



AMERICAN INTERNATIONAL HEALTH ALLIANCE

**ARMENIA PARTNERSHIP PROGRAM
1998 – 2004
FINAL REPORT**

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The American International Health Alliance (AIHA) wishes to express its sincerest gratitude to the countless Armenian and American partners who gave so generously of themselves to the partnership program in Armenia. The program was successful because these individuals demonstrated the courage and commitment to change; the patience, dedication, and hard work to gain new knowledge and skills; and a generous spirit of trust and collaboration. Together they made significant contributions to improving healthcare services and delivery for the people of Armenia.

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AIHA's mission is to advance global health through volunteer-driven partnerships that mobilize communities to better address healthcare priorities while improving productivity and quality of care. Founded in 1992 by a consortium of American associations of healthcare providers and of health professions education, AIHA is a nonprofit organization that facilitates and manages twinning partnerships between institutions in the United States and their counterparts overseas. It has supported to date 116 partnerships linking American volunteers with communities, institutions, and colleagues in 22 countries in a concerted effort to improve healthcare services. Operating with funding from the United States Agency for International Development (USAID), the Health Resources and Services Administration (HRSA) of the US Department of Health and Human Services, the Library of Congress, the Susan G. Komen Breast Cancer Foundation, and other organizations, AIHA's programs represent one of the US health sector's most coordinated responses to global health concerns.

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ACRONYMS & ABBREVIATIONS

AACA	Armenian American Cultural Association
AAWC	Armenian American Wellness Center
AIHA	American International Health Alliance
ANA	American Nurses Association
ANCC	American Nurses Credentialing Center
ANIH	Armenian National Institute of Health
AONE	American Organization of Nurse Executives
ASTP	Armenian Social Transition Program
AUA	American University of Armenia
CDC	Centers for Disease Control and Prevention
CEE	Central and Eastern Europe
CPG	Clinical Practice Guidelines
CQI	Continuous Quality Improvement
EBP	Evidence-Based Practice
EDM	Emergency and Disaster Medicine
EMSTC	Emergency Medical Services Training Center
FMC	Family Medicine Center
FMTC	Family Medicine Training Center
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
ICT	Information and Communications Technology
ICTC	Infection Control Training Center
INLI	International Nursing Leadership Institute
LRC	Learning Resource Center
MOH	Ministry of Health
NGO	Non-Governmental Organization
NIS	Newly Independent States
NRC	Nursing Resource Center
NRP	Neonatal Resuscitation Program
NRTC	Neonatal Resuscitation Training Center
PHC	Primary Healthcare
STI	Sexually-Transmitted Infections
TOT	Training-Of-Trainers
USAID	United States Agency for International Development
WWC	Women's Wellness Center

I. EXECUTIVE SUMMARY

Since 1993, AIHA has been creating and managing twinning partnerships that link American and Armenian healthcare professionals to improve both the quality and accessibility of health-related programs and services in Armenia. The first two partnerships established in this Caucasus nation of 3 million people were part of a broader USAID-funded Health Partnerships Program that encompassed the 12 newly independent nations of the former Soviet Union and focused on improving hospital-based care in the Armenian capital of Yerevan. In 1998, USAID awarded AIHA a second round of cooperative agreements to apply its unique volunteer-based partnership model to new regional health reform priorities, to improve the quality and scope of primary healthcare services. Building on the many successes of those earlier partnerships, six new twinning alliances were formed during this second round of funding. Together, the dedicated efforts of partners on both sides have resulted in positive and sustainable changes at the individual, institutional, community, and national levels.

Through AIHA's programs, partners have paved the way for many "firsts" in Armenia—establishing the country's first school of nursing and baccalaureate program in nursing education at Erebouni Medical Center; pioneering the use of mammograms and Pap smears for the early detection of breast and cervical cancers at the Armenian American Wellness Center; and creating some of the country's first model primary care centers in Armavir, Gegarkunik, and Lori where patients can access a wide range of clinical services, patient education programs, and peer support groups.

Healthcare practitioners have gained life-saving clinical skills at AIHA-sponsored training centers for emergency and disaster medicine, neonatal resuscitation, and primary care. Nursing professionals have been empowered and taken on expanded responsibilities for patient care and outreach. Healthcare administrators have adopted modern, cost-effective practices resulting in streamlined financial and management policies. Clinicians, students, and others have increased access to a wealth of evidence-based medical research, including the ability to consult with specialists around the world via the Internet, at partnership Learning Resource and Nursing Resource centers. And, patients have much better access to comprehensive, high-quality care at AIHA's network of nine primary care centers in Armenia, many of which also conduct medical outreach missions to remote areas of the country. Thousands of people have benefited, and will continue to benefit, from USAID-funded AIHA partnerships and programs.

Specifically, this translates into:

- 1,800 women diagnosed with breast or cervical cancer through the Yerevan/Washington partnership's expansion of early screening and diagnostics capabilities;
- 750 practitioners and 8 instructors trained at the AIHA-sponsored Neonatal Resuscitation Training Center resulting in a 60 percent reduction in combined maternal and infant deaths at Yerevan's Erebouni Hospital;
- 183 physicians, 352 nurses, and 15 teachers trained on topics such as asthma, breast cancer, cardiovascular disease, diabetes, disaster preparedness, gastrointestinal infections, health and safety, infection control, respiratory diseases, and substance abuse by the Armavir/Galveston partners;
- 10,000 people participated in community education and outreach activities conducted by the Lori/Los Angeles partners, with 3,000 screened for chronic conditions and more than 25 percent of those found to have high blood pressure, elevated cholesterol levels, vision impairment, and/or dental caries. Each person was either treated or referred to a specialist for follow-up care;
- 2,500 nurses attended continuing education seminars, clinical training programs, and information and communication technology at partnership Nursing Resource Centers;

- 1,100 children participated in anti-smoking courses and 800 learned about proper oral hygiene through school-based education programs conducted by the Gegarkunik/Providence partners; and
- Through AIHA's cross partnership program, 36 primary healthcare nurses trained in physical assessment, communication, health promotion, patient education, time management, mental and adolescent health, asthma, gerontology, and dental health.

AIHA and its partners have also been at the forefront of national health system reform, helping to:

- Create a regional disaster-response network that includes medical associations, fire response services, emergency medical services, mass media, the regional administration, the Ministry of Internal Affairs, and the Red Cross;
- Develop clinical practice guidelines for hypertension, chest pain, diabetes, and asthma in conjunction with the Ministry of Health; and
- Integrate healthcare facilities into the Ministry of Health's optimization plan to reduce costs and make family medicine services more convenient.

Whether by establishing and supporting skills-based training centers, creating comprehensive new models of prevention and treatment, or opening innovative, patient-focused care centers, AIHA and its partners have been pioneers of healthcare reform in Armenia, building critically-needed human and institutional capacity. The Armenian healthcare professionals involved in AIHA's partnerships have benefited not only from the knowledge and technical skills their American counterparts shared, but also from the collaborative learning process that drives partnership activities.

Thousands of doctors, nurses, and other healthcare professionals have received training through voluntary, peer-to-peer exchanges and other programmatic activities. The interaction with their counterparts in the United States and other countries in the region, as well as their exposure to new ideas and ways of approaching the provision of care, has enabled these professionals to rethink their roles as healthcare providers and become educators and agents of change at their institutions and in their communities. Nurses, in particular, have embraced the new educational opportunities the partnerships have afforded them and taken on increased roles and responsibilities, gaining the respect of physicians and patients alike who now view them as an integral part of the healthcare delivery system.

The increased skills and knowledge of the Armenian health practitioners translated into clear improvements in health care, better preventative medicine, and healthier lifestyles for the Armenian public. Communities who worked with the partnerships benefited from the technical assistance of the US partners, but they also gained the intangible benefits of learning about the importance of taking responsibility for one's own health and the health of the community. The impact of the increase in awareness and improved health statistics were evident in two large household surveys which were conducted before and after the partnership interventions.

While many healthcare challenges remain in Armenia, the AIHA Health Partnership Program has created a new paradigm for international collaboration and the provision of technical assistance. By working directly with Armenian healthcare professionals and policymakers, partners have helped lay a strong foundation for ongoing change. Political support and individual commitment have been critical to the success of AIHA's partnerships and the twinning model has demonstrated its viability by bringing about sustainable health system reform. Having strengthened existing institutions or created new ones, partners have ushered in programs that are more relevant and responsive to the populations they serve, leaving Armenian healthcare leaders better positioned to sustain these services and seek new opportunities to improve quality of care.

This final performance report is a comprehensive overview of AIHA programs in Armenia between 1998 and 2004. The report describes AIHA's unique partnership twinning model, the development and evolution of the Armenia program, and the main program components funded during this period. Section III of the report

presents summary results of each partnership and cross-partnership program, as well as AIHA's inter-partnership conferences and a program-wide mid-term evaluation completed in 2001. Additional details and information on individual partnerships and projects can be found at www.aiha.com.

