

**UKRAINE INFECTIOUS DISEASE
PROGRAM PLANNING VISIT**

a joint mission by USAID, BASICS, PATH, and CDC

April 14-26, 1997
Kiev, Ukraine

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ACRONYMS

AFP	acute flaccid paralysis
BASICS	Basic Support for Institutionalizing Child Survival Project
CDC	Centers for Disease Control and Prevention
EPI	Expanded Programme on Immunization
FAP	feldscher (medical assistant) accoucheur (midwife) post
FY	fiscal year
HIS	health information system
IMR	infant mortality rate
MOH	Ministry of Health
PATH	Program for Appropriate Technology in Health
SES	Sanitary and Epidemiologic Surveillance
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

EXECUTIVE SUMMARY/PURPOSE OF VISIT

This joint trip was an assessment visit to Ukraine by a team from USAID, BASICS, PATH, and CDC to begin development of a new assistance program to strengthen local health management information systems. The immediate goal of the visit was to begin programming a \$1.1 million infectious disease earmark (\$350K from FY96 and \$750K FY97) held by the mission.

A secondary larger goal was to obtain Mission support for a longer term, multi-year health information system reform program. Although there is no indication of funding beyond 1997, the USAID Regional Mission suggested that the planning team should develop a multi-year strategy for strengthening Ukraine's capacity to control infectious disease, with each year building on the previous year's activities. Thus the program will continue efficiently and will grow should future funding become available.

The ultimate goal of the program will be to assist the Ukrainian Ministry of Health (MOH) and Oblast Sanitary and Epidemiologic Surveillance (SES) in identifying and implementing instruments and procedures that will enable them to better monitor and manage their infectious disease control activities.

BACKGROUND

Joining Europe as an independent state in 1991, Ukraine is now the largest country in Europe. Its borders stretch approximately 2000 km east to west, and approximately 1000 km north to south. Ukraine borders Russia to the east and north, Belarus to the north, Poland to the west, and the Black Sea to the south. Neighboring countries in the southwest include Slovakia, Hungary, Romania, and Moldova. The country is divided geographically, and somewhat politically, by the Dniro River which runs from north to south, passing through the capital of Kiev (Kiev). The country is administratively divided into 25 oblasts, with 712 rayons and 2 cities.

Ukraine's population is approximately 52 million. The three largest oblasts are Donetsk (5.3 million), Dnipropetrovsk (3.9 million), and Kharkiv (3.2 million). The smallest oblast has a population of about 1 million people, and the population of Kiev is approximately 2.6 million people.

According to a report by the World Bank ("World Bank Study of Ukrainian Health Care") Ukraine's infant mortality rate (IMR) rose sharply in 1992 to 15.0 per 1000 live births. Some local studies indicate that certain areas have an IMR above 20. The World Bank reports infectious and parasitic diseases, respiratory infections, and birth defects as the primary causes of infant mortality.

The MOH is in a state of transition and reform, with frequent personnel and programmatic changes. Consequently, the lines of authority and communication in the MOH are not completely

evident. The control of infectious diseases comes under the MOH's Ukrainian State Centre of Sanitary and Epidemiologic Surveillance (SES). The SES has offices and epidemiologists at oblast and rayon levels. Infectious diseases are reported to the national level through the oblast and rayon SES offices from the medical facilities. National health statistics are compiled both by the Centre for Medical Statistics and by the State SES. The MOH considers reforming their health information system (HIS) a high priority.

The new assistance program under development is an outgrowth of BASICS HIS reform activities in other countries of the former Soviet Union and the USAID/PATH experience in the Ukraine diphtheria project. The diphtheria project found that the central MOH had very poor access to accurate information regarding vaccine supply, consumption, and coverage during the project; had unreliable and incomplete data on immunization histories; and had a weak, decentralized, and overburdened health information and disease surveillance system.

The general program goals and an immediate action plan were developed during a March 1997 meeting held at CDC. At a March meeting, this two-week planning trip was agreed upon. The program development team included Murray Trostle and Rebecca Rohrer of USAID/DC, Lyndon Brown and Mark Weeks of BASICS, Mark White and Scott McNabb of CDC, and David Mercer of PATH.

TRIP ACTIVITIES

The team met with staff of the USAID Regional Mission; senior level officials in the Ministry of Health, including the State SES; several national institutes involved with the HIS; a representative for UNICEF in Ukraine; and the Canada-Ukraine Partners Office, which is contributing to HIS reform.

On April 19, the entire team made a site visit to one rayon in Kievskaya Oblast (Titiev). Weeks, Mercer, and PATH Medical Officer Dmitri Tyschenko also made a second site visit to the Zhitomyr Oblast SES on April 21.

