

Trans Caucasus Health Information Project March 1999 – June 2001

FINAL SUMMARY REPORT

Canadian Society for International Health

Background

Discussion of a joint initiative in health information in the South Caucasus began in December 1997 at a round-table organized by Canadian Society for International Health (CSIH) in Kiev, Ukraine. The Ministries of Health of Armenia, Azerbaijan, and Georgia agreed that improved health information systems were key in guiding the important decisions to be made during the health reform process. Continued discussions among the three countries and CSIH led to a proposal for a two-year project called the Trans Caucasus Health Information Project (TCHIP). Although the initial idea was for a larger project, the Canadian government suggested starting at a smaller scale and focussing mainly on training events. The Canadian International Development Agency approved a contribution of Canadian \$1.16 million (approximately US\$750,000) for the project in March 1999.

The stated project goal was as follows: “To enhance capacity at the national level to develop sustainable health information system structures to serve as the foundation for an inter-country health information network in the Trans Caucasus region.”

The project began with a needs-assessment mission and a start-up workshop in Tbilisi, Georgia. In September 1999, representatives of the Ministries of Health of the three countries met with CSIH at the Regional Assembly of the World Health Organization European Region and signed a Memorandum of Understanding about the health information project. The project then began its operational phase, focused on promoting collaboration among the three ministries of health, building capacity in health information systems, and raising awareness of gender equality issues.

In the past two years, CSIH staff have observed improved capacity in health information systems (HIS) in the South Caucasus, particularly at the regional and hospital levels. Clinicians have reported that they benefit from better HIS because they now have easier access to their own data; administrators have stated that better HIS provide more reliable information, which allows them to make better decisions, thus confirming that better HIS means better health care for all.

Local and International Partners

In the summer of 1999, following discussions with the Ministries of Health in each country, national technical coordinators were named, representing the institutions involved in the development and implementation of health information systems in each country.

In Canada, technical expertise was provided primarily by the School of Health Information Science of the University of Victoria. Other Canadian institutions involved in the project included Health Canada (federal Ministry of Health), provincial and local health institutions, and the Canadian Institute for Health Information (CIHI).

The World Health Organization Regional Office for Europe (WHO EURO) provided important assistance in helping to establish the project, ensuring that its activities in health information were consistent with international standards and related initiatives, and providing logistical support via the WHO liaison offices in each country.

National Health Information Analytic Centre, Armenia	Centre for Medical Statistics and Information, Georgia	Bureau of Computer Science and Statistics, Ministry of Health, Azerbaijan
World Health Organization Regional Office for Europe Copenhagen, Denmark		School of Health Information Science University of Victoria Victoria, BC, Canada

Main Accomplishments

The key feature of a sustainable health information system is the quality of the information that it contains. The data gathered must be valid, reliable, and comparable within and between countries in order to effectively contribute to decision-making and health planning. Through training activities (certificate courses and workshops), study tours to Canada, and pilot applications, the project has successfully reinforced the efforts of the health ministries of Armenia, Azerbaijan, and Georgia to develop a new and integrated approach to health information systems. This approach focuses on users and planners having greater access to more reliable information for better decision-making and planning.

The following are the main activities and accomplishments of the project:

Health Information Training Courses & Workshops

Material on Health Information Systems was developed to meet the needs of local partners, and has been made available on the internet <http://www.csih.org/Tchip/index.html>

1. 1-day workshop, Tbilisi (Nov. 1999)	25 participants
2. Workshop, Baku (Nov. 1999)	10 participants
3. 5-day Certificate course, Yerevan (Feb. 2000)	22 participants from Armenia 4 participants from Georgia
4. 5-day Certificate course, Tbilisi (June 2000)	22 participants from Georgia 4 participants from Armenia 4 participants from Azerbaijan
5. 5-day Certificate course, Baku (Sept. 2000)	22 participants from Azerbaijan 4 participants from Georgia
6. 1-day Data collection & data transfer workshop, Yerevan (Oct. 2001)	32 participants
7. 2-day Data collection & Computer training workshop, Baku (Feb. 2001)	22 participants
8. 1-day, workshop on data transfer, data analysis and data integrity, Tbilisi (Feb. 2001)	25 participants

Over 150 health professionals have attended the various training events, thereby contributing to the development of a critical mass of health information users in the three countries.