THE PROGRAM IN NUMBERS
(Fiscal Years 1999-2004)

- 8** = Armenia partnerships
- 87** = US partner volunteers who traveled on exchanges to Armenia
- 118** = Armenian partners who traveled on exchanges to the United States
- 389** = Total individual exchange trips (in both directions)
- 103,000** = Population served by the 3 PHC centers established in Armenia
- \$8.4 million** = Total USAID funding
- \$10+ million** = Value of in-kind contributions by US partners

II. PROGRAM OVERVIEW

A. INTRODUCTION

AIHA's partnership program in Armenia between 1998 and 2004 (FY99-FY04) was built on a foundation of USAID support to healthcare reform efforts in the country begun after the collapse of the Soviet Union in 1991. Beginning in 1993, with USAID funding, AIHA established a total of eight Armenia healthcare partnerships that addressed a range of health sector priorities including nursing, women's health, emergency medicine, and primary care. In keeping with AIHA's partnership methodology and model (described in the following section), the program emphasized institutional and human capacity building to facilitate the sustainability and replication of successful healthcare interventions introduced through the partnerships.

Under the initial cooperative agreement signed with USAID in 1992, two hospital-based partnerships were established the following year in Yerevan, Armenia. The partnerships improved targeted healthcare services while strengthening the country's capacity for ongoing improvements in the quality of care. The first partnership brought together the Erebouni Medical Center with Beth Israel Hospital in Boston, Massachusetts, and focused on improving women's health services. The University of California at Los Angeles (UCLA) Medical Center replaced Beth Israel Hospital as the US partner in 1995 and the resulting Yerevan/Los Angeles partnership expanded its scope to encompass neonatal resuscitation and nursing education. The second Armenia partnership was between the Emergency Scientific Medical Center in Yerevan and Boston Medical Center. This partnership initially focused on improving emergency medical services (EMS), including the development of an EMS training center (EMSTC), and later was expanded to address infection control, nursing and medical education, and hospital administration.

“There is excitement about partnerships such as ours—partnerships that focus on relationships. The potential that can be unleashed for the whole world by creating more of these partnerships and focusing on relationships is awesome. There would be less strife and stress in the world, we could begin to address the difficult issues of poverty, and the world could become a healthier place.”

*—Ben Raimor,
Vice President of Community Outreach, University of Texas
Medical Branch at Galveston*

At the end of the first CA funding period in 1998, USAID awarded the competitively-solicited NIS Health Partnerships Program to AIHA. The award was comprised of a “Basic Agreement” that provided the overall scope, authority, and parameters of the program, and five “Sub-regional Agreements.” Four of the sub-regional agreements focused on the Caucasus, Central Asia, Russia, and West NIS. The fifth, an NIS region-wide agreement, promoted inter-regional sharing, dissemination, and common targeted initiatives, such as neonatal resuscitation, nursing, and women's health. The program and underlying cooperative agreements were for an initial five-year period, with an extension for up to an additional five years.

Under the 1998 CA awarded by USAID/Caucasus (EE-A-00-98-00017-00), AIHA was charged with establishing partnerships in Armenia, Azerbaijan, and Georgia in support of the Mission's strategic objectives and intermediate results, particularly in the area of primary healthcare. AIHA's initial five-year program in Armenia (FY99-FY03) under this CA comprised: (a) one-year sustainability grants to the two existing partnerships; (b) four new partnerships, three focusing on primary care and one on health management education; and (c) cross-partnership programs.

At USAID's request, a fifth partnership was added to AIHA's portfolio in 2000 to support an existing relationship between the Armenian American Cultural Association (AACA) in Washington, DC, and the

Armenian American Wellness Center (AAWC) in Yerevan. This partnership initially targeted improving breast health screening capabilities in Armenia and later evolved to encompass all areas of women's health and primary healthcare. In 2002, AIHA also began to support Abt Associates' USAID-funded Armenian Social Transition Program (ASTP) by helping to establish a family medicine training center in Lori. When funding for ASTP came to an end, USAID asked AIHA to provide continued support to the training center, thus a new partnership between Milwaukee's Center for International Health and the Lori Regional Health Administration was established to enable the further development of faculty and curricula for rural practitioner training. Beginning in 2003, the Yerevan/Washington, DC, and Lori/Milwaukee partnerships were funded under a new cooperative agreement with USAID/Armenia (111-A-00-03-00104-00) separate from a four-year extension of the 1998 CA negotiated with USAID/Caucasus for programs in Azerbaijan and Georgia. The Armenia program was intended to last four years, but USAID ended the program in September 2004.

B. AIHA PARTNERSHIP MODEL

In Armenia, as elsewhere in Eurasia, AIHA applied its central program methodology—a unique voluntary, twinning model—developed and refined over the years, in which a US community's health-related institutions are partnered with institutions in communities in developing and transitional countries. By embracing city, county, and statewide relationships and conducting peer-to-peer professional exchanges, these partnerships work together to develop practical solutions to healthcare delivery problems; create model programs; disseminate lessons learned; and effect broad, systemic change during and after the AIHA-funded partnership period.

Key elements of AIHA's twinning partnership model include:

- ❖ Voluntarism: significant in-kind contributions of human, material, and financial resources
- ❖ Institution-based partnering for capacity-building and systematic change
- ❖ Peer-to-peer collaborative relationships that build mutual trust and respect
- ❖ Transfer of knowledge, ideas, and skills through professional exchanges and mentoring
- ❖ Benefits flowing in both directions
- ❖ Replication and scaling-up of successful models
- ❖ Sustainability of achievements and relationships
- ❖ "Partnership of partnerships" for networking, sharing, and creating common approaches and solutions

"These partnerships are the building blocks, the coming together of individuals and institutions, to achieve health benefits for many countries. Participation, commitment, and involvement are the kinds of principles that help partnerships succeed."

*—Michael Farbman,
Mission Director,
USAID/Caucasus*

Over the years, external evaluations conducted of AIHA's twinning model have consistently affirmed the positive and lasting contributions partnerships have made to efforts to improve healthcare—and, in fact, overall health status—in partner countries. These independent evaluations have also indicated that AIHA partnerships have played an important role in transitional nations by building local capacity, creating sustainable relationships, increasing international cooperation and understanding, and promoting democratic values (*See section III.E for results of the mid-term evaluation conducted of the overall Health Partnerships Program*). This model continues to flourish and make important contributions, particularly through human and organizational capacity building. In September 2004, AIHA was awarded a major new cooperative agreement from the US Department of Health and Human Services to apply its partnership model to combating HIV/AIDS in 15 countries of Africa, the Caribbean, and Vietnam by establishing an HIV/AIDS Twinning Center in support of the President's Emergency Plan for AIDS Relief.

C. PROGRAM DESIGN

AIHA's 1998-2004 Armenia program was designed within the framework of a broader program for the Caucasus region and developed in consultation with USAID missions in Tbilisi, Georgia, and Yerevan, Armenia. The program was designed to build on the past accomplishments and lessons learned through AIHA partnerships in the region while meeting new priorities identified by both the ministries of health and USAID.

In 1998, USAID/Caucasus's priorities were based primarily on the findings of an assessment team that analyzed the health situation in the three countries in the region—Armenia, Azerbaijan, and Georgia. The team reported that:

The health delivery systems of all three countries are characterized by massive excess capacity and an absence of patients. The Caucasus nations have too many hospitals, too many beds, and too many hospital-based medical specialists. Virtually all facilities are now in disrepair; lack necessary medical equipment, drugs, and supplies; and cannot afford the energy necessary to provide heat and light and to power the minimal medical equipment available. Many facilities now lack running water, effective sanitation or sterilization, continuous electricity or telephone systems.

Overwhelmingly, physicians and related health personnel are hospital-based specialists, too many of whom are inadequately trained. Moreover, because of the economic collapse, the official salaries paid to virtually all physicians and other providers are inadequate to meet basic living needs, leading to the creation of incentives that have affected provider behaviors in undesirable ways. Despite the overall surplus of physicians, all three countries suffer from an inadequate supply of appropriately trained primary care physicians and primary care services.

Although the incidence of some infectious diseases such as tuberculosis and STDs has increased in the last several years, epidemiological profiles indicated that cardiovascular diseases, cancers, and other "lifestyle" diseases are the leading causes of morbidity and mortality in the three Caucasus nations. Nevertheless, the medical establishment devotes little attention to disease prevention, health promotion, and lifestyle modification programs, which, in the long run, have the greatest effect on reducing a population's disease burden. Mental health disorders and injuries (including automobile accidents) appear to be seriously underreported and are undoubtedly high. Serious reproductive and maternal and child health concerns remain in pockets of each of the three republics.

Among other things, the assessment team recommended that USAID support experimental demonstrations at the regional and/or local level to test alternative patterns of healthcare delivery, explore viable financing mechanisms, and develop new attitudes about rights and responsibilities among citizens, providers, and authorities. It was with those recommendations in mind that, in the fall of 1998, AIHA undertook a strategic planning process to address how the organization and its partnerships could support USAID's strategic objectives (SOs) and intermediate results (IRs) for the Caucasus countries. For Armenia, the relevant SO and IRs were: SO3.2 - "strengthened social safety net;" IR2 - "improved social protection systems;" and IR2.1 - "regional healthcare systems piloted." The Armenia SO and IRs subsequently underwent several revisions during AIHA's program years in the country. AIHA's headquarters and regional office staff consulted with USAID representatives, ministry of health officials, and previous partners to identify needs and assess potential sites for new partnerships.