The team had two meetings with USAID/Kiev: an initial briefing on April 16 to outline the trip objectives, and a presentation on April 24 of a proposal for a three-year information systems reform project.

On April 22, Mercer and Tyschenko attended, along with Trostle and Molly Mort from USAID/Kiev, a meeting between the Ministry of Health and vaccine donors at which the MOH announced its projected 1997 shortfalls of EPI and other vaccines.

A complete list of persons contacted by the team are found in Appendix A.

RESULTS AND CONCLUSIONS

1. Although categorized by WHO and UNICEF as being self sufficient for financing EPI vaccine costs, Ukraine has relied on donor support for purchasing vaccines. Because the Canadian government, a major source for vaccines in Ukraine, will no longer donate vaccines, the country is facing a critical shortage. A recent WHO report suggests that Ukraine will be without measles vaccine by June 1997. The USAID Mission is deeply concerned about the MOH's decreased capacity to provide immunization services.
2. Obtaining consistent information and making an accurate forecast of the vaccine situation in Ukraine is difficult. Most oblasts purchase their vaccines directly from Russia and do not routinely report stock balances to the central level. Current local stores at the oblast and rayon levels of independently procured vaccines, drugs, and other supplies are unknown at the national level and are, in fact, often unavailable at the oblast SESs, as well. This lack of information on vaccine supplies became most evident during the diphtheria epidemic. In these circumstances, rational planning and resource management at the local level is all but impossible¹.
3. A UNICEF consultant reported in August 1996 that most refrigerators storing vaccines are antiquated and need to be replaced. Major repairs also are required for the country's walk-in cold rooms. The consultant's report also mentioned that it is difficult to retrieve information about the cold chain in the oblasts and that most oblasts probably can afford only about 50 percent of their vaccine needs. ("Cold Chain Survey in Republic of Ukraine" 17 June-14 August, 1996, S. Gavinet.)
4. The health information system (HIS) in Ukraine typifies that of the former Soviet health care system. The medical facilities collect a large array of data on infectious, chronic, and occupational diseases, as well as hospital statistics. Case counts are tabulated by hand from the disease ledgers and forwarded monthly, quarterly, and yearly from each rayon

1 Many of the systemic problems, particularly with regard to redundancy, inefficiency, and inaccuracy, have also been recognized by the government, which is organizing a committee at the ministerial level that will be charged with recommending and instituting reforms. In connection with this internal assessment, the Canadian Society for International Health, through the Canada-Ukraine Partners in Health Program, is funding a project with technical assistance from the University of Victoria that will assist the government with its central-level health information systems reform. This national reform program is directed toward computerized data processing in the management and cost-efficiency evaluation of curative services, particularly in the hospital sector, but will also have a disease surveillance component. Because its focus appears to be economic monitoring and evaluation of curative services rather than prophylaxis and infectious disease control (which is organized as a separate part of the national health system), this HIS reform program and the proposed USAID activities will probably not have direct impacts on one another. However, each group should be kept aware of the other's initiatives, and opportunities for cooperation and collaboration should be encouraged.

SES to the oblast SES, where the data are further aggregated and passed along to the central ministry, departments, and institutes for further aggregation and dissemination of summary statistics. Infectious diseases are supposed to be reported by telephone within 24 hours by the medical facilities to the rayons and oblasts. Written notification is also required. The flow of information, however, is one-way, and at each stage the opportunity for error is high and the burden of work is enormous.

Records from multiple reporting sources (e.g., ambulances, schools, FAPs, factories, rayon clinics) for dozens of diseases are maintained at the rayon level in a number of different report forms and ledgers. Many of these forms and ledgers contain identical information while others contain follow-up information, such as laboratory diagnoses or subsequent complications, which can be linked only with difficulty to the original case records².

With so many parallel systems and the burden of paperwork and compilation that is imposed on every level of the health system, it is no surprise that much of this information remains unchecked and unused. At the local level, surveillance data appears to be used almost exclusively for case management and prophylactic treatment of contacts. There is little use of data at the operational levels.