Understanding the role of health information systems in other countries can help provide useful ideas and approaches, methods and techniques for the development of one's own system. Study tours to Canada were designed to demonstrate both Canada's health information systems (at national, provincial, and facility levels) and its health system as a whole.

Study Tours to Canada

Tour participants showed a great interest in the study tours and demonstrated their ability to identify useful aspects of Canada's health information systems and the health system in general (e.g., wellness concept, consensus process, birth registration procedures), and apply these to their own situations.

1. Study tour - familiarization with Canada's health system (Nov. 1999)	2 participants from Georgia 2 participants from Armenia
2. Michener Institute Course on databases & networks for health professionals, Toronto (April 2000)	1 participant from Georgia 1 participant from Armenia
3. Study tour - familiarization with Canada's health system (May 2000)	2 participants from Azerbaijan
4. Study Tour- study of Canadian HIS at various levels (Nov. 2000)	3 participants from Georgia 3 participants from Armenia 3 participants from Azerbaijan

A total of **17 health professionals** from the Caucasus participated in study tours to Canada during the project.

Appropriate follow-up activities to the training are important in order to provide opportunities for the participants to concretely apply some of the concepts they have learned. The collection and analysis of case-based clinical data can demonstrate improved availability and reliability of information, thereby providing motivation for broader improvements in health information systems. To date, information on approximately 4,000 births in the South Caucasus has already been collected using comparable forms with standardized definitions. This is being used at the national level to verify statistics from other sources, assess performance of select health facilities, and monitor health outcomes. Using their own data, individual institutions will be able to analyze their own performance and more accurately identify health issues relevant to the population they serve.

Pilot Applications	
<i>The collection and analysis of case-based clinical data can demonstrate improved availability and reliability of information, thereby providing motivation for broader improvements in health information systems; once motivated people find innovative ways to make use of their knowledge.</i>	
1. Georgia	OBSQID ¹ training by WHO field staff Distribution of 40 computers (began June 2000) Canadian Intern assisted with computer installation and training, June – Dec, 2000
2. Armenia	Distribution of 18 computers by WHO and CSIH (Feb. 2000) Distribution of 45 computers (began October 2000) Canadian Intern assisted with computer installation and training, Oct 00 to Jan 01
3. Azerbaijan	45 computers sent to Azerbaijan (February 2001) Distribution of computers to maternity houses in Baku planned in April 2001 2 Canadian Interns assisted with short term tasks, Sep. 2000 and Feb. 2001
Over 120 computers have been donated to the three countries for use in various pilot applications, focusing mainly on the collection of case-based maternal child health data. As a result, health professionals in over 50 health care facilities have more timely access to reliable health data.	

Medical researchers have pointed out that some diseases affect men and women differently, and it is obvious that each sex has its own particular health issues. For these reasons, it is important for health professionals to understand differences implied by gender. At the same time, special attention is needed in the health care system to ensure that women and men have equal access to health services. The health information system has a critical role to play by disaggregating data by sex and highlighting information of particular importance to one sex or the other. These issues

¹ OBSQID (Obstetrical Quality Indicators and Data Collection) is a WHO EURO initiative supporting quality management of perinatal care. A standardized basic information sheet was developed in the mid-1990s with the involvement of clinicians and statisticians in the European region. The CSIH project has made use of the OBSQID experience in the South Caucasus to promote case-based data collection in the field of perinatal health.

also relate to society's treatment of gender issues in a wider context. Two regional workshops were held to raise awareness of these issues and to explain the methodology of gender-based analysis.

Gender Based Analysis in Health	
<i>As a result of two regional workshops on Gender-Based Analysis in Health progress is being made on recognizing and promoting gender issues.</i>	
1. 2-day workshop GBA in Health, Tbilisi (June 2000)	22 participants from Georgia 4 participants from Armenia 4 participants from Azerbaijan
2. 2-day GBA in Health workshop, Yerevan (Feb. 2001)	22 participants from Armenia 4 participants from Georgia 4 participants from Azerbaijan
Approximately 50 government officials, statisticians, health professionals, and NGO representatives from the three countries participated in the two workshops. Resource books on gender-based analysis in health were provided to all participants to supplement the workshop presentation material.	