At the same time, to address the reorientation toward primary care called for under the new Health Partnerships Program, AIHA assembled a **Primary Healthcare Advisory Committee** of 24 senior health officials from the region and the United States, including the director of the Erebouni Medical College (nursing school) in Armenia. At its inaugural meeting held in Washington, DC, in December 1998, the Committee worked to engage key strategic partners in a consensus development process that would result in a viable new approach to designing primary healthcare partnerships that meet the needs of countries in Eurasia.

Committee members from the region visited primary healthcare sites in the Washington, DC, area then met with US participants and AIHA staff to share information about the current state of primary care reform in both the United States and Eurasia. Participants identified essential elements of a PHC system, including core services that should be provided, and also made recommendations for assessing a community's primary care needs; the primary roles of and relationships among family practitioners and specialists; the roles of nurses and other healthcare providers; the relationship of primary care to community education and social services programs; related education, in-service training, and certification for health professionals; development, dissemination, and use of clinical practice guidelines (CPGs); the role of evidence-based practice; and continuous quality improvement. Finally, the Committee identified the types of partnerships and potential partner institutions that would support the evolution and improvement of primary care in their countries. The consensus reached by the Committee provided AIHA and USAID with valuable input and critical support and buy-in for pursuing a strategy for the new PHC partnerships, a strategy that included emphasis on community development and outreach, adherence to evidence-based practice, and the involvement of multi-disciplinary teams including social workers and educators. (Additional information on the work of the Advisory Committee, including proceedings of their meeting can be found at: <http://www.aiha.com/index.jsp?sid=1&id=7967&pid=1283>)

Taking into account the results of the strategic planning processes described above, AIHA prepared a preliminary overall program strategy for Armenia and Georgia for an initial three-year period (FY1999-2001); more detailed workplans were submitted to and approved by USAID each year. The workplan for Armenia encompassed the following three program components: (1) one-year extensions of existing partnerships (referred to as "sustainability partnerships"); (2) new partnerships; and (3) cross-partnership programs. Each of these is further described below.

Sustainability Partnerships

As provided for in the 1998 cooperative agreement program description, AIHA awarded small-scale grants to selected partnerships established under the previous CA. The purpose of these grants was to provide partnerships with an additional year to further solidify their accomplishments and strengthen their capacity to sustain achievements. In Armenia, the grants competition was opened to the two existing Armenian partnerships: Yerevan/Boston and Yerevan/Los Angeles. AIHA set the following requirements for applications: (a) joint submission by US and Armenian partners reflecting collaborative development of a workplan and budget; (b) a targeted workplan and realistic budget in support of discrete objectives; (c) relatively little funding required to achieve objectives; and (d) clear contribution to the sustainability of partnership achievements and/or the partnership relationship, or improved likelihood of replication and dissemination of partnership successes.

After reviewing proposals to ensure compliance with the basic criteria, AIHA assisted partners to refine their workplans and budgets. Because limited funds were available, partners made every effort to maximize voluntary and in-kind contributions. After USAID's concurrence was received, AIHA issued sub-grants to both partnerships for the period of January to December 1999 and invited partners to an orientation session held in Washington, DC, in February 1999.

New Partnerships

Four new partnerships initiated in 1999—Armavir/Galveston, Texas; Gegarkunik/Providence, Rhode Island; Lori/Los Angeles, California; and Yerevan/Birmingham, Alabama, formed the core of AIHA's new program in Armenia. In keeping with the priorities of the country's Ministry of Health and USAID, the first three partnerships focused on primary healthcare, while the fourth addressed the need to build health management education (HME) capacity that could contribute to strengthened delivery of PHC services on a national level. As described above, the PHC partnerships were created within the framework of an overall Eurasia-wide approach to primary healthcare that was developed through a highly collaborative process involving experts from the United States and the region. The HME partnership drew upon AIHA's experience with successful HME partnerships in Central and Eastern Europe (CEE).

The new PHC partnerships were designed to support USAID's strategy to improve primary care outside of Yerevan. In consultation with the Armenian Ministry of Health and USAID, three "marzes," or regions, were identified—Armavir, Gegarkunik, and Lori. In coordination with World Bank programs, these *marzes* would serve as demonstration sites and were charged with implementing model, community-oriented and family-centered primary care services and related health professions retraining programs. Using the newly developed

"This partnership has, for many of us, been a time of personal and professional renewal. We've bonded with our colleagues in Armenia, with our co-workers at home, and with our greater community. We feel we are all working together for a common purpose, using our knowledge and skills to make positive changes—both in Armavir and at home."

—Cissy Yoes,
*Director of Knowledge Management,
University of Texas Medical Branch at Galveston*

framework for PHC partnerships resulting from the work of the Primary Healthcare Advisory Committee, AIHA issued in April 1999 a solicitation for US partners for the three Armenia sites. At the end of the proposal review process, US partners were selected and the matched Armenia/US partnership institutions were submitted to USAID for concurrence. Once the new partnerships were officially announced, AIHA issued sub-grants to the US partner institutions and invited the new partners to participate in a two-day orientation workshop held in Washington, DC, August 25-26, 1999. Armenian partners participated in a separate orientation held in Tbilisi, Georgia, June 4-5, 1999.

In addition to the three PHC partnerships, AIHA also launched an HME partnership between the Armenian National Institute of Health (ANIH) and the University of Alabama at Birmingham in 1999. This partnership was designed to support the ANIH in strengthening its capacity for health services management, health policy development, and healthcare administration. The partnership ended prematurely in 2001 due to political and organizational changes at ANIH.

At USAID's request, two additional Armenia partnerships were launched in 2000 and 2003 respectively. The Yerevan/Washington, DC, partnership was created to support a pre-existing relationship between the Armenian American Cultural Association and the Armenian American Mammography University Center—now known as the Armenian American Wellness Center—in Yerevan. The partnership initially focused on improving breast health screening capabilities in Armenia and later grew to encompass all areas of women's health and, eventually, family-oriented primary healthcare.

The most recent Armenia partnership was started in 2003 between Milwaukee's Center for International Health (CIH) and the Lori Regional Health Administration. This partnership grew out of a project in which AIHA served as a sub-contractor to Abt Associates' USAID-funded Armenian Social Transition Program (ASTP). Through this project, AIHA helped establish a family medicine training center in Lori. When funding for ASTP came to an end, USAID asked AIHA to provide continued support to the training center through a partnership that would enable the further development of faculty and curricula for rural practitioner training.

Cross-Partnership Programs

The third component of AIHA's program in Armenia was cross-partnership programs (results for each program are described below in section B). As healthcare partnerships throughout Eurasia each sought solutions to common problems, AIHA established region-wide programs addressing specific healthcare issues to provide a mechanism for better inter-partnership sharing, collaboration, and problem solving. These programs, developed beginning in 1994, addressed: emergency and disaster medicine (EDM), healthcare management (HCM), infection control (IC), information and communication technology (ICT), neonatal resuscitation (NRP), nursing, and women's health. Through these cross-partnership programs, AIHA engaged partners from the region in task forces designed to develop new and innovative ideas and approaches to improving care and in training activities to build human resource capacity.

During 1998-2004, funding for Armenia's participation in AIHA's cross-partnership programs came both from the Caucasus CA as well as AIHA's separate region-wide cooperative agreement funded by USAID/Washington. During this period, meetings and training events were designed to reinforce the work of the partnerships. Through them, Armenian professionals had opportunities to network, collaborate, and learn new practical skills at specialized training centers. Armenian cross-partnership activities included primary care nursing training workshops, infection control seminars, and guidance on the development of clinical practice guidelines, among other things.

In addition, AIHA provided limited, essential support for re-supply of materials and Internet connectivity to the EMS Training Center (EMSTC), Neonatal Resuscitation Training Center (NRTC), Nursing Resource Centers (NRCs), and Women's Wellness Centers (WWCs) in Yerevan. All of these were established as part of the Yerevan/Los Angeles and Yerevan/Boston partnerships under the previous cooperative agreement. Through its ICT program, AIHA also supported the establishment of a Learning Resource Center (LRC) at each new Armenian partnership site and provided limited support to two existing LRCs in Armenia.

Monitoring, Evaluation, and Reporting

Performance monitoring and evaluation (M&E) of the Armenia program was consistent with AIHA's overall M&E strategy designed to: provide timely feedback about program performance; ensure optimum use of available resources and improve programmatic decision-making; provide information to USAID and key stakeholders regarding progress and accomplishments; help disseminate knowledge of best practices; assist in expanded replication of successful models; and strengthen the capacity of local institutions to engage in continuous improvement processes through monitoring and evaluation activities.

AIHA established in 2001 an M&E unit at its Washington, DC, headquarters and designated an M&E coordinator in each regional office, including the Tbilisi office. Working closely with AIHA's country coordinator in Yerevan and in consultation with the USAID missions in Tbilisi and Yerevan, AIHA sought to integrate its M&E activities into USAID's performance monitoring plan. An overall M&E strategy document was presented in May 2002 to USAID/Caucasus, including the Armenia Mission, and was subsequently approved.