5. The existing HIS does not promote the utilization of information for planning or for making decisions. Aggregated data are reported on large spreadsheets; little analytical information, such as age specific incidence rates, are presented. More specific information (e.g., immunization status), however, is available for diphtheria.
6. All oblast SESs and some rayons, especially those involved in Chernobyl-related programs, are equipped with computers. Locally developed software programs are used. Data on diphtheria are stored and reported using computers. Based on observation in only one oblast, existing computers are not being used effectively or optimally by the epidemiologists.
7. All of the MOH centers and institutes visited by the team regard improving the HIS as a high priority and want to simplify the system. MOH personnel at all levels mentioned computer hardware and software as their most important needs for improving the HIS.
8. The MOH's effort to reform the HIS is not coordinated among the various government institutes and centers in Kiev. Apparently the Centre for Medical Statistics is the lead office for compiling and reporting data on infectious diseases, although data are

² At one rayon clinic visited in Zhytomir City, in addition to a daily case log, separate case registers were kept for diphtheria (cases and carriers); varicella, measles, pertussis, and tuberculosis; hepatitis and mononucleosis; rubella; sore throat; diarrheal diseases; and bacteriologic diagnoses.

channeled through the Ukrainian State Center for Sanitary Epidemiologic Surveillance and other institutes that also produce reports. Several institutes are preparing proposals for improving the HIS. The Minister of Health will select the most appropriate proposal within the next few months. Given the MOH's state of transition and our limited time, it was not possible to clearly define the key persons or offices that will have the most input and responsibility for reforming the HIS.

9. The MOH implemented AFP surveillance in 1996, but MOH officials interviewed felt that AFP surveillance was not yet well established. Three cases of poliomyelitis were reported in 1996: two adults and one vaccine-associated case.
10. The USAID Regional Mission prefers that technical assistance be applied in at least two oblasts to include geographical and political diversity. However, the coverage by the program also must consider the available technical and financial resources, the one year time frame for implementation, and the life of the USAID/BASICS project (September 1998).

RECOMMENDATIONS

1. The more effective approach for applying USAID's infectious disease earmark for Ukraine will be to develop an approach which improves disease surveillance and information systems at oblast, rayon, and facility levels. This prototype should include the process through which an oblast and the country can improve their surveillance and information systems, as well as the activities required to strengthen the HIS (e.g., selection of key indicators, revision of forms, training on analysis and reporting). The prototype should follow these principles:
 - a. designed according to MOH interests and needs
 - b. easy to replicate and expand through out the country
 - c. within MOH and oblast budgets
 - d. easily modifiable in terms of expansion into other diseases, indicators, or health problems

Making a Soviet-style information system effective and cost efficient is an enormous task. One must also consider the program and managerial issues that will arise as the information system becomes more effective and more revealing. The Ministry of Health will remain in a difficult position if it can only better document health problems, rather than address them.

An important distinction is that the program should focus on **management** information, rather than strict disease surveillance. The resulting HIS model will include vaccine and

other commodities management, immunization coverage and contraindication monitoring, as well as surveillance and service statistics.³

2. Given the MOH's declining capacity to deliver immunizations, the experiences gained through diphtheria control, and the broad range of information collected by the MOH, the developmental stage of USAID's infectious disease program should focus on one subset of information: the vaccine preventable diseases.
3. To ensure quality and to rapidly develop the prototype, this program should be initiated in only two oblasts during the first year. It may be more effective to phase in the second oblast. When selecting oblasts the following should be considered—
 - a. recommendations of the MOH and USAID
 - b. active interest by the oblast SES and willingness to commit a core group of staff for 12 months
 - c. logistics and administrative support for project staff
4. Prior to the USAID, CDC, BASICS, and PATH planning exercise scheduled for July, a second visit to Ukraine is necessary to gain a better perspective on the following issues: the MOH and State SES interests, views, and roles on reforming their surveillance and information systems; the surveillance and information systems in the oblasts; potential oblasts for developing the prototype; the financial and human resource requirements for the program; and, most importantly, the MOH's receptivity to the strategy proposed for this earmark.
5. A full-time local coordinator will be needed to ensure continuous and active follow up on both technical and administrative matters. This person should have exceptional communication skills in English, Ukrainian, and Russian, and should be able to readily acquire respect from MOH counterparts. This person should not be used as the interpreter/translator during working sessions, but rather should help lead the sessions. The job description is found in Appendix B.
6. Throughout this program, up-to-date documentation on the background and the activities should be maintained. Careful documentation in Ukrainian or Russian will simplify future expansion and will enhance ownership.

³ This strategy was not a unanimous choice of the group. One member in particular, representing CDC, felt strongly that the HIS should emphasize surveillance and should be comprehensive—not limited to infectious diseases—and that our efforts should be directed more towards assistance to the central ministry in improving data processing capacity and report generation—principally through computerization of existing disease surveillance systems, training in data analysis, and dissemination of comprehensive health bulletins.