Regional collaboration

Through regional Steering Committee meetings and other less formal opportunities, the Trans Caucasus Health Information Project (TCHIP) has created an enabling environment for longer-term regional impacts to be realized, and has promoted further negotiation and agreement on inter-country collaboration.

The following Steering Committee meetings were held during the course of the project:

February 2000, Tbilisi
June 2000, Tbilisi
September 2000, Baku
February 2001, Yerevan

Basic participants included representatives of the three Ministries of Health, the WHO liaison offices, CSIH, and CIDA. In addition international organizations such as WHO, USAID, World Bank, UNICEF, and Soros Foundation were invited to observe the meetings and participate in the discussions.

At the September, 2000 Steering Committee meeting in Baku, the Directors of the health information departments of the Ministries of Health of Armenia, Azerbaijan and Georgia signed a Declaration in which they commit their respective Ministries of Health to work together to create a health information network for the South Caucasus region.

The Declaration provided a framework for the implementation of activities, while identifying specific areas for collaboration: public health, social welfare, and environmental protection. (See copy attached.)

Environment as a Determinant of Population Health

At the request of CSIH the Canadian International Development Agency agreed to fund an additional activity to follow up on one of the common areas of interest expressed in the Declaration mentioned above, that of the link between the health information system and environmental protection.

In May 2001, a workshop was held in Ganja City, Azerbaijan, on "Environment as a Determinant of Population Health". The workshop looked specifically at the relationship between the physical environment and human health to demonstrate how environmental information linked to health information can contribute to better understanding and decision-making in the health sector.

The workshop participants from Armenia, Azerbaijan, and Georgia, included representatives of the ministries of health, ministries of environment, and various NGOs working on environment and health issues.

One of the highlights of the workshop was the presentation on local experiences in linking health and environment data. The Sumgayit Centre for Environmental Rehabilitation made a presentation on the history of Sumgayit as a major industrial centre of the Soviet Union, the resulting workplace and environmental pollution, and the work being carried out on monitoring the situation using a Geographic Information System (GIS). In partnership with the Ministry of Health, Azerbaijan, the WHO European Centre for Environment and Health (Rome), and the University of Alberta, Canada, the Sumgayit centre is playing a key role in a study of cancer morbidity and mortality as a consequence of environmental and occupation exposures to industrial pollutants.

Related Activities

In addition to the main project activities, CSIH supported various initiatives relevant to the development of HIS and health reform in the South Caucasus. In September 1999, CSIH participated in the **Donors' meeting for Georgia** at WHO Euro in Copenhagen where opportunities to assist and support Georgia in the development of national and regional public health and health promotion policies were identified and practical steps for its implementation were discussed.

The **Consensus Conference on Population Health Indicators** hosted by the Ministry of Health of Azerbaijan and UNICEF, (Baku, September 2000), brought together health professionals from across Azerbaijan to discuss the health indicators and standards

being used in Azerbaijan and progress on the adoption of common internationally accepted indicators. CSIH sent a representative from the Canadian Institute for Health Information to attend and deliver a presentation on the Canadian experience with population health indicators, and enabled two observers from Georgia to also attend.

The theme for the November 2000, Canadian Conference for International Health, "Health as a Bridge to Peace," provided an excellent opportunity for our partners to promote the accomplishments of the project, in particular the regional collaboration in developing health information systems. The national health information managers from Armenia, Azerbaijan, and Georgia were part of the panel presentation for a Symposium entitled "**Peacebuilding and Health in the South Caucasus.**" The session was attended by representatives of Canada's aid program (CIDA) as well as the Department of Foreign Affairs and International Trade.

The CSIH management team also participated actively in sharing information about the project to Canadian and international audiences through presentations at various **health information conferences**, such as the Routine Health Information Network (RHINO) conference in Washington, D.C., sponsored by the United States Agency for International Development (USAID). Papers about the project were presented at conferences hosted by the Canadian Institute for Health Information, (Vancouver, June 2000), the School of Health Information Science (Victoria, August 2000), and most recently at the 8th Armenian Medical World Congress, in Toronto (July 2001).