AIHA's M&E activities were organized at the partnership, country, and region-wide levels:

At the partnership level, AIHA provided M&E orientation to partners and worked with them to ensure the inclusion of measurable objectives and output and outcome indicators into their workplans. For comparative purposes, AIHA worked with partners to develop standard data sets for common program elements such as primary healthcare and women's health. During the initial visits to Armenia, US partners assisted their counterparts in identifying baseline data related to workplan objectives and in assessing the feasibility of collecting these data where it was not available. The three PHC partnerships conducted community-based surveys to gather data on the health status of the populations. The Gegarkunik and Armavir regions commissioned the School of Public Health at the American University of Armenia to conduct household surveys, while data for the Lori region was collected by polyclinic staff during partnership sponsored health

fairs and compiled by the American partners. Among other things, results of the surveys affirmed the need for the partnerships to focus on chronic disease prevention and treatment, as well as on the promotion of healthy lifestyles.

AIHA developed instruments for partnership monitoring and reporting purposes that included monthly progress reports, quarterly reports, and final self-assessment reports. AIHA also supported partners as they worked to establish mechanisms for collecting, analyzing, and disseminating data. This included the development of a standardized patient satisfaction survey that was implemented by PHC partnerships and Women's Wellness Centers. Partnership quarterly reports to AIHA were incorporated into AIHA's quarterly progress reports to USAID. These reports described activities and outputs toward accomplishing objectives, significant events, and project developments that occurred during the reporting period. In addition to exchange visits, these activities included teleconferences, in-country training workshops or conferences, significant e-mail or phone consultations, transfer of medical/educational supplies and materials, and other capacity-building activities.

At the country level, AIHA collected and reported on data requested by the Armenia Mission and corresponding with the Mission's strategic objective and relevant intermediate results. Starting in October 2002, this data was provided in the form of annual statistical reports to USAID that covered the three Caucasus countries. The reports were developed within the framework of AIHA's overall M&E strategy and reflected both AIHA's output/outcome indicators for each program area and country-specific indicators requested by the respective USAID missions. Annual reports presented aggregated annual data from Armenia and were submitted to USAID in early-November. These reports focused on progress toward meeting agreed-upon benchmarks and performance indicators and included data tables and success stories.

At the region-wide level, AIHA conducted assessments of several of its cross-partnerships programs. These are described briefly under each of the relevant programs in section III.B. In addition, AIHA collaborated with USAID on a program-wide evaluation conducted by a panel of outside experts (described in section 3 below) during 2000-2001.

III. PROGRAM RESULTS

A. PARTNERSHIPS

AIHA supported a total of eight Armenia partnerships during the 1998-2004 funding period. Of these, the first two described below were one-year “sustainability” awards to pre-existing partnerships initially established in 1993 (information on these original hospital-based partnerships can be found on AIHA’s Web site). The remaining six partnerships were initiated between 1999 and 2003 and dealt with aspects of primary healthcare, capacity building, women’s health, and healthcare management.

Each partnership began by conducting a needs assessment using a standardized assessment tool provided by AIHA. Results of the assessment were then used to develop a partnership workplan that addressed the priority needs identified. AIHA’s partnership model allows partners the flexibility and freedom to determine not only their own objectives, but their own path to achievement of those objectives. The partners thus devised solutions and models best suited to the local needs and resources within each community. In the case of the PHC partnerships, AIHA encouraged partners to apply the “healthy communities”¹ methodology whereby stakeholders from diverse organizations within communities are brought together in a planning process to assess health issues and set priorities. The result was that partnerships chose to emphasize disease prevention and health promotion, as well as to improve basic urgent and primary services, disease management strategies, and evidence-based practices at model family-centered primary care facilities.

Information for the partnership summaries below was drawn from partnership quarterly reports as well as a self-assessment questionnaire completed by each partnership in late 2002. Additional information on each partnership, including contacts, can be found on AIHA’s Web site.

A.1 PARTNERSHIP SUMMARIES

1. Yerevan/Boston, Massachusetts (1999)

The Partners

US: Boston University Medical Center (BUMC) is a large, private, urban medical center comprised of schools of medicine, public health, and dentistry; 22 affiliated community hospitals; 12 neighborhood health centers; and the Boston municipal emergency medical services. The affiliated Boston Medical Center is a private, non-profit, 547-bed hospital housing Boston’s only certified level-I adult and pediatric trauma center. The University of Massachusetts Medical Center in Worcester is a public institution that includes a medical school and affiliated hospital, and a graduate school of nursing.

Armenia: The Emergency Scientific Medical Center (ESMC) in Yerevan is an urban medical center comprised of an 800-bed, multi-service hospital, ambulance service, and level-II-equivalent trauma center. As an affiliate of the Armenian National Institutes of Health (ANIH), ESMC houses a residency program for students from the Yerevan State Medical Institute and is Armenia’s principal provider of education and training in emergency and trauma care.

¹*Healthy communities* refers to an international movement and a model of community health that broadly defines health as not merely the absence of disease, but the well-being of the population as a whole. Related to WHO’s Healthy Cities movement, the model is based on engaging citizens and public and private entities within a given community in promoting healthy behaviors and improving the quality of life for all its citizens.

Partnership Objectives

The overall goal was to strengthen the capacity of the Armenian partners to continue work in emergency medicine/trauma and expand the influence of the Eurasian partner's teaching programs to Armenian districts and institutions. Key objectives were to:

- Expand the influence of the Nursing Resource Center and its existing nursing faculty to healthcare facilities outside of Yerevan.
- Improve and expand pediatric emergency training and practices.
- Integrate nuclear accident preparedness capacity into ESMC's National Disaster Medicine Center.

Key Events

1999

- First outreach program at Etchmiadzin Hospital conducted (March).
- Memorandum of Understanding updated and re-signed (April).
- Outreach program on pediatric emergency medicine delivered to Yerevan Pediatric Hospital (May).
- Nursing Resource Center established and named ANIH Center for Post-Graduate Nursing Education (September).
- Radiation accident preparedness exercise involving seven sites and four training centers (September).

Achievements

Nursing

- Partners conducted six outreach programs at regional hospitals located in the Armenian districts of Ararat, Armavir, Charentsavan, Echmiadzin, Mesamor, and Sevan. Partner nurses taught 90 other nurses in physical assessment and evaluated their skills between March and September 1999. It was the first time Armenian nurses had taught physical assessment skills to other nurses. The BUMC monitors observed that the nurse/teachers demonstrated an 80-percent average retention rate six months after participation in the course. Practical testing showed that all these nurses were able to demonstrate their skills accurately.
- National criteria for nursing re-licensure were developed in September.
- ESMC's director of nursing was named Chair of Clinical Nursing of the ANIH (May 1998) and held that position during the period of the sustainability project. This followed her successful tenure as Chief Nurse of the Republic in 1997 and 1998.
- ESMC's director of nursing was inducted into Sigma Theta Tau, the international nursing honor society, in 1999.
- In January, the Nursing Journal Club was initiated by teleconference.



A nurse assists an intensive care unit patient at ESMC in Yerevan.
(Photo courtesy of Linda Aiken.)

Pediatric Emergency Medicine

- Armenian instructors from the Yerevan Regional EMSTC and the Pediatric Hospital taught the pediatric emergency medicine course three times, twice at the Pediatric Hospital and once at Etchmiadzin Hospital.
- On the basis of strict adherence to the tasks, the program's objectives in this category were met. The course was delivered three times, monitored objectively twice, and Armenian instructors were provided with feedback that enabled them to improve their knowledge and teaching methods. However, additional work in monitoring and ensuring the quality of training remains.

Disaster Preparedness

- In conjunction with the IAEA, partners conducted a radiation accident preparedness course at the Metzamor Hospital, the receiving facility for accidents at the Metzamor Nuclear Power Plant. Instructors from Estonia, Georgia, Moldova, Russia, and Ukraine also participated in the event, thus working toward an integrated approach to nuclear preparedness and response at the national, regional, and international levels.
- The Yerevan Regional EMSTC hosted an innovative radiation accident preparedness exercise involving seven sites and four training centers in a Web-based teleconference network. The August 1999 exercise was partially funded by IAEA. Five members of the partnership presented the program at the 1999 AIHA annual conference.

Health Professions Education

- The Tavitian Foundation provided funds for a health management trainers program in which four ANIH fellows attended the Boston University School of Public Health for customized training.
- In April 1999, three Armenian medical students participated in medical electives from Wright State University in Dayton, Ohio; University of California/San Francisco Medical School; and University of Hawaii, Honolulu.
- In 1999, the partnership trained 782 nurses, 290 of whom were taught outside ESMC; 133 physicians, 15 of whom were taught outside ESMC; 168 Armenian medical students; and 41 lay persons.

2. Yerevan/Los Angeles, California (1999)

The Partners

US: The University of California Los Angeles (UCLA) Medical Center offers patients of all ages comprehensive care from routine to highly specialized medical and surgical treatment. The center includes specialized intensive care units, inpatient and outpatient operating suites, a level-I trauma center, the latest diagnostic technology, and a staff of more than 1,000 physicians and 3,500 nurses, therapists, technologists, and support personnel.

Armenia: Erebouni Hospital is a 900-bed institution specializing in women's health and neonatology. It is home to Armenia's first school of nursing, which offers a four-year baccalaureate degree program and was established in 1995 through the efforts of the partnership.

Partnership Objectives

The overall goal was to strengthen previously established partnership programs and initiatives related to nursing and women's health. Key objectives were to:

- Strengthen the bachelor's of science in nursing (BSN) program.
- Develop future faculty for the school of nursing.
- Support the Armenian Nurses Association and assist with their annual meeting.
- Enhance the Erebouni Medical Center and Women's Wellness Center.

Key Events

1999

- First class of 18 nurses graduated from the BSN program (July).
- Armenian Nurses Association held their third annual conference.

Achievements

Nursing

- As a result of partnership efforts, the first class of BSN students graduated in a ceremony at the American University of Armenia attended by more than 700 people. All 18 graduates took the Armenian nursing state exam in addition to an exam prepared by the UCLA faculty who assisted in the development of the program. The Minister of Health granted the students “nurse manager” certificates in recognition of the rigorous educational program they had completed. Ten of the students graduated with honors and received pins from Sigma Theta Tau, the international nursing honor society.
- Nurses from the first class of BSN students are now serving as faculty at the Erebouni College of Nursing. UCLA staff provided extensive faculty training to the 10 graduates who went on to serve as nursing faculty.
- In addition to educating BSN nurses, the Erebouni College of Nursing faculty conducts continuing education programs for practicing nurses.
- The Erebouni College of Nursing is now fully equipped with supplies, books, audiovisuals, and computers. E-mail and Internet services are available to the college’s students and to other nurses and doctors through the Nursing Resource Center.
- For the first time in Armenia, nurses are documenting nursing care by preparing individualized nursing care plans.
- For the first time, the Armenian Nurses Association planned and conducted its own annual conference with American colleagues providing support and feedback. All conference lectures were prepared and presented by Armenian nurses and more than 100 participants from all regions of Armenia attended.
- The Armenian Nursing Association is sustaining itself with minimal financial support from the Armenian-American Nurses Association of Los Angeles and the Armenian Nursing Council in Boston. It continues to increase membership and presently it boasts 3,000 members with the majority paying a membership fee of approximately \$3 per year.
- For the first time in Armenia’s history, a nursing conference was held in the auditorium of the Ministry of Health, demonstrating the Ministry’s commitment to the elevation of nursing as a profession.

Women’s Health

- UCLA hosted one Armenian physician for OB/GYN training.
- OB/GYN physicians who trained during the earlier years of the partnership traveled outside of Yerevan to train regional physicians and nurses in OB/GYN care and physicians in cytology.
- As part of its outreach activities, the Women’s Wellness Center staff also provided women’s health services in rural regions free of charge and plans to expand this coverage are underway. (See section B.6 for additional information about the WWC.)

3. Armavir/Galveston, Texas (1999– 2004)

The Partners

US: The University of Texas Medical Branch at Galveston (UTMB) is a large academic health science center dedicated to health education, patient care, research and community service. Inpatient services are provided at six facilities with John Sealy Hospital, a 364-bed tertiary hospital, as the hub. The other hospitals are Children's Hospital, John Sealy Annex, Rebecca Sealy Hospital, R. Waverly Smith Pavilion, and the Texas Department of Criminal Justice Hospital. A network of 43 community-based and 44 campus-based clinics provide ambulatory services. Two non-profit organizations, the Galveston Partnership for Better Living (GPBL) and JesseTree, also participated. GPBL’s goal is to effect systemic and collaborative community change. JesseTree’s goal is to coordinate efficient delivery of social and health services.

Armenia: The Armavir Regional Health Care Administration is responsible for the management and coordination of healthcare delivery for the Armavir region. It implements federal and municipal programs initiated by the Ministry of Health and the regional administration and conducts data collection and analysis. Armavir Polyclinic, serving 15 districts, also participated.

Partnership Objectives

The overall goal was to improve the health of the population in the Armavir region by implementing PHC principles and practices. Key objectives were to:

- Increase training and training capacity.
- Increase continuing education for nurses.
- Improve record keeping.
- Expand diagnostic laboratory capabilities in areas including management, calibration of equipment, blood safety, and infection control.
- Encourage healthy lifestyles.
- Expand a multidisciplinary approach to disaster preparedness.

Key Events

2000

- TOT course on CPGs in PHC held in Galveston (May).
- Training center established and equipped; core trainers conducted training.
- Planning workshops and meetings with officials responsible for coordinating disaster relief to develop three-year multi-disciplinary disaster planning program (November).

2001

- Baseline survey on general population health in Armavir conducted by American University of Armenia (AUA).
- Second TOT course on PHC, this one focusing on pediatrics, held in Galveston (April-May).
- Donated primary care equipment and supplies delivered by Carelift International.
- Sister-Cities agreement signed in Galveston by the mayor of Galveston and the governor of Armavir Marz. This event was linked by teleconference to Yerevan and Washington, DC (September).

2002

- “Functional disaster” exercise with hazardous materials and burn treatment response held in Armavir (February).
- Community health fair held in Armavir region.
- Filming of disaster drill, health fair, and other activities by a film crew for an episode of *The Visionaries*, a documentary series airing on PBS channels nationwide. The episode, titled “Partners in Health” debuted in late 2003.
- Full-scale disaster drill held in Armavir (October).

2003

- Leadership development courses held at UTMB (March).

Achievements

Clinical Organization and Capacity Building

- Eleven physicians and nine nurses completed TOT courses in the United States. Workshops at the Armavir Training Center during 2000-2002 provided hands-on training to 183 physicians, 352 nurses, and 15 teachers. Training covered cardiovascular disease/stroke, breast cancer, diabetes, disaster preparedness, health, personal

“So much has changed at the Polyclinic thanks to our collaboration. I feel learning should be a continuous process and the trainings I have received give me the confidence to be a true nurse leader.”

*–Lusik Ter-Astvatsatryan,
Chief Nurse, Armavir Polyclinic*

safety, infection control, and substance abuse. Pediatric training focused on asthma care, diabetes, and respiratory and gastro-intestinal infections. The Training Center also conducted PHC trainings for 14 physicians and 14 nurses from partnerships in Lori and Gegarkunik.

- Statistical monitoring forms were designed for patients with hypertension, asthma, and diabetes. The forms are being used in a cross-regional cooperation project on CPGs and indicate the number of patients who refer to PHC providers on a regular basis.
- Laboratory equipment and reagents were supplied to the Armavir Polyclinic and staff was trained on proper use of the equipment, record-keeping, and infection control protocols.
- In a patient satisfaction survey administered in 2003, 73 percent of respondents indicated that services at the polyclinic had improved since the partnership was initiated and a majority indicated that these services were better than at other government health facilities.

Community Outreach

- In coordination with AUA, the partners evaluated changes in health status in the region through two household surveys. The initial survey revealed that the poor socio-economic status of the region had resulted in low access to healthcare and was the principal cause of unsatisfactory health status. The partners targeted their interventions to identified needs and provided free screenings and health education. The results of a second survey are being used to measure the change in health status and attitudes toward health three years after the partnership became active in the region.

The baseline survey in 2001 indicated that five times more respondents assessed their health status as declining than improving, with 80 percent assessing their current health status as fair or poor. The most frequent conditions noted were high blood pressure, cardiac disease, gastrointestinal complaints, vision impairment, and kidney disease. Fifty-five percent were at probable risk for depression and another 22 percent showed possible risk. Only 12 percent of respondents reported ever undergoing screening for high blood pressure and 6 percent for breast cancer. Sixty-nine percent reported never seeing a doctor for a preventative check-up. Sixty-seven percent reported needing medical care but not seeking it due mostly to inability to pay.

- More than 1,000 patients were examined during a health fair at the Armavir Polyclinic. Attendees included people from outlying areas brought in on buses. Eyeglasses and health promotion booklets were distributed and specialists in ophthalmology and mammography from Yerevan screened patients.
- Fifteen school teachers were trained in adolescent hygiene, infections, emergency preparedness, domestic violence, and smoking cessation. Educational Materials on healthy lifestyles and emergency preparedness were published for secondary school students and all fifth-grade students in the region participated in an anti-smoking campaign.
- Nurses now play an integral role in patient education and clinical staff interacts with the mass media to increase public awareness about breast cancer, hypertension, and other illnesses. This has led to an improved early detection—15 cases of breast cancer and 25 cases of breast abnormalities were detected in 2000, while those numbers rose to 23 and 49, respectively, in 2002.
- From 2001 to 2002, registered cases of parasites declined from 113 to 58 and Hepatitis B cases declined from 5 to 3.

Disaster Preparedness

- A comprehensive disaster response network involving medical associations, fire response services, EMS, mass media, the regional administration, the Ministry of Internal Affairs, and the Red Cross was created.



A full-scale disaster drill in Armavir involved the participation of key emergency agency personnel, fire officials, first responders, healthcare providers and government officials from the region. (Photo courtesy of Sargis Avetisyan.)

- Emergency training was provided to chief physicians of the Armavir partnership, representatives of the Fire Response Service, Emergency Response Service, Sanitation and Epidemiology Service, Communication Service, mass media, Ministry of Internal Affairs, National Security Service, and Red Cross.
- Tabletop exercises, workshops, and discussions were used to train first-responders about aircraft accidents and burn treatment.
- Some 150 participants were trained on the use of defibrillators, torches, and radio telephones. They also learned about EMS in the United States. Meetings were organized in three schools to teach students about correct emergency responses.
- The Sister Cities relationship with Galveston facilitated the donation of surplus medical and emergency response equipment to Armavir.