7. At the mission debriefing on April 24, in a presentation given by Dr. Trostle, the team proposed a three year project with a total budget of \$3 million. Of this money, \$1.1 million is currently available and will be programmed for year one of the project. Additional funding for years two and three would come from anticipated, but not guaranteed, future infectious disease earmarks.

FOLLOW-UP ACTION REQUIRED

1. At least two members of this team (PATH, BASICS) will return to Ukraine for two weeks beginning in mid-June 1997 to obtain input from the MOH on the proposed program strategy and objectives and to collect more information for developing the work plan and for selecting the target oblasts and program staff.
2. USAID, BASICS, CDC, and PATH will develop the work plan, including the budget and time frame, between 9-11 July 1997.
3. At this time the project development team, consisting of one representative from each of the implementing agencies, will establish contacts and identify the principal Ukrainian collaborators at each level of the system (rayon, oblast and central) and begin planning for the launch of program activities in late August or early September. Discussions within PATH regarding staffing and organization of the PATH/Ukraine office have been initiated. A project work plan will be drafted during a three day meeting in Washington DC, scheduled for July 9-11, 1997. It is expected to be circulated for review and finalized by August 11. Implementation will begin shortly thereafter.

APPENDIXES

APPENDIX A

USAID Ukraine Infectious Diseases Program/List of Key Contacts

USAID
Ukraine Infectious Diseases Program

List of Key Contacts

Ministry of Health

Dr. Lyubov S. Nekrasova, First Deputy Minister
Dr. Valery O. Sjomyn, First Deputy Minister
Dr. Raisa V. Bogatyryova, Deputy Minister
Dr. Anatoly N. Mishchenko, Chief of Center for Health Statistics
Dr. Sergei P. Berezhnov, Chief of SES Dept
Dr. Nina G. Goida, Chief of Maternal & Child Health Dept
Dr. Anatoly G. Padchenko, Deputy Chief of SES Dept
Dr. Ludmila N. Belinkaya, Epidemiologist
Dr. Raisa O. Moiseyenko, Senior Pediatric Specialist
Dr. Elenora A. Laugen, Epidemiologist

Kyiv Research Institute of Epidemiology & Infectious Diseases

Dr. Viktor F. Mariyevsky, Deputy Director
Dr. Vladimir V. Alexeyenko, Chief of Cholera Laboratory
Dr. Lyudmila M. Chudnaya, Professor of Pediatric Infectious Diseases
Dr. Anatoly L. Gural, Chief of Viral Hepatitis Laboratory

Ukrainian Center for Disease Surveillance

Dr. Vladimir I. Shestokov, Chief Physician
Dr. Natalia N. Semonova, Chief of Virological Department

Research Institute of Public Health

Dr. Viktor M. Ponomarenko, Director
Dr. Yevgeny V. Dobroshtan, Epidemiologist

Research Institute of Ecobiology & Toxicology

Dr. Mykola G. Prodanchuk, Director

Kyivska Oblast

Dr. Ludmila V. Bulavka, Deputy Chief Physician of SES

Tetiyevsky Rayon

Dr. Mykola I. Yastyuk, Chief Physician of SES
Dr. Anatoly S. Krochmalny, Deputy Chief Physician of Central Rayon Hospital
Dr. Vassily F. Kuzmyk, Deputy Chief Physician of Central Rayon Hospital
Ms. Mariya I. Bachynska, Feldsher, Telizhentsi Village FAP

Zhytomyr Oblast

Dr. Olexandr S. Volkov, Chief Physician of Oblast SES
Dr. Galina K. Redkina, Deputy Chief Physician of Oblast SES
Ms. Olena D. Neverova, Engineer of Oblast SES

Zhytomyr City

Dr. Anatoly I. Maguts, Chief Physician of City SES
Dr. Galina D. Sharapa, Deputy Chief Physician of City SES
Dr. Tetyana O. Volcova, Chief Physician of Epidemiology Dept, City SES
Dr. Anatoly S. Kritsny, Chief Physician of Sanitary Dept, City SES
Dr. Volodymyr J. Bashets, Chief Physician of City Children's Hospital
Dr. Tetyana T. Petrenko, Chief Physician of City Children's Polyclinic
Dr. Valentina I. Makarenko, Head, Prevention Dept, City Children's Polyclinic
Ms. Anastasiya N. Yanishevskaya, Nurse, City Children's Polyclinic

United Nations Development Program

Dr. Alla O. Solovyova, National Programme Officer for UNICEF

World Health Organization

Dr. Yuri V. Soubbotin, Liaison Officer

Canadian Partners Association

Ms. Olena Kurishko, Programme Officer

International Rotary Club

Dr. John Elloway, U.S. Chairman of 3-H (Health, Humanity & Hunger) Project
Dr. Robert Tuttle, U.S. Co-Chairman of 3H Project
Mr. Alexei Kozhenkin, Ukraine Chairman of 3H Project
Mr. Yuri Volvich, Ukraine Co-Chairman of 3H Project

USAID Regional Mission for Ukraine & Moldova

Ms. Anne Arness

Ms. Molly Mort

APPENDIX B

Ukraine Infectious Disease Program/Job Description: Field Coordinator

***Ukraine Infectious Disease Program
Job Description: Field Coordinator***

Summary of Duties

Under the supervision of BASICS/PATH Senior Advisor, Dr. Dmitri Tyshchenko, the Field Coordinator will be responsible for:

- (1) Liaison with counterparts at oblast, rayon and facility levels in the initial pilot oblast, and in other oblasts as the program develops;
- (2) Local planning and organization of information systems development, training and other oblast and rayon-level activities, with other team members;
- (3) Distribution and tracking of funds for local activity costs, maintaining complete and accurate field accounts;
- (4) Support of, and participation in, all oblast and rayon-level activities;
- (5) Monitoring progress of development and implementation of improved information systems, providing weekly updates and other reports as requested;
- (6) Participation in briefings for Ministry of Health and other national-level counterparts, officials of USAID and partner organizations, as well as staff and consultants of BASICS/PATH, as needed.

Qualifications

Medical degree, with specialty in epidemiology or infectious diseases desirable; Prior experience in information systems, epidemiology and/or training desirable; Computer skills: familiarity with word processing and spreadsheet software; Language skills: native Ukrainian, fluent Russian, and at least fair English; Flexibility, patience, diplomacy, and the ability to *listen* and to learn quickly.

Note: During certain stages of the program, the Field Coordinator will be expected to work in the pilot oblast, or other parts of the country, for extended periods (up to three weeks at a time). Accommodations and a living allowance will be provided during those periods.

APPENDIX C

Brown/Weeks BASICS Scope of Work

BASICS

BASIC SUPPORT

FOR INSTITUTIONALIZING CHILD SURVIVAL

Lyndon Brown and Mark Weeks in Ukraine April 14-30, 1997

Operations Officer Lyndon Brown and Technical Officer Mark Weeks will travel to Kiev, Ukraine o/a April 14 to participate with other members of a joint planning team. This team (which will also include representatives of USAID/W, CDC and PATH) will develop a strategy and planning framework for a program to provide technical assistance to the Ukraine Ministry of Health and Republican Sanitary-Epidemiologic Service (RSES) for improved surveillance of infectious diseases and design of more effective and efficient health information systems.

In Kiev, the team will meet with staff of the USAID Regional Mission, with counterparts of MOH, RSES and other health institutions, and with representatives of partner agencies, to review current status and discuss priority needs and issues related to disease surveillance and health information systems in Ukraine. It is also anticipated that members of the team will travel to Lviv for meetings at the Institute of Epidemiology there, and to one or more oblasts for meetings with oblast and rayon-level health officials and service providers.

In representing BASICS on the joint team, Brown will focus on cooperation and coordination among potential partners and counterparts, gathering information needed for subsequent planning and budgeting, and identifying means of providing management support for BASICS activities within the program. Weeks will advise on overall strategy and design of the program, and specifically assess the need and receptivity for development of oblast, rayon and facility-level monitoring and supervision as a foundation for national health information systems.

The full team will debrief with staff of the Regional Mission o/a April 23. Program strategy and proposed next steps will be presented and discussed at that time. Team members representing USAID/W will leave Ukraine April 24. Brown and Weeks will continue oblast visits with other team members through April 29, and will leave Ukraine o/a April 30.

Lyndon Brown in Geneva April 30-May 2, 1997

In returning from Ukraine, Brown will stop in Geneva, arriving on April 30. On May 1, he will meet with the Regional Director and staff of the UNICEF Regional Office for Central & Eastern Europe and the New Independent States to discuss UNICEF and BASICS plans for child survival-related activities, review progress of cooperation to date, and identify ways to further strengthen partnership in the region. He will also meet with Dr. Ivan Lejnev of WHO/CHD to brief him on progress of ARI case-management training being conducted by BASICS in focus oblasts of Kazakstan, Kyrgyzstan and Uzbekistan under the Central Asia Infectious Disease Program (CAIDP). Adaptation and translation of selected WHO training materials into three national languages, and plans for the upcoming CAIDP workshop on supervision being held in Almaty later in May will also be discussed. Brown will leave Geneva o/a May 2.