General information about the project activities remains available on the Internet at <http://www.csih.org/Tchip/index.html>; whereas more specific information about regional issues and health statistics from the South Caucasus has been compiled by the Bureau of Health Information and Statistics, Azerbaijan and can be found at <http://www.caucasushealth.net/>

Evaluation of the Project

CSIH has relied heavily on feedback from the local partners and participants in the activities to assess the degree of satisfaction with project activities and success in meeting participants' expectations. Following each training activity (certificate-course, workshop, study tour), the participants were asked to complete an evaluation form that assesses satisfaction with the activity and asks for recommendations for improvement. These results have been taken into account for the planning and implementation of future activities.

While the Regional Steering Committee has been an important mechanism in evaluating the impact of the project from the partners' perspective, the **Canadian Advisory Committee** has been instrumental in monitoring the effectiveness of the management team in working with the partners and reporting to CIDA. The Advisory Committee, composed of members knowledgeable about the South Caucasus region

and about the fields of informatics and international cooperation, has met periodically throughout the project to advise the project staff on programming and policy issues.

In November 2000, the Canadian International Development Agency (CIDA) commissioned an external evaluation of the project to determine how the project was progressing, the extent to which it was delivering expected results, and whether there was a basis for ongoing or additional support. The review concluded that the project has been largely successful, has met all of its outputs (short-term results arising from activities) and most of its outcomes (long-term results measurable over time). Despite the project's success, however, the evaluators concluded it could only be viewed as the mobilization stage in the development of an effective regional health information system. Much remains to be done in order to consolidate this beginning and operationalize a long term and sustainable health information system. For this reason, the evaluator recommended a second phase for the project.

Phase 2 Proposal

CSIH, in consultation with local partners and other stakeholders, has submitted a proposal to CIDA for continued funding for the development of health information systems in the South Caucasus. Phase 2 will contribute to and strengthen health reform through the appropriate application of health information technology and information management strategies. It will focus on:

- Further detailing the regional vision of HIS through consultations with partners and international agencies, national and regional health information advisory committees, and regional HIS conferences.
- Institutionalizing HIS training through development of undergraduate and post-graduate curricula, and delivery of intensive HIS certificate course for local professionals;
- Consolidating pilot applications (demonstration sites) in each country and using them to model good information management practices;
- Using HIS to build inter-sectoral collaboration to improve population health; and
- Developing mechanisms (e.g., websites, health reports) for the dissemination of information to health professionals and the community.

The proposal is currently under negotiation with CIDA; final decision is expected by September 2001.


DECLARATION

Of the Managers of Information technologies and Analytical Services of Ministries of Health, Armenia, Azerbaijan and Georgia.

Managers of the Information Technologies and Analytical Services of Ministries of Health Armenia, Azerbaijan and Georgia have discussed the problem of formation and development of a Health Information Network for the countries of South Caucasus Region during the Baku meeting held 29-30 September 2000.

The participants have come to the following conclusions:

1. Information support to national public health care systems is one of the highest priorities of State policy;
2. The public health care system and its data are recognized as of State significance and thus should be under State control, actively supporting all relevant structures;
3. The State identifies major development trends and is a guarantor to fulfilment of the intergovernmental protocols and agreements;
4. International cooperation between our countries in the framework of the first stage of a project of the Trans-Caucasian Information Network, supported by CIDA through the Canadian Society for International Health, provides possibilities to expand work and contact between the Information Technologies and Analytical Services of our countries.
5. An important result of this cooperation is the provision of a framework for discussion between the participating countries regarding ways to implement an Information System and Network project for countries of the South Caucasus region.
6. Today's participants have agreed upon the following directions:
 - to organize a Joint Conference of the Information Technologies and Analytical Services of the Public Health Care Systems of Armenia, Azerbaijan and Georgia. The aim of this conference will be to reach Consensus in the field of Public Health Care, Social Welfare and Environment Protection Indicators;
 - to develop a project and form the systems for data exchange, joint analyses and output through the framework of a protocol drafted and approved in the course of the above mentioned conference;
 - to establish and support a common Internet server: www.caucasushealth.net for the joint publications of the public health and environment protection data amongst the participating countries.
 - to publish a joint report on Public Health in the three countries based on agreements achieved at the conference;
 - to undertake joint studies on various aspects of public health care and environmental protection;
 - to hold a joint training program for medical and technical staff dealing with the collection and analysis of health and medical information;
 - to develop and use jointly, geographical information monitoring systems in the field of public health, social welfare and environmental protection.



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