4. Gegarkunik/Providence, Rhode Island (1999–2004)

The Partners

US: Care New England is comprised of three private, non-profit hospitals: Women & Infants Hospital of Rhode Island, Kent Hospital, and Butler Hospital. Lifespan Health Systems, a large health system in New England, consists of five hospitals, a visiting nurse association, and numerous PHC facilities across Rhode Island and southeastern Massachusetts. The National Perinatal Information Center coordinated all administrative aspects of the partnership.

Armenia: The Gegarkunik Regional Health Care Management Department is responsible for managing and coordinating healthcare delivery for the region. It implements federal and municipal healthcare programs initiated by the MOH and the regional administration, and conducts data collection and analysis. The Sevan Polyclinic has women’s health services and specialty clinics in tuberculosis, oncology, sexually-transmitted diseases (STDs), psychiatry, endocrinology, ophthalmology, and neurology.

Partnership Objectives

The overall goal was to improve the quality of health services in the region by strengthening continuing education and training for healthcare professionals and by fostering greater emphasis on disease prevention and health promotion in the population. Key objectives were to:

- Expand continuing education programs for physicians and nurses.
- Update medical practices through increasing access to current medical literature, practice guidelines, and protocols.
- Improve and upgrade facilities and equipment.
- Expand community outreach and awareness based on identified needs of the population.
- Expand disease detection and prevention services.

Key Events

2000

- Survey of 800 households in Gegarkunik conducted in cooperation with AUA.

- Regional management workshop on problem solving, strategic thinking, and leadership styles held in Tsakhkadzor, Armenia.

2001

- Training in cytology screening and colposcopy techniques held at Erebouni Hospital's Sona Women's Center in Yerevan, Armenia (March).
- Renovation of clinic and training space, establishment of resource library for community and staff education, and provision of audio-visual equipment by donation from the Armenian Church in Providence undertaken in Gegarkunik.
- TOT workshop series held on group dynamics and adult-learning methodologies, PHC, clinical skills, CPG development, nursing, dentistry, and disease management.
- Donated PHC equipment and supplies delivered by Carelift International.

2002

- TOT workshop on role-modeling and patient education techniques especially for school-age populations conducted in Providence.
- Visit of US ambassador to Armenia, USAID mission director, and others to Sevan Polyclinic (April).
- First annual health fair held at Sevan Polyclinic (September).

2004

- Follow-up household survey conducted.

Achievements

Clinical Organization and Capacity Building

- Patient care and patient satisfaction improved significantly as a result of advanced training of providers, educational programs for clinicians and patients, and the implementation of evidence-based CPGs for diabetes, bronchial asthma, hypertension, emergency care, and breast exams. Following the implementation of the hypertension guidelines, the clinic reported a 20-percent decrease in patients with uncontrolled high blood pressure.
- Physicians and nurses at Sevan Polyclinic participated in clinical training on diabetes and clinical standards, diagnostic criteria, management of hypertension, clinical breast exams, evidence-based medicine, family planning, cervical cancer screening, and emergency medicine. An intensive TOT course was conducted for clinic personnel so they could serve as a resource for disseminating practices throughout the Gegarkunik region.
- The Sevan adult and pediatric clinics were integrated within the framework of the MOH's optimization plan. The combined facility will reduce costs by centralizing administrative and structural functions for family primary care.
- Donations from the Providence Armenian community were used to renovate the Gagarin Clinic, install a heating system in the Sevan Adult Polyclinic, and give salary gifts for the adult and pediatric clinics.
- A departmental cost-accounting system implemented at the polyclinic will enable management to review departmental financial performance and improve the clinic's finances.
- A patient satisfaction survey conducted in 2003 revealed that 93 percent of respondents thought services in the polyclinic had improved since the partnership was initiated and 83 percent thought services were better than at other government health facilities.

Community Outreach

- Each month, about 19 community education and outreach programs that engage more than 700 people are held by partners.
- Healthy-lifestyle programs have covered oral hygiene courses for 800 children and anti-smoking classes for 1,100 students. These children were encouraged to become involved in the programs and demonstrate their understanding by creating artwork that was then displayed at the Sevan Polyclinic.

- A community health fair attracted more than 1,100 people for glucose testing, height and weight measurements, and blood pressure screening, as well as for dental exams. Clinical breast exams were provided in conjunction with the Armenian American Wellness Center in Yerevan.
- As part of the health fair, a mental health and alcohol use survey was conducted to identify needs for new programs and services. Of the 420 people surveyed, 221 reported signs of severe depression and an additional 36 showed signs of depression. Alcohol abuse was reported as a serious problem for 168 and 66 reported some alcohol abuse. In response, educational materials were created and workshops on controlling depression and preventing alcohol abuse were conducted for 177 and 345 people, respectively.
- A survey of 750 households was used to establish baseline data for program planning and evaluation, as well as to identify specific problem areas and interventions.
- A follow-up survey in early 2004 suggested moderate but significant improvement since the baseline survey in almost all areas, including perceived health status, health knowledge, satisfaction with own health and life, accessibility of healthcare services, and use of early diagnosis and prevention services by the target population.
- HIV/AIDS education and outreach activities were conducted in conjunction with World AIDS Day. These included a poster display at the clinic and courses on AIDS at secondary schools.

Disease Prevention and Patient Education

- A cytology laboratory was established at the Sevan Polyclinic to facilitate early detection and prevention. In coordination with the Erebouni Medical Center in Yerevan, a gynecologist and lab assistant were trained to administer screening tests and read the results.
- A total of 13 physicians and 16 nurses were trained in breast screening, glucose measurements, peak flow measurements, and the use of the ophthalmoscope and otoscope. Medical diagnostic equipment was upgraded and supplies—including ultrasound machine strips and glucose tests—were provided for on-site screening.
- Patient education tools, including a pictorial flip chart that shows disease conditions and how the body and its systems function, were developed for use during office visits. This visual aid helps patients understand the effect their lifestyle choices have on disease conditions and overall health.

5. Lori/Los Angeles, California (1999–2004)

The Partners

US: The UCLA Medical Center is a multi-specialty teaching hospital renowned for its state-of-the-art facilities, research capabilities, and innovative approaches to healthcare. It provides physicians for more than 40 satellite healthcare centers throughout southern California.

Armenia: The Lori Regional Health Care Administration manages and coordinates healthcare services for the region's population. The department implements federal and municipal healthcare programs initiated by the MOH and the regional health administration and conducts data collection and analysis. Vanadzor Polyclinic No. 5 serves 17 districts in Vanadzor.

Partnership Objectives

The overall goal was to decrease morbidity and mortality in Lori by building community-based primary care services within existing services. Key objectives were to:

- Introduce model PHC services and increase capacity to provide primary care services.
- Expand access to women's health screenings, including Pap smears, breast exams, and mammograms.
- Expand capacity of Armenian partners in monitoring quality, adherence to guidelines, and proper use of forms and statistics from health fairs.

- Increase availability of patient and community health education materials and services.
- Improve access to care in targeted regions, including free blood pressure screening to at least 20,000 people.

Key Events

2000

- Health fair held for 512 individuals and data collected from screenings in Vanadzor (September).
- US partners assisted local health officials stem the spread of an infectious gastrointestinal disease outbreak in Stepanvan in the northern Lori region .

2001

- Vanadzor clinic received special permission to treat patients outside its traditional catchment area .
- Carelift International delivered a donation of primary care equipment and supplies.
- Second annual Vanadzor community health fair attended by 700 individuals, clinic re-opening ceremony, and one-day PHC conference conducted jointly and covered extensively in the Armenian press.

2002

- Third annual Vanadzor health fair and first annual Spitak health fair held (August).

2003

- Official opening ceremonies for PHC satellite offices at Stepanavan, Tashir, Alaverdi, and Spitak polyclinics (July).

Achievements

Clinical Organization and Capacity Building

- Vanadzor Polyclinic No. 5 began seeing primary care patients in 2000 and the model family medicine clinic was officially completed in 2002. Subsequently, renovations were completed on replication sites in the communities of Alaverdi, Dashir, Spitak and Stepanavan, which adopted primary care methods and began utilizing guidelines developed at Polyclinic No. 5.
- All physicians and nurses at Polyclinic No. 5, as well as staff from other clinics, were given clinical training at UCLA, in the Los Angeles Armenian community, and in Armenia. Trainings were conducted as one-on-one clinical experiences, classroom education, conferences, and/or workshops. Topics included comparisons between primary care and family medicine, public health, infectious diseases, budgeting, guidelines, patient education, accessibility to healthcare, home healthcare, medications, immediate and advanced treatments, supply and equipment use, preventive care, health promotion, and screening for diseases.
- In collaboration with the MOH, CPGs were developed for hypertension, chest pain, diabetes, and asthma, all of which had been identified as health concerns among the local population.
- Nearly 100 professionals from Vanadzor Polyclinic No. 5 and sites in Alaverdi, Dashir, Spitak, and Stepanavan received intensive training from Armenian trainers in primary care and management of hypertension, chest pain, diabetes, and asthma. The newly-trained staff monitored 490 patients with hypertension, 326 with chest pain, 192 with diabetes, and nine with asthma.
- Women's health services were expanded with the assistance of the Erebouni WWC. The facility has trained personnel and provided supplies for Pap smears, clinical breast exams, contraception counseling, and STD diagnosis and treatment. As a result, a gynecologist and cytologist from Lori completed cervical cancer screening training at the Erebouni WWC, nearly 150 patients received obstetrical and gynecological care at Polyclinic No. 5 through mid-2004, abnormalities were detected in some 13 percent of all women screened for cervical cancer, and more than 260 women in Vanadzor and Margahovit were screened for breast cancer and some were referred for further diagnostics.
- CPR instructors from the nearby Akhourian CPR Training Center trained more than 25 Lori region doctors and nurses in the American Heart Association's Basic Life Support Course for professionals.

The trainers then held training sessions for community members, such as teachers and first responders.

- The partners made presentations at the Armenian International Medical and Nursing Conferences and at AIHA annual and regional meetings.
- Patient visits to the clinic increased by 50 percent following staff training; this is attributed in part to the popular perception that the medical staff is well trained.

Community Outreach

- Large segments of Lori's population were exposed to patient education and outreach programs, affecting the health of more than 10,000 people. Through annual health fairs held during the past three years, 3,000 people were screened for chronic conditions—more than 25 percent had high blood pressure, elevated cholesterol levels, vision impairment, and/or dental caries.
 - Health education services covered healthy lifestyle topics, substance abuse prevention, and maternal and child health.
 - The organization Analysis, Research and Planning for Armenia (ARPA) trained teachers to conduct “healthy living” programs for more than 800 students in 10 Lori-region schools. Students in the program were given pre- and post-tests that showed a 30-percent improvement in knowledge on health-related topics.
 - In conjunction with World AIDS Day, Polyclinic No. 5 exhibited educational posters, distributed brochures, and conducted courses on AIDS at secondary schools in the region.
 - In collaboration with Vanadzor Optic Center and the Armenian Relief Society (ARS), vision screening was conducted and 300 people received eyeglasses.
 - Some 8,000 people from the Lori region received blood pressure screenings and approximately 16 percent were diagnosed with elevated blood pressure.
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6. Lori/Milwaukee, Wisconsin (2003–2004)

The Partners

US: The Center for International Health (CIH), previously the Milwaukee International Health Training Consortium (MIHTC), was established in 1986 by the Milwaukee county government with support from USAID. In 1999, MIHTC became an independent not-for-profit organization and changed its name to CIH in 2003 to reflect the organization's expanded base. CIH is a multidisciplinary consortium of public and private health and human service institutions, agencies, and programs.

Armenia: The Lori Regional Health Care Administration manages and coordinates healthcare services for the region's population. The department implements federal and municipal healthcare programs initiated by the MOH and the regional health administration and conducts data collection and analysis. The Primary Care Skills Training Center (PSTC) is part of Vanadzor Polyclinic No. 5, which serves 17 districts in Vanadzor.

Partnership Objectives

The overall goal was to improve health in rural communities by building educational and training capacity and developing human resources in the rural primary care sector in Lori. Key objectives were to:

- Improve professional competencies of physicians and nurses at rural ambulatories and health stations.
- Improve training competencies of the Armenian physician and nurse trainers at Polyclinic No. 5.

Key Events

2003

- Opening ceremony of Primary Care Skills Training Center held at Vanadzor Polyclinic No. 5 (October).

Achievements

Clinical Organization and Capacity Building

- The PSTC is a model training institution specifically designed for rural primary care practitioners. The center was fully equipped and trains rural ambulatory health post staff in an effort to improve professional skills and competencies and thereby improve the quality of care they provide. The center focuses on family medicine training to increase services at polyclinics and ambulatories and to reduce the use of hospital services. By October 2003, six of the 24 training modules planned for the center had been developed: EMS, community health, chest pain, abdominal pain, joint problems, and infectious diseases. Over the following year, an additional five modules were developed: diabetes and thyroid diseases, geriatrics and end-of-life care, medical informatics and evidence-based medicine, children's health, and office laboratory.
 - The requirements were established for securing official recognition for, and support of, the PSTC as a regional family medicine training venue and the certification of the Armenian trainers as family medicine trainers.
 - Training sessions included TOT to strengthen the teaching competencies of physician and nurse trainers. TOT sessions covering all the curriculum modules developed were conducted for Vanadzor faculty, followed by training courses for rural physicians and nurses.
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7. Yerevan/Birmingham, Alabama (1999–2002)

The Partners

US: The Department of Health Services Administration at the University of Alabama at Birmingham (UAB) was the lead institution. The department offers five academic degrees, both at the graduate and undergraduate levels, as well as a variety of continuing education opportunities for health services executives. UAB collaborated with the Graduate Program in Health Services Administration at Creighton University in Omaha, Nebraska, and the Department of Health Policy and Management at the Kansas University Medical Center in Kansas City, Kansas.

Armenia: The School of Health Care Management (SHCMA) was established in 1999 to prepare healthcare professionals with skills and knowledge needed to implement healthcare reform in Armenia. The SHCMA offers two courses, an eight-week certificate program for practicing healthcare administrators and a two-week academic program for new entrants.

Partnership Objectives

The overall goal was to strengthen post-graduate and certificate programs in health services administration and nursing and ensure the sustainability of these programs. Key objectives were to:

- Improve faculty competencies in teaching methods.
- Expand international and national networking among health administrators.

Key Events

2000

- Partnership presentation at international exhibition on *Education in the New Millennium* in Yerevan (October).
- TOT workshop on *Management and Leadership* conducted in Almaty, Kazakhstan (April).
- Caucasus management workshop held in Borjomi, Georgia (May).
- Participation in annual conferences of Association of University Programs in Health Administration (AUPHA) and Association for Health Services Research held in Los Angeles, California (June).
- Twentieth National Symposium for Healthcare Executives in Sandestin, Florida (August).

2001

- Training course on case methods in Yerevan, Armenia (May).

- Participation in annual meetings of AUPHA and AHSR held in Atlanta, Georgia (June).
- Partnership ended early due to political problems at SCHMA, which was subsequently moved to the American University of Armenia (September).

2002

- International conference on *Competencies for Healthcare Managers* held in Yerevan, Armenia (April).

Achievements

Health Management Education

- Training workshops were conducted on management, case writing, organizational culture, motivation, health insurance, ambulatory care administration, change and reform, and leadership. The workshops were open to SHCMA faculty and students and, in some cases, the public.
- Seminars were held on pedagogical techniques, including the relationship between curriculum objectives and course objectives, the relevance of curriculum objectives, and assessment of whether a curriculum adequately covers required topics. SHCMA faculty began a curriculum matrix to determine if courses provide instruction that addresses key objectives. Faculty members also developed preliminary syllabi for their courses. Because the partnership ended early, the curricula were not completed during this partnership, but work is underway at the American University of Armenia to finish this task.
- Partners learned about the value of professional associations, steps required in forming an association, and procedures for affiliating with existing associations. A group of Armenian health professionals took the first steps toward establishing a professional association of clinic managers. They formed an executive committee to explore links with the Medical Group Management Association in Denver, Colorado.
- Partners hosted an international conference titled *Competencies for Health Care Managers*, featuring speakers from Armenia, Georgia, Slovakia, and the United States. The conference provided a forum for 110 healthcare practitioners, academics, governmental officials, and association executives from Eurasia and the United States, along with healthcare managers from AIHA partnership institutions, to discuss key health management issues and to reach consensus on a list of core competencies for healthcare managers.
- Partners published a number of scientific articles in the *Journal of Public Health* and publications of the National Institute of Health of Armenia.
- US nurse educators assisted nurse leaders at Erebouni and the Emergency Scientific Hospitals to develop nursing education activities. They continued these activities through AIHA's nursing program.

8. Yerevan/Washington, DC (2000–2004)

The Partners

US: The Armenian American Cultural Association (AACA), a non-profit organization, was the lead institution, supported by Washington Hospital Center and its affiliates. The AACA provides technical and financial assistance to health projects in Armenia. The Washington Hospital Center is the largest private hospital in Washington, DC, offering health services at the primary, secondary, and tertiary care levels.

Armenia: The Women's Health Care Association (WHCA), an Armenian NGO, was the lead institution, supported by the Armenian American Wellness Center (AAWC), formerly the Armenian American Mammography University Center (AAMUC). The AAWC was established to provide accurate



An annual health walk through downtown Yerevan has become a regular part of the breast cancer awareness campaign initiated by the Yerevan/Washington, DC partnership.
(Photo courtesy of AAWC.)

and affordable breast cancer screening and medical referrals and to promote health education and early detection.

Partnership Objectives

The overall goal was to reduce breast and cervical cancer morbidity and mortality and to improve health through enhanced clinical, diagnostic, preventative, and community education services. Key objectives were to:

- Expand access to breast cancer screening and primary care for the Gegarkunik Marz (population approximately 200,000).
- Strengthen management, accounting, medical, and administrative recordkeeping procedures and practices at AAWC, its satellite offices, AACA, and WHCA.
- Expand public relations and community mobilization activities in the United States and Armenia to support AACA's and WHCA's activities to improve women's health in Armenia.
- Expand public education and outreach by organizing scientific, cultural, educational, and social activities as a forum to elevate knowledge and awareness of breast cancer, cervical cancer, and other women's and general public health issues in Armenia.

Key Events

2000

- Memorandum of understanding signed .
- First annual health walk held to focus attention on Breast Cancer Awareness Month, women's health, early detection, and services offered by the Mammography Center in Yerevan, Armenia (October).

2001

- AAMUC reopening ceremony held (March).
- Pathology lab established at AAMUC and pathologist and technician trained on equipment (June).
- Second annual health walk for Breast Cancer Awareness Month attended by 1,500 people (October).

2002

- Training at Washington Hospital Center in Maryland for radiologist and at University of Southern California for cytologist (August).
- Conference on *Medical Ethics in Armenia: Cancer Patients' Rights to Know the Truth* attended by 100 people, including the US ambassador, the Armenian Minister of Health, and heads of universities (October).
- Three thousand people attended the annual health walk for International Breast Health Month (October).

2003

- A \$20,000 grant from the global health organization *PATH* for Pap smears for indigent women in Yerevan and rural areas of Armenia received by partnership physician with LRC assistance .
- Gavar Clinic opened with 250 attendees (July).
- Annual health walk for Breast Cancer Awareness Month held and discounted exams offered at AAWC (October).

2004

- Partners present on cervical cancer screening project at cervical cancer prevention conference in Durres, Albania (March).

Achievements

Clinical Organization and Capacity Building

- A renovated AAMUC was reopened and renamed as the Armenian American Wellness Center (AAWC) to better reflect its expanded scope. AAWC offers breast cancer screening services on site and through outreach missions, as well as basic gynecological care, cervical cancer screening, and in-house pathology facilities for histology and cytology.

- Screening and diagnostic capabilities were improved by technical interventions—a state-of-the art laboratory, on-site mammograms, and blind biopsy procedures—and by building the capacity of local clinicians through skills-based training. In the first year, 8,000 patients were examined; in the second year, 8,500 patients were examined; and in the third year, 10,053 patients were examined. More than 1,800 cases of breast and cervical cancers were detected at early stages, leading to decreased mortality.
- AAWC serves as a teaching center for students and residents of Yerevan State Medical University.
- A satellite clinic opened in Gavar, in the Gegarkunik Region, after renovation and staff training. This facility provides PHC services to the community and serves as another hub for breast health education, screening, and outreach. In the first year, the center served more than 2,500 patients.
- A donated mammography van from Grant/Riverside Hospital in Columbus, Ohio, was converted into a mobile clinic staffed by an AAWC family physician and used to provide free PHC services in rural areas.

“The Armenian American Wellness Center is an excellent example of an investment in the human capital of Armenia. By contributing to the health of Armenian women, the Center is promoting the well-being of the Armenian people.”

*–Hon. Arman Kirakossian,
Armenian Ambassador
to the United States*

Community Outreach

- Community outreach on cancer prevention was conducted through surveys, lectures, radio and television information programs, and distribution of booklets. This has contributed to changed attitudes and health-related behaviors in the population.
- In coordination with the MOH, October was designated as Breast Cancer Awareness Month. Throughout the month, AAWC offers a 50 percent discount to encourage women to seek preventative care. The partners organized medical conferences, seminars, and roundtables devoted to breast cancer, medical ethics, and other women’s health concerns. The events were covered by the media, expanding awareness of the center’s activities.
- Each year during Breast Cancer Awareness Month, a health walk was organized. The event, coordinated with other NGOs, US and Armenian government officials, and local healthcare providers, attracted thousands of members of the community each year. Activities included the distribution of t-shirts, dissemination of health promotion posters, and performances by local students and musicians.
- An essay competition was conducted in which 150 children from 15 schools were encouraged to write about the topic, “For the Health of My Mother.” This activity helped to enlist school children in caring about the health of their mothers—and women in general—and helping to prevent breast cancer.
- Free medical services were provided for low-income people, breast prostheses were donated to 545 women, and a survivor’s support group was organized.

A.2 KEY PARTNERSHIP CHALLENGES AND LESSONS LEARNED

One of the biggest challenges AIHA and its partners faced in Armenia was securing and sustaining the political support necessary to achieve partnership objectives. AIHA and its partners learned that sustained efforts to engage officials at all levels of government from local administrations to the Ministry of Health was crucial to the success of the partnership programs. Involving key decision-makers in the planning process and partnership exchange activities, as well as providing them with convincing evidence that backed up proposed plans and strategies, was integral to garnering their support. This challenge was further compounded by several changes in leadership at the ministerial and institutional level. As new officials assumed these positions, AIHA and its partners made every effort to brief them about existing programs, gauge their

interest, and solicit their ideas for future programs. Eventually, the political and institutional leaders came to understand the value of the program and gave it their enthusiastic support.

Several partnerships also faced serious financial hurdles as they sought to renovate their facilities as part of their efforts to improve primary care services. Unlike larger facilities in Yerevan, clinics outside the capital often lack the financial resources for even basic infrastructural needs, such as heating, let alone renovations. In response to requests from Polyclinic No. 5 in Lori and Sevan Polyclinic, AIHA made exceptions to its general policy of not funding infrastructure costs. Whenever possible, AIHA sought to cover one-time expenses, such as the purchase of generators. US partners also helped by soliciting private funding in their own communities and beyond to help the Armenian partners who themselves contributed whenever possible by committing scarce resources for renovations, equipment, and salaries.

Another common challenge for the partnerships was communication, both in terms of language and access to reliable technology. Finding effective interpreters and translators was particularly challenging because Armenians use two languages—Armenian and Russian. The two partnerships that were led on the US side by members of the Armenian Diaspora had the advantage of being able to communicate more freely and tended to conduct their business, including translations, in Armenian. The other partnerships faced difficulties establishing a common language and worked mainly in Russian, particularly on exchange trips to US partnership sites where Armenian interpreters were not readily available. To overcome difficulties associated with unreliable telephone and Internet connections in Armenia, especially outside Yerevan, AIHA staff in Washington and Yerevan worked to relay messages and kept the lines of communication among partners open and flowing freely.

The strong sense of collaboration that grew among the Armenian and US partners played a crucial role in their efforts to overcome the many challenges they faced. Because both sides participated as volunteers, peer-to-peer relationships and a sense of mutual trust developed more easily. The selection of partners is key to this relationship-building and, ultimately, to program success. On the Armenian side, AIHA looked for institutions with open-minded leadership and the potential to contribute to the long-term healthcare goals of the country. The Armenian partners, in addition to bearing the costs of renovation and salaries, were required to commit staff time for trainings. On the American side, AIHA solicited partner institutions with professionals willing to donate their time, effort, and expertise. Ultimately, the success of the partnerships depended on the tremendous commitment and dedication of these Armenian and US partners.

B. CROSS-PARTNERSHIP PROGRAMS

AIHA's cross-partnership programs grew out of a desire to search for common solutions to common problems and needs identified by multiple partnerships in the region, regardless of their location. These programs constitute a key aspect of AIHA's "partnership of partnerships" concept, which is to encourage and facilitate networking, sharing, and the creation of common approaches within and across borders. The programs thus helped to reduce duplication of efforts and maximize resources by developing common protocols, providing shared training opportunities, disseminating model programs, and influencing national policies. Through many of these programs, human and organizational capacity in the health sector has been strengthened and new and improved healthcare services introduced.

During 1998-2004, AIHA supported the continued involvement of Armenia in six of its cross-partnership programs: 1) emergency and disaster medicine; 2) healthcare management; 3) information and communication technology (Learning Resource Centers); 4) neonatal resuscitation; 5) nursing; and 6) women's health. AIHA's support for these programs was mainly in the form of providing ongoing opportunities for training and networking, Internet connectivity, and limited provision of selected equipment

and supplies. The descriptions below provide a background and overview for each program, as well as goals and objectives, key events, and achievements.

B.1 EMERGENCY AND DISASTER MEDICINE

Background

After the dissolution of the Soviet Union, death rates due to accidents and cardiac incidents in the region were nearly three times the rate in the United States. Healthcare institutions had limited capacity to respond to unexpected illnesses, accidents, and disasters due to weak emergency infrastructure and lack of trained staff. In the process of reforming health systems, the authorities in the Caucasus were concerned about improving pre-hospital and hospital emergency care.

AIHA and partner institutions contributed to improving emergency care by establishing 16 national EMS Training Centers (EMSTCs) in 12 countries in Eurasia, including one in Armenia. The centers were furnished with training equipment and supplies, computers, and Internet connectivity. A uniform training curriculum adapted to existing healthcare structures was introduced.

The EMSTCs provide hands-on training in emergency techniques, emphasizing practical skills. The courses are monitored and evaluated for relevance to local conditions. EMSTCs assist in training medical and nursing students and building regional professional associations. This model allows for the expansion of EMS educational programs throughout Armenia.

Program Goal and Objectives

The overall goal is to create within countries sustainable capacity to respond effectively to emergencies ranging from routine medical cases and traumas to disasters with mass casualties. Specific objectives are to:

- Increase capacity for quality training and education in emergency and disaster medicine (EDM).
- Improve knowledge and skills in first aid and emergency care among first-responders, medical providers, and others trained at EMSTCs.
- Increase EDM services.
- Increase sustainability of EDM programs.

Program Overview

In 1994, an EMSTC was established at the Emergency Scientific Medical Center in Yerevan using a version of a common EMS curriculum based on international standards and adapted to Armenian conditions. AIHA provided limited and gradually decreasing support to the center in the form of Internet connectivity, basic re-supply of training materials and equipment, and occasