institutions (DT for children up to and including first grade, and Td for older individuals), unless within the last 12 months they have documented evidence of having completed primary immunization or having received a booster .

Additional dose (s) is (are) needed if a child/adolescent has not yet complete a 3-dose schedule.

- All adolescents and adults should receive one dose of Td. Certain groups of adults may later need additional doses of Td for optimal protection. For example, in Russia and Ukraine, adults aged 30 to 50 years will require a total of three doses: two doses given a minimum of 4 weeks apart, and a third 6-12 months later. Longer intervals between doses do not reduce the effectiveness of vaccination.

- Children not attending preschool institutions should be included in immunization campaigns together with their mothers/parents.

When beginning immunization campaigns, priority should be given to the following groups who are at high risk of diphtheria:

- health care workers
- armed forces
- refugees
- teachers; staff of kindergartens, crèches, and similar institutions
- homeless people
- alcoholics
- drug users.

Homeless people, drug users and alcoholics can be difficult to reach. Special attention must be given to social care institutions and to the involvement of NGO's who have developed special programmes for those groups of people who are at higher risk of disease and death from diphtheria.

4.3.2.2 Immunization campaigns for children, adolescents and adults in areas of risk (villages, towns, districts, or regions with diphtheria outbreaks)

The principles mentioned above for country-wide epidemics should be applied for localized areas of risk where outbreaks occur. In case of localized outbreaks, immunization should be carried out immediately.

4.3.3 Organization of immunization campaigns

Immunization campaigns can include use of Immunization Days, immunization centers, and mobile immunization points. Immunization carried out on a house-to-house basis could be very useful in villages and small towns. The key for success is proper preparation in collaboration with local mass media and local organizations. It will be necessary to formulate detailed strategies appropriate to the particular conditions (epidemiological, logistical, etc) of each country.

4.3.4 Contraindications to diphtheria immunization

The only valid contraindication against the use of diphtheria toxoid or diphtheria-tetanus toxoids is:

the occurrence of a severe adverse reaction (anaphylaxis, collapse, shock) after a previous dose.

Simple febrile reaction following a previous doses is not a contraindication and further immunization should not be withheld. Advice should be given to prevent recurrence of these symptoms, i.e. by the use of antipyretic drugs.

5. Laboratory diagnosis and surveillance

Adequate means for laboratory confirmation of diphtheria is an essential component of surveillance, and therefore, of epidemic control measures. It

will be necessary to ensure the availability of particularly culture media and other reagents necessary for basic laboratory diagnosis of diphtheria, i.e. isolation of C. diphtheriae, and toxigenicity testing.

6. Monitoring and surveillance

At least, the following data should be collected and analysed in a standard and timely fashion:

- Disease incidence by age group and region.
- Vaccination coverage, by age group and region. This should be calculated using a simple, standard method in which the denominator should be the entire population within the specified age group, and the numerator, the number of persons already vaccinated. WHO/EURO has provided a proposal for data collection.

Serologic studies during an outbreak are of limited usefulness. The most useful studies are likely to be of response to vaccination by age and type of vaccine received. Such studies should be carefully designed in order to be meaningful. Routine serologic testing is not required to screen individual children prior to immunization nor to assess individual seroconversion.

7. Social mobilization and training

Implementation of diphtheria control strategies into practice also needs support for social mobilization and training in the NIS countries.

Depending on the size of the different countries, 30 000-80 000 USD are needed for support of social mobilization measures and 5 000 USD local costs (plus two facilitators for one training course).

8. Resource requirements and logistics

A detailed estimate of resource requirements for the NIS in 1995 based on

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strategies described above is presented below. Estimates for 1996 should also be elaborated in the framework of national action plans to control diphtheria.

8.1 Estimated Vaccine Needs - 1995 (000's of doses, wastage factor 1.3. UNICEF prices in 000's USD)

Provisional Data - Country Needs in each Case to be Validated Based on Epidemiological Situation

Country/Region	Population (mill)	Surviving 1 yr olds (000's)	Routine Immunization		Supplementary Immunization (Emergency Immunization Campaigns)		Costs US\$	
			primary (4DPT /4DT) ¹⁾	school age (Class 1) (1 DT booster)	backlog (2DT / 2DPT) ²⁾	children > 7 yrs/ adoles/ adults in risk areas/groups (1 Td / 3Td) ³⁾		
Caucasus								
ARMENIA	3.74	84.0	420 / 17	109	174 / 44	5 705	570	
AZERBAIJAN	7.46	203.0	1 014 / 42	264	422 / 106	11 752	1 203	
GEORGIA	5.49	96.6	482 / 20	126	201 / 50	8 580	831	
							sub tot :	2 601
Central Asia								
KAZAKHSTAN	17.46	407.3	2 033 / 85	529	847 / 212	26 557	2 667	
KYRGYZSTAN	4.7	140.5	701 / 29	183	282 / 73	7 167	747	
TAJIKISTAN	6.02	229.7	1 147 / 48	299	478 / 119	9 169	999	
TURKMENISTAN	4.16	141.7	707 / 29	184	294 / 74	6 403	641	
UZBEKISTAN	22.83	786.5	3 926 / 164	1 023	1 636 / 409	35 062	3 731	
							sub tot :	8 831
European								
BELARUS	10.33	132.5	662 / 28	172	276 / 69	16 455	1 541	
MOLDOVA	4.36	89.4	446 / 19	116	186 / 46	6 883	671	
UKRAINE	52.47	774.3	3 616 / 151	942	1 506 / 377	81 624	7 731	
Baltics								
ESTONIA	1.57	21.4	107 / 4	28	45 / 11	2 453	231	
LATVIA	2.65	35.7	178 / 7	46	74 / 19	4 006	361	
LITHUANIA	3.77	54.2	270 / 11	70	113 / 28	5 950	541	
							sub tot :	1 111
RUSSIA	149.9	2 352.8	11 745 / 489	3 059	4 894 / 1 223	237 967	22 751	
							Total (excl Russia) :	22 541
							Total Overall :	45 321

- ¹⁾ 96 % of all infants to receive DPT 4 ; an estimated 4 % with adverse reactions to P component to receive DT 4
- ²⁾ backlog: allowance for estimated 10 % of children previously unimmunized or incompletely immunized ; average 2 doses each required ; estimated as 1 birth cohort needing 2 doses each , assumed to be 80% DT/20% DPT
- ³⁾ supplementary immunization for people in risk areas and risk groups:
estimated at 1 dose for 80 % of the whole population in the age group 7yrs and above , plus
an additional 2 doses for 80% of the population in a 20yr age band at highest risk (eg; the 30-50yr group)

8.2 Reported and Estimated Diphtheria Cases 1993, 1994, and 1995
Estimated Needs for Diphtheria Antitoxin

COUNTRY	DIPHTHERIA CASES				Anti-toxin Needs (ampoules a 10 000 I.U.)	COSTS (USD)
	reported 1993	reported 1994 up to July/Oct	estimated total 1994	estimated 1995		
ARMENIA	0	28	50	50 - 150	500 - 1 500	5 000 - 15 000
AZERBAIJAN	141	195	250	300 - 500	3 000 - 5 000	30 000 - 50 000
GEORGIA	28	163	200	300 - 500	3 000 - 5 000	30 000 - 50 000
KAZAKHSTAN	82	234	400	500 - 700	5 000 - 7 000	50 000 - 70 000
KYRGYZSTAN	6	79	150	200 - 300	2 000 - 3 000	20 000 - 30 000
TAJIKISTAN	680	662	>1500	2000 - 3000	20 000 - 30 000	200 000 - 300 000
TURMENISTAN	3	17	50	50 - 100	500 - 1 000	5 000 - 10 000
UZBEKISTAN	137	82	150	100 - 200	1 000 - 2 000	10 000 - 20 000
ESTONIA	11	0	5	10 - 50	100 - 500	1 000 - 5 000
LATVIA	12	90	200	200 - 300	2 000 - 3 000	20 000 - 30 000
LITHUANIA	8	13	40	50 - 100	500 - 1 000	5 000 - 10 000
BELARUS	120	134	200	200 - 300	2 000 - 3 000	20 000 - 30 000
MOLDOVA	35	57	200	100 - 300	1 000 - 3 000	10 000 - 30 000
UKRAINE	2 987	1 633	2000 - 2500	1 500 - 2000	15 000 - 20 000	150 000 - 200 000
RUSSIA	15 211	21 622	>35 000	> 40 000		
TOTAL	19 470	25 000 (approx)	>40 000	40 000 - 50 000	50 000 - 100 000 ampoules (500 - 1 000 Mill I.U.)	
TOTAL EXCL RUSSIA & UKRAINE	1 272	1 800 (approx)	2 500	5 000 - 10 000		
TOTAL EXCL RUSSIA	4 259	3 400 (approx)	5 000	5 000 - 10 000		

Estimates allow for numbers of estimated cases

x 3 -5 ampoules of 10 000 I.U. (average dosage);

x 2 to permit repeated treatment in severe cases and for wastage during distribution;

UNICEF price was 3.50 USD per 10 000 I.U. but due to shortages on the international market prices could be 3- to 10- times higher, say 10 USD per 1 ampouie per 10 000 I.U.

8.3 Calculating Needs for Antibiotics Treatment of Cases and Prophylaxis of Close Contacts

<u>Penicillin</u>	adults:	- 1.2 million units/d for 6 days, and 600 000 units/day for 8 following days
<u>treatment:</u>		- total: 12 million units procain penicillin (i.m.) per case = approx. 2 USD
	children:	- 600 000 units/day for 6 days, and 400 000 units/day for 8 following days
		- total: 6.8 million units per case = approx. 1.20 USD
<u>Erythromycin</u>	adults:	- 2g/day for 6 days, and 1g/day for 8 following days
<u>treatment</u>		- total: 20g per case = approx. 3.20 USD
	children:	- 1g/day for 6 days, and 0.5g/day for 8 following days
		- total: 10g per case = approx. 1.60 USD
<u>Penicillin</u>	> 6 yrs:	- single dose of 1.2 million units benzathine penicillin i.m. = appr. 0.20 USD
<u>prophylaxis:</u>	< 6 yrs:	- single dose of 600 000 units = approx. 0.10 USD
<u>Erythromycin</u>	adults:	- 1g/day for 7 days = 7g per contact = approx. 1.15 USD
<u>prophylaxis¹⁾</u>	children:	- 0.5g/day for 7 days = 3.5g per contact = approx. 0.60 USD

1) Erythromycin prophylaxis should be used only exceptionally for reasons of compliance.

The numbers of diphtheria cases to be expected can be taken from Table 8.2.
The number of patients to be treated could be higher (suspected cases included): The number of expected cases could be multiplied x 3 to calculate treatment needs.

10 close contacts to receive antimicrobial prophylaxis could be calculated per 1 diphtheria case, 25 % children below 6 years of age and 75 % close contacts older than 6 years.

8.4 Example to calculate

- * Antibiotics for treatment
- * Antibiotics for prophylaxis

KAZAKHSTAN

1) TREATMENT

500 - 700 cases estimated in 1995

approximately 2 000 suspected cases need treatment

Costs to treat 1 patient: 1.20 - 3.20 USD, say 2 - 3 USD

Cost to treat 2 000 cases: 4 000 - 6000 USD

2) PROPHYLAXIS

approximately 20 000 close contacts need prophylaxis

Costs for penicillin prophylaxis of 1 close contact: 0.10 - 0.20 USD, say 0.15 USD

Cost for prophylaxis: 3 000 USD

8.5 Estimated Needs for Needles and Syringes

could be based on Tables 8.1 - 8.3 Estimations on Vaccines, Antistoxin and Antibiotics, and must take into consideration the safety of all injections including the use of a sterile needle and a sterile syringe for each injection and the proper destruction of disposable injection devices after use.

APPENDIX 5

**RUSSIAN FEDERATION/WHO EURO MEETING
ON DIPHTHERIA CONTROL IN THE RUSSIAN FEDERATION**

A PLAN OF ACTION FOR THE RUSSIAN FEDERATION



TELEFAX

M. K.

WORLD HEALTH ORGANIZATION
ORGANISATION MONDIALE DE LA SANTE
WELTGESUNDHEITSORGANISATION
СЪВМЪЖНА ОРГАНИЗАЦИЯ ЗА ПУБЛИЧНО ЗДРАВООПАЗЕНИЕ
REGIONAL OFFICE FOR EUROPE
BUREAU REGIONAL DE L'EUROPE
REGIONAL BÜRO FÜR EUROPA
ЕВРОПЕЙСКО РЕГИОНАЛНО БЮРО

Date: 9 March 1995

Ms Julie M. Klement
Chief, Health and Population
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Votre référence: diph RF
Unser Zeichen: u/en
Съвмъжност: u/en
Your reference: IELNLEE.DOC
Votre référence:
Ihr Zeichen:
Ihre Nummer:

Fax no: 202 736 7750
Pages: 1+8

**U.S. meeting on diphtheria control in the Russian Federation
Washington D.C.**

Attached please find the action plan for the control of diphtheria in the Russian Federation adopted during the Moscow meeting on 20 May 1994.

The main fields where the Russian Federation needs support are social mobilization, upgrading of vaccine production and strengthening of surveillance of infectious diseases. The ICC, focusing mainly on support for vaccine supply, has not taken any action regarding these three issues. During the forthcoming meeting between the U.S. and the Russian Federation, possibly these topics could be discussed.

Best regards,

Yours sincerely,

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RUSSIAN FEDERATION/WHO EURO MEETING ON DIPHTHERIA CONTROL IN THE RUSSIAN FEDERATION

Moscow
20 May 1994

Summary: There has been a sharp increase in the occurrence of diphtheria in Russia in recent years (Annex 1). During the period 1990 - 1992, 15 210 cases were recorded. Outbreaks of disease have been especially severe in large cities and regions that are industrialized and densely populated. Although approximately 70% of cases have affected adults, the highest rates of infection have been reported among children. During the period 1990-1993 more than 700 persons, including more than 150 children, died.

The main cause of the diphtheria epidemic in Russia is low levels of vaccination. In recent years coverage levels among children less than two years of age have been less than 80%. Many reasons account for the decline in vaccine coverage, including problems with vaccine supply and unstable socioeconomic conditions throughout the country.

In order to address these problems, a "Plan of Action for the Prevention and Control of Diphtheria in Russia, 1994-1995" has been developed by officials of the Ministry of Health and Medical Industry and staff and consultants of the World Health Organization Regional Office for Europe. The goal is to reduce diphtheria morbidity and mortality. Seven major objectives have been adopted. They are:

- Achieve high levels of immunization against diphtheria for all people in all regions.
- Develop and implement information programmes for diphtheria prevention (social mobilization).
- Train health care personnel in the diagnosis, clinical aspects, epidemiology, and prevention of diphtheria.
- Ensure adequate production and quality control of preparations used in the diagnosis, treatment and prevention of diphtheria.
- Organize an effective system for transporting and storing vaccines ("cold chain").
- Improve the system of epidemiological surveillance of diphtheria.
- Undertake applied research on the diagnosis, epidemiology and prevention of diphtheria.

This document describes the activities planned to achieve these objectives, together with the resources needed from the Russian Federation and WHO Extra-budgetary sources. A Budget Summary for the Plan of Action is shown below:

BUDGET SUMMARY		
Activity	Russian Federation Roubles (millions)	WHO Extra-Budgetary US\$ (000s)
Achieve high levels of immunization	15825.0	-
Develop and implement programmes for social mobilization	600.0	500.0
Train health care personnel	215.0	835.0
Ensure production and quality of diphtheria toxoid and other preparations	6215.0	7360.0
Organize an effective "cold chain"	180.0	420.0
Improve epidemiological surveillance	1000.0	1750.0
Undertake applied research	310.0	170.0
Total	24345.0	11035.0

Achieve high levels of immunization against diphtheria for people in all regions

The morbidity and mortality from diphtheria can be dramatically reduced by establishing a high of immunity in the population. To reach this goal by 1996, immunization rates will be not less 95% in children under the age of 2 years, not less than 95% in schoolchildren and adolescents, not less than 80% in adult populations, especially those belonging to high-risk groups (i.e. those living in areas with high rates of diphtheria, belonging to age and socio-professional groups with high rates of diphtheria; health care workers; service personnel; refugees and forced migrants; alcoholics of fixed address; patients of psychiatric hospitals and drug rehabilitation centres; those staying at old welfare centres and hostels; those working in commerce, public catering, transport and communications for children; schoolchildren and their teachers; and students and lecturers at colleges of higher education and secondary technical colleges).

The following activities to achieve high levels of immunization are planned:

- draft and submit to the Duma of the Federal Assembly a Law of the Russian Federation on Preventive Vaccination which defines national policy in this area; resolve legal issues concerning the responsibility of health care workers for administering vaccinations unless there are medical contraindications; establish vaccination requirements for admission of children to pre-school and school establishments; establish mandatory national and other insurance against possible post-vaccinal complications; and introduce vaccination certificates.
- develop and implement public health regulations for planning, organizing and administering programmes for vaccinations;
- develop and implement new vaccination schedules against diphtheria, with a reduced interval between vaccination and first revaccination for children and immunization of adults irrespective of age and vaccination history;
- reduce the number of medical contraindications to vaccination against diphtheria;
- introduce vaccination certificates;
- analyse the work of immunization clinics and implement measures to improve their activities;
- develop and implement a policy for vaccination teams in therapeutic/preventive care establishments;
- develop and implement a set of economic incentives for health care workers to administer vaccines;
- ensure adequate supplies of vaccines and disposable syringes to therapeutic/preventive care establishments.

BUDGET SUMMARY

Activity	Year	Russian Federation	WHO
		Roubles (millions)	Extra-Budgetary US\$ (000s)
Law on Preventive Vaccination	1994	10.0	.
New vaccination schedule	1994	15.0	.
Vaccination certificates (100 million)	1994	1000.0	.
Vaccines and disposable syringes (Yearly doses DPT 11 min; DT 40 min; D1 45 min; d 14min)	1995	7400.0	.
Subtotal		825.0	

Develop and implement information programmes on diphtheria prevention (social mobilization)

It is essential to inform the public of the dangers of diphtheria and the effectiveness of vaccination with diphtheria toxoids. In addition to efforts of health care workers to inform their patients, the use of television, radio and periodicals to promote widespread understanding of diphtheria and its control is extremely important.

The following activities to promote social mobilization are planned:

- produce health education materials (posters, booklets, brochures, leaflets, etc.) on the prevention of diphtheria for various population groups;
- produce and broadcast television and radio documentaries and short items on the prevention of diphtheria;
- establish confidential telephone hotlines to provide information on the prevention of diphtheria;
- publish in newspapers and magazines a series of articles and interviews with leading scientists and staff in the national health system and the sanitary and epidemiological service on diphtheria prevention;
- distribute "open letters" to physicians and intermediate-level health care workers describing how to organize diphtheria vaccination programmes;
- publish appeals to principal regional authorities and the public concerning the prevention of diphtheria;
- organize frequent press conferences and radio and television speeches and round-table discussions by administrators in the health system and the national sanitary and epidemiological service, paediatricians, epidemiologists, infectious diseases specialists, and leading scientists on diphtheria and its prevention;
- prepare monthly press releases for the media that include assessments of the epidemiological situation and information on control measures implemented;

BUDGET SUMMARY - 2

Activity	Year	Russian Federation	WHO
		Roubles (millions)	US\$ (000s)
1 Health education materials (posters 30min, booklets 50min - RF; posters 10min, booklets 10min - WHO) (Posters 10min, leaflets 10min - RF; leaflets 10min - WHO)	1994	500.0	200.0
	1995		
2 Television and radio documentaries (3 videoprogrammes - RF; 6 - WHO) (6 videoclips - RF; 12 videoclips - WHO)	1994	100.0	300.0
	1995		
Subtotal		600.0	500.0

Train health care personnel in the diagnosis, clinical aspects, epidemiology and prevention of diphtheria

In order to successfully implement measures for epidemic control, a programme of continuing education is needed for physicians (especially paediatricians, clinicians, neuropathologists and ear nose throat specialists) and intermediate-level health care workers on methods for the clinical and biological diagnosis, treatment and prevention of diphtheria. Priority must be given to the expansion of vaccination programmes, medical contraindications to vaccination, post-vaccinal reactions and methods of administering vaccines to children. Educational programmes must also include the organization of epidemiological surveillance and epidemic control measures in diphtheria as well as methods for working with the media to educate the public on diphtheria and its control.

The following activities to train health care personnel are planned:

develop a programme for testing the knowledge of physicians and intermediate-level health care workers on the clinical aspects, diagnosis, epidemiology and prevention of diphtheria;
develop and introduce requirements for certifying physicians regarding preventive vaccination;
produce and distribute two health education video films on the clinical aspects, diagnosis, epidemiology and prevention of diphtheria;

develop a curriculum on issues of preventive vaccination for students at medical and pharmaceutical institutes and colleges;

conduct seminars and special courses for paediatricians, epidemiologists and bacteriologists on the diagnosis, clinical aspects, epidemiology and prevention of diphtheria;

conduct courses on issues related to the "cold chain" for specialists from therapeutic/preventive care establishments, state sanitary and epidemiological surveillance centres, pharmaceutical establishments and firms manufacturing vaccines.

conduct courses jointly with WHO for managers of regional immunization programmes;

set up regional education/methodology centres at research institutes on the prevention of the "target diseases";

translate, print and distribute WHO and foreign language publications on the diagnosis, clinical aspects, epidemiology and prevention of diphtheria;

support scientists and specialists from practical health care establishments and the national sanitary and epidemiological service who attend international conferences and meetings to study the experiences of other countries in diphtheria control;

organize practical training at central research institutes, including those in other countries, for specialists from regional research and local practice establishments;

prepare and publish a practical guide for health care workers entitled "The diagnosis, clinical aspects, epidemiology and prevention of diphtheria".

BUDGET SUMMARY - 3

Activity	Year	Russian Federation	WHO Extra-Budgetary
		Roubles (millions)	US\$ (000s)
Health education videofilms (2 - RF, 1 - WHO)	1994	30.0	100.0
WHO courses for regional managers (12 courses @ 30 participants)	1994-95	20.0	150.0
Translate foreign language publications on diphtheria (10 000 copies each RF and WHO)	1994-95	15.0	65.0
Participate in international conferences (30 persons)	1994-95	-	300.0
Publish practical guide on diphtheria (30 000 copies)	1994	30.0	-
Regional progress assessment meetings (3 meetings each year @ 100 participants)	1994-95	40.0	80.0
All-Russian conference on revised contraindications to vaccination (100 participants)	1994	20.0	20.0
Translate WHO-EPI management publications (translation - WHO; print 10 000 copies RF)	1994-95	40.0	120.0
Subtotal		215.0	835.0

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Ensure adequate production and quality control of preparations used in the diagnosis, treatment and prevention of diphtheria

In programmes to prevent and control diphtheria, the preparations used in diagnosis, treatment and prevention must be of guaranteed quality and conform with international requirements. In order to strengthen the technological capacity of firms manufacturing such preparations, in accordance with good manufacturing practices (GMP), and to improve procedures for quality control, the following activities are planned:

- 1 modernize the facilities and expand the output of preparations for the diagnosis, treatment and prevention of diphtheria at the firms I.I. Mechnikov Biomed AO (Moscow) and Immunopreparat NPO (Ufa),
- 2 undertake the manufacture of such preparations in St. Petersburg (Institute for Research on Vaccines and Sera) and Perm (Biomed NPO),
- 3 supply each of these firms with essential technical and laboratory equipment, reagents, and other materials which are not manufactured in Russia;
- 4 supply essential technical equipment to the laboratories involved in quality control of antidiphtherial preparations at the L.A. Tarasevich State Research Institute for the Standardization and Control of Medical Biological Preparations (GISK; Moscow);
- 5 implement quality control procedures for all batches of such preparations in the GISK laboratories ("continuous monitoring");
- 6 organize technical courses for staff of firms manufacturing antidiphtherial preparations, especially those working in the biological monitoring departments;
- 7 develop and implement public health regulations on the manufacture and monitoring of medicinal immunobiological preparations.

BUDGET SUMMARY

Activity	Year	Russian Federation	WEIO Extra-Budgetary
		Roubles (millions)	US\$ (000s)
International expertise to ensure good manufacturing practice (GMP)	1994	-	200.0
Modernize and expand production of vaccine - equipment reagents	1994-95	1000.0	4000.0
		500.0	2000.0
Improve quality control procedures - equipment reagents	1994-95	80.0	300.0
		20.0	150.0
Produce materials for laboratory diagnosis	1994	100.0	300.0
	1995	100.0	400.0
Provide diphtheria antisera (5 bln IU each year)	1994	2200.0	-
	1995	2200.0	-
Organize technical courses (10 persons - RF; 20 persons - WHO)	1994-95	5.0	10.0
Develop guidelines on production and quality control of vaccine (5000 copies)	1994	10.0	-
Subtotal		6215.0	7360.0

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Organize an effective system for transporting and storing vaccines ("cold chain")

Maintaining the necessary temperature conditions for transporting and storing vaccines to a extent determines their quality and effectiveness in use. To organize and maintain an effective chain", the following activities are planned:

develop, test and manufacture disposable 50 litre insulated containers for transporting vaccines from the manufacturer to regional central warehouses (10,000 in 1994 and up to 50,000 annually thereafter);

develop, test and manufacture non-disposable 3-15 litre insulated containers for transporting vaccines from regional central warehouses to therapeutic/preventive care establishments (100 000 in 1995, and up to 150 000 annually thereafter);

develop, test and manufacture thermoindicators (1,300,000 in 1995 and up to 1,500,000 annually thereafter);

organize the delivery of vaccines from the manufacturer to the central warehouses in the European regions of the country using 5 refrigerated trucks (UNICEF is supplying 3 such trucks to Russia in 1994);

develop and introduce public health regulations on the conditions for the transportation and storage of medicinal immunobiological preparations;

provide therapeutic/preventive care and pharmaceutical establishments and state sanitary and epidemiological surveillance centres with their own refrigeration equipment (refrigerators, cold boxes).

BUDGET SUMMARY - 5

Activity	Year	Russian Federation	WHO Extra-Budgetary
		Roubles (millions)	US\$ (000s)
Non-disposable 3-15 litre containers for vaccine transport (140 000-150 000 per year - RF; production facility - WHO)	1994-95	100.0	150.0
Thermoindicators (1.5-2.0 mln - RF; production facility - WHO)	1994-95	50.0	50.0
Purchase thermoindicators for disposable boxes	1994	-	50.0
Guidelines for "cold chain"	1994	10.0	20.0
WHO training courses on "cold chain" (2 courses @ 30 persons - RF; 10 courses @ 30 persons - WHO)	1994-95	20.0	150.0
Subtotal		180.0	420.0

Improve the system of epidemiological surveillance of diphtheria

Epidemiological surveillance of diphtheria should be carried out by the national sanitary and epidemiological service. This includes routine monitoring and retrospective epidemiological analysis, epidemiological forecasting and assessing epidemic control measures and adopting management decisions. The following features of diphtheria and its control can be monitored: carriage rates of diphtheria pathogens; number of vaccinations given; immunization coverage and levels of immunity in various age groups and socio-professional groups; number and nature of postvaccinal complications; clinical manifestations of the disease; fatality rates; supplies to therapeutic/preventive care establishments of vaccines and preparations for treatment; supplies to state sanitary and epidemiological surveillance centres of materials used for diagnosis; conditions of vaccine storage and transportation and their quality; the scale of epidemic control measures; and socioeconomic factors. The results serve as the basis for analysis, forecasting, assessing and amending epidemic control measures.

The following activities to improve epidemiological surveillance are planned.

- 1 review and modify the national statistical report on vaccinations in order to make it more informative;
- 2 develop and introduce a statistical reporting system on diphtheria morbidity and mortality (weekly), number of vaccinations (monthly), serological evidence of population immunity (every three months), and supplies of preparations for the diagnosis, treatment and prevention of diphtheria (every three months);
- 3 develop short- and medium-term forecasts of the diphtheria epidemic in Russia and in each region in order to amend epidemic control measures;
- 4 develop and introduce methods for serological monitoring of immunity to diphtheria among various socio-professional and age groups;
- 5 develop and introduce public health regulations on the prevention of diphtheria, including requirements for case-finding and treatment, and implementation of control measures in areas with outbreaks of disease;
- 6 provide adequate supplies of preparations for the diagnosis of diphtheria to the state sanitary and epidemiological surveillance centres, and carry out serological monitoring of immunity to diphtheria among various socio-professional and age groups;
- 7 introduce a "standard case definition" of diphtheria illness and bacterial carriage;
- 8 introduce a card-index form for reporting adult immunization;
- 9 develop and implement a computerized information system for epidemiological surveillance of diphtheria;
- 10 provide computers and telecommunication links between state sanitary and epidemiological surveillance centres and the therapeutic/preventive care establishments in those regions with the highest rates of diphtheria;
- 11 establish regional centres for epidemiological surveillance of diphtheria at research institutes;
- 12 implement effective computerized data processing and analysis and publish analytical reports on the epidemiology and prevention of diphtheria.

BUDGET SUMMARY - 6

Activity	Year	Russian Federation	WHO Extra-Budgetary
		Roubles (millions)	US\$ (000s)
6.8 Adult immunization card-index form (50min)	1994-95	500.0	-
6.9 and 6.10 Computerized epidemiological surveillance in two regions (computers and telecommunications)	1994-95	500.0	1000.0
6.11 Regional centres for diphtheria surveillance (3) (laboratory equipment, reagents)	1994	-	600.0
Study computerized surveillance systems in other countries (10-15 epidemiologists and paediatricians)	-	-	150.0
Subtotal		1000.0	1750.0

APPENDIX 5

**RUSSIAN FEDERATION/WHO EURO MEETING
ON DIPHTHERIA CONTROL IN THE RUSSIAN FEDERATION
A PLAN OF ACTION FOR THE RUSSIAN FEDERATION**



TELEFAX

Milly

WORLD HEALTH ORGANIZATION
ORGANISATION MONDIALE DE LA SANTE
WELTGESUNDHEITSORGANISATION
СЪВМЪЖНОСТНА ОРГАНИЗАЦИЯ ЗА ПУБЛИЧНО ЗДРАВУВАНЕ
REGIONAL OFFICE FOR EUROPE
BUREAU REGIONAL DE L'EUROPE
REGIONALBURO FOR EUROPA
ЕВРОПЕЙСКО РЕГИОНАЛНО БУРО

Date: 9 March 1995

Ms Julie M. Klement
Chief, Health and Population
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Our reference: emds 6
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Unser Zeichen: 4/1/en
Ваш номер: 4/1/en
Your reference: ENLEE.DOC
Votre référence:
Unser Zeichen:
Ваш номер:

Fax no: 202 736 7750
Pages: 1+8

**U.S. meeting on diphtheria control in the Russian Federation
Washington D.C.**

Attached please find the action plan for the control of diphtheria in the Russian Federation adopted during the Moscow meeting on 20 May 1994.

The main fields where the Russian Federation needs support are social mobilization, upgrading of vaccine production and strengthening of surveillance of infectious diseases. The ICC, focusing mainly on support for vaccine supply, has not taken any action regarding these three issues. During the forthcoming meeting between the U.S. and the Russian Federation, possibly these topics could be discussed.

Best regards,

Yours sincerely,

Collette Roure, M.D., M.P.H., Ph.D.
Regional Adviser
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RUSSIAN FEDERATION/WHO EURO MEETING ON DIPHTHERIA CONTROL IN THE RUSSIAN FEDERATION

Moscow
20 May 1994

Summary: There has been a sharp increase in the occurrence of diphtheria in Russia in recent years (Annex I). During the period 1990 - 1992, 15 210 cases were recorded. Outbreaks of disease have been especially severe in large cities and regions that are industrialized and densely populated. Although approximately 70% of cases have affected adults, the highest rates of infection have been reported among children. During the period 1990-1993 more than 700 persons, including more than 150 children, died.

The main cause of the diphtheria epidemic in Russia is low levels of vaccination. In recent years coverage levels among children less than two years of age have been less than 80%. Many reasons account for the decline in vaccine coverage, including problems with vaccine supply and unstable socioeconomic conditions throughout the country.

In order to address these problems, a "Plan of Action for the Prevention and Control of Diphtheria in Russia, 1994-1995" has been developed by officials of the Ministry of Health and Medical Industry and staff and consultants of the World Health Organization Regional Office for Europe. The goal is to reduce diphtheria morbidity and mortality. Seven major objectives have been adopted. They are:

- Achieve high levels of immunization against diphtheria for all people in all regions.
- Develop and implement information programmes for diphtheria prevention (social mobilization).
- Train health care personnel in the diagnosis, clinical aspects, epidemiology, and prevention of diphtheria.
- Ensure adequate production and quality control of preparations used in the diagnosis, treatment and prevention of diphtheria.
- Organize an effective system for transporting and storing vaccines ("cold chain").
- Improve the system of epidemiological surveillance of diphtheria.
- Undertake applied research on the diagnosis, epidemiology and prevention of diphtheria.

This document describes the activities planned to achieve these objectives, together with the resources needed from the Russian Federation and WHO Extra-budgetary sources. A Budget Summary for the Plan of Action is shown below:

BUDGET SUMMARY

Activity	Russian Federation Roubles (millions)	WHO Extra-Budgetary US\$ (000s)
Achieve high levels of immunization	15825.0	-
Develop and implement programmes for social mobilization	600.0	500.0
Train health care personnel	215.0	835.0
Ensure production and quality of diphtheria toxoid and other preparations	6215.0	7360.0
Organize an effective "cold chain"	180.0	420.0
Improve epidemiological surveillance	1000.0	1750.0
Undertake applied research	310.0	170.0
Total	24345.0	11035.0

Achieve high levels of immunization against diphtheria for people in all regions

The morbidity and mortality from diphtheria can be dramatically reduced by establishing a high of immunity in the population. To reach this goal by 1996, immunization rates will be not less 95% in children under the age of 2 years, not less than 95% in schoolchildren and adolescents, not less than 80% in adult populations, especially those belonging to high-risk groups (i.e. those living in areas with high rates of diphtheria, belonging to age and socio-professional groups with high rates of diphtheria; health care workers; service personnel; refugees and forced migrants; alcoholics of remote address; patients of psychiatric hospitals and drug rehabilitation centres; those staying at old welfare centres and hostels; those working in commerce, public catering, transport and communications for children; schoolchildren and their teachers; and students and lecturers at colleges of higher education and secondary technical colleges).

The following activities to achieve high levels of immunization are planned:

- draft and submit to the Duma of the Federal Assembly a Law of the Russian Federation on Preventive Vaccination which defines national policy in this area; resolve legal issues concerning the responsibility of health care workers for administering vaccinations unless there are medical contraindications; establish vaccination requirements for admission of children to pre-school and school establishments; establish mandatory national and other insurance against possible post-vaccinal complications; and introduce vaccination certificates.
- develop and implement public health regulations for planning, organizing and administering programmes for vaccinations;
- develop and implement new vaccination schedules against diphtheria, with a reduced interval between vaccination and first revaccination for children and immunization of adults irrespective of age and vaccination history;
- reduce the number of medical contraindications to vaccination against diphtheria;
- introduce vaccination certificates;
- analyse the work of immunization clinics and implement measures to improve their activities;
- develop and implement a policy for vaccination teams in therapeutic/preventive care establishments;
- develop and implement a set of economic incentives for health care workers to administer vaccines;
- ensure adequate supplies of vaccines and disposable syringes to therapeutic/preventive care establishments.

BUDGET SUMMARY

Activity	Year	Russian Federation	WHO
		Roubles (millions)	Extra-Budgetary US\$ (000s)
Law on Preventive Vaccination	1994	10.0	-
New vaccination schedule	1994	15.0	-
Vaccination certificates (100 million)	1994	1000.0	-
Vaccines and disposable syringes (Yearly doses DPT 11 min; DT 40 min; D1 45 min; d 14min)	1995	7400.0	-
Subtotal		7430.0	

Develop and implement information programmes on diphtheria prevention (social mobilization)

It is essential to inform the public of the dangers of diphtheria and the effectiveness of vaccination with diphtheria toxoids. In addition to efforts of health care workers to inform their patients, the use of television, radio and periodicals to promote widespread understanding of diphtheria control is extremely important.

The following activities to promote social mobilization are planned:

- produce health education materials (posters, booklets, brochures, leaflets, etc.) on the prevention of diphtheria for various population groups;
- produce and broadcast television and radio documentaries and short items on the prevention of diphtheria;
- establish confidential telephone hotlines to provide information on the prevention of diphtheria;
- publish in newspapers and magazines a series of articles and interviews with leading scientists and staff in the national health system and the sanitary and epidemiological service on diphtheria prevention;
- distribute "open letters" to physicians and intermediate-level health care workers describing how to organize diphtheria vaccination programmes;
- publish appeals to principal regional authorities and the public concerning the prevention of diphtheria;
- organize frequent press conferences and radio and television speeches and round-table discussions by administrators in the health system and the national sanitary and epidemiological service, paediatricians, epidemiologists, infectious diseases specialists, and leading scientists on diphtheria and its prevention;
- prepare monthly press releases for the media that include assessments of the epidemiological situation and information on control measures implemented;

BUDGET SUMMARY - 2

Activity	Year	Russian Federation	WHO
		Roubles (millions)	US\$ (000s)
Health education materials (posters 30min, booklets 50min - RF; posters 10min, booklets 10min - WHO) (Posters 10min, leaflets 10min - RF; leaflets 10min - WHO)	1994	500.0	200.0
	1995		
Television and radio documentaries (3 videoprogrammes - RF; 6 - WHO) (6 videocassettes - RF; 12 videocassettes - WHO)	1994	100.0	300.0
	1995		
Subtotal		600.0	500.0

Train health care personnel in the diagnosis, clinical aspects, epidemiology and prevention of diphtheria

In order to successfully implement measures for epidemic control, a programme of continuing education is needed for physicians (especially paediatricians, clinicians, neuropathologists and ear nose throat specialists) and intermediate-level health care workers on methods for the clinical and microbiological diagnosis, treatment and prevention of diphtheria. Priority must be given to the organization of vaccination programmes, medical contraindications to vaccination, post-vaccinal reactions and methods of administering vaccines to children. Educational programmes must also include the organization of epidemiological surveillance and epidemic control measures in diphtheria as well as methods for working with the media to educate the public on diphtheria and its control.

The following activities to train health care personnel are planned:

- develop a programme for testing the knowledge of physicians and intermediate-level health care workers on the clinical aspects, diagnosis, epidemiology and prevention of diphtheria;
- develop and introduce requirements for certifying physicians regarding preventive vaccination;
- produce and distribute two health education video films on the clinical aspects, diagnosis, epidemiology and prevention of diphtheria;
- develop a curriculum on issues of preventive vaccination for students at medical and pharmaceutical institutes and colleges;
- conduct seminars and special courses for paediatricians, epidemiologists and bacteriologists on the diagnosis, clinical aspects, epidemiology and prevention of diphtheria;
- conduct courses on issues related to the "cold chain" for specialists from therapeutic/preventive care establishments, state sanitary and epidemiological surveillance centres, pharmaceutical establishments and firms manufacturing vaccines;
- conduct courses jointly with WHO for managers of regional immunization programmes;
- set up regional education/methodology centres at research institutes on the prevention of the "target diseases";
- translate, print and distribute WHO and foreign language publications on the diagnosis, clinical aspects, epidemiology and prevention of diphtheria;
- support scientists and specialists from practical health care establishments and the national sanitary and epidemiological service who attend international conferences and meetings to study the experiences of other countries in diphtheria control;
- organize practical training at central research institutes, including those in other countries, for specialists from regional research and local practice establishments;
- prepare and publish a practical guide for health care workers entitled "The diagnosis, clinical aspects, epidemiology and prevention of diphtheria".

BUDGET SUMMARY

Activity	Year	Russian Federation	WHO Extra-Budgetary
		Roubles (millions)	US\$ (000s)
Health education videofilms (1 - RF, 1 - WHO)	1994	50.0	100.0
WHO courses for regional managers (12 courses @ 30 participants)	1994-95	20.0	150.0
Translate foreign language publications on diphtheria (10 000 copies each RF and WHO)	1994-95	15.0	65.0
Participate in international conferences (30 persons)	1994-95	-	300.0
Publish practical guide on diphtheria (30 000 copies)	1994	30.0	-
Regional progress assessment meetings (3 meetings each year @ 100 participants)	1994-95	40.0	80.0
All-Russian conference on revised contraindications to vaccination (100 participants)	1994	20.0	20.0
Translate WHO/EPI management publications (translation - WHO; print 10 000 copies RF)	1994-95	40.0	120.0
Subtotal		215.0	835.0

55

Ensure adequate production and quality control of preparations used in the diagnosis, treatment and prevention of diphtheria

In programmes to prevent and control diphtheria, the preparations used in diagnosis, treatment and prevention must be of guaranteed quality and conform with international requirements. In order to strengthen the technological capacity of firms manufacturing such preparations, in accordance with good manufacturing practices (GMP), and to improve procedures for quality control, the following activities are planned:

- 1 modernize the facilities and expand the output of preparations for the diagnosis, treatment and prevention of diphtheria at the firms I.I. Mechnikov Biomed AO (Moscow) and Immunopreparat NPO (Ufa);
- 2 undertake the manufacture of such preparations in St. Petersburg (Institute for Research on Vaccines and Sera) and Perm (Biomed NPO);
- 3 supply each of these firms with essential technical and laboratory equipment, reagents, and other materials which are not manufactured in Russia;
- 4 supply essential technical equipment to the laboratories involved in quality control of antidiphtherial preparations at the L.A. Tarasevich State Research Institute for the Standardization and Control of Medical Biological Preparations (GISK; Moscow);
- 5 implement quality control procedures for all batches of such preparations in the GISK laboratories ("continuous monitoring");
- 6 organize technical courses for staff of firms manufacturing antidiphtherial preparations, especially those working in the biological monitoring departments;
- 7 develop and implement public health regulations on the manufacture and monitoring of medicinal immunobiological preparations.

BUDGET SUMMARY

ACTIVITY	Year	Russian Federation	WEO Extra-Budgetary
		Roubles (millions)	US\$ (000s)
International expertise to ensure good manufacturing practice (GMP)	1994	-	200.0
Modernize and expand production of vaccine - equipment reagents	1994-95	1000.0	4000.0
		500.0	2000.0
Improve quality control procedures - equipment reagents	1994-95	80.0	300.0
		20.0	150.0
Produce materials for laboratory diagnosis	1994	100.0	300.0
	1995	100.0	400.0
Provide diphtheria antisera (5 bln IU each year)	1994	2200.0	-
	1995	2200.0	-
Organize technical courses (10 persons - RF; 20 persons - WHO)	1994-95	5.0	10.0
Develop guidelines on production and quality control of vaccine (5000 copies)	1994	10.0	-
Subtotal		6215.0	7360.0

Organize an effective system for transporting and storing vaccines ("cold chain")

Maintaining the necessary temperature conditions for transporting and storing vaccines to a extent determines their quality and effectiveness in use. To organize and maintain an effective chain", the following activities are planned:

develop, test and manufacture disposable 50 litre insulated containers for transporting vaccines from the manufacturer to regional central warehouses (10,000 in 1994 and up to 50,000 annually thereafter);

develop, test and manufacture non-disposable 3-15 litre insulated containers for transporting vaccines from regional central warehouses to therapeutic/preventive care establishments (100 000 in 1995, and up to 150 000 annually thereafter);

develop, test and manufacture thermoindicators (1,300,000 in 1995 and up to 1,500,000 annually thereafter);

organize the delivery of vaccines from the manufacturer to the central warehouses in the European regions of the country using 5 refrigerated trucks (UNICEF is supplying 3 such trucks to Russia in 1994);

develop and introduce public health regulations on the conditions for the transportation and storage of medicinal immunobiological preparations;

provide therapeutic/preventive care and pharmaceutical establishments and state sanitary and epidemiological surveillance centres with their own refrigeration equipment (refrigerators, cold boxes).

BUDGET SUMMARY - 5

Activity	Year	Russian Federation	WHO
		Roubles (millions)	Extra-Budgetary (US\$ (000s))
Non-disposable 3-15 litre containers for vaccine transport (140 000-150 000 per year - RF; production facility - WHO)	1994-95	100.0	150.0
Thermoindicators (1.5-2.0 mln - RF; production facility - WHO)	1994-95	50.0	50.0
Purchase thermoindicators for disposable boxes	1994	-	50.0
Guidelines for "cold chain"	1994	10.0	20.0
WHO training courses on "cold chain" (2 courses @ 30 persons - RF; 10 courses @ 30 persons - WHO)	1994-95	20.0	150.0
Subtotal		180.0	420.0

Improve the system of epidemiological surveillance of diphtheria

Epidemiological surveillance of diphtheria should be carried out by the national sanitary and epidemiological service. This includes routine monitoring and retrospective epidemiological analysis, epidemiological forecasting and assessing epidemic control measures and adopting management decisions. The following features of diphtheria and its control can be monitored: carriage rates of diphtheria pathogens; number of vaccinations given; immunization coverage and levels of immunity in various age groups and socio-professional groups; number and nature of postvaccinal complications; clinical manifestations of the disease; fatality rates; supplies to therapeutic/preventive care establishments of vaccines and preparations for treatment; supplies to state sanitary and epidemiological surveillance centres of materials used for diagnosis; conditions of vaccine storage and transportation and their quality; the scale of epidemic control measures; and socioeconomic factors. The results serve as the basis for analysis, forecasting, assessing and amending epidemic control measures.

The following activities to improve epidemiological surveillance are planned.

- 1 review and modify the national statistical report on vaccinations in order to make it more informative;
- 2 develop and introduce a statistical reporting system on diphtheria morbidity and mortality (weekly), number of vaccinations (monthly), serological evidence of population immunity (every three months), and supplies of preparations for the diagnosis, treatment and prevention of diphtheria (every three months);
- 3 develop short- and medium-term forecasts of the diphtheria epidemic in Russia and in each region in order to amend epidemic control measures;
- 4 develop and introduce methods for serological monitoring of immunity to diphtheria among various socio-professional and age groups;
- 5 develop and introduce public health regulations on the prevention of diphtheria, including requirements for case-finding and treatment, and implementation of control measures in areas with outbreaks of disease;
- 6 provide adequate supplies of preparations for the diagnosis of diphtheria to the state sanitary and epidemiological surveillance centres, and carry out serological monitoring of immunity to diphtheria among various socio-professional and age groups;
- 7 introduce a "standard case definition" of diphtheria illness and bacterial carriage;
- 8 introduce a card-index form for reporting adult immunization;
- 9 develop and implement a computerized information system for epidemiological surveillance of diphtheria;
- 10 provide computers and telecommunication links between state sanitary and epidemiological surveillance centres and the therapeutic/preventive care establishments in those regions with the highest rates of diphtheria;
- 11 establish regional centres for epidemiological surveillance of diphtheria at research institutes;
- 12 implement effective computerized data processing and analysis and publish analytical reports on the epidemiology and prevention of diphtheria.

BUDGET SUMMARY - 6

Activity	Year	Russian Federation	WHO Extra-Budgetary
		Roubles (millions)	USS (000s)
8 Adult immunization card-index form (50min)	1994-95	500.0	-
9 and 10 Computerized epidemiological surveillance in two regions (computers and telecommunications)	1994-95	500.0	1000.0
11 Regional centres for diphtheria surveillance (3) (laboratory equipment, reagents)	1994	-	600.0
Study computerized surveillance systems in other countries (10-15 epidemiologists and paediatricians)		-	150.0
Subtotal		1000.0	1750.0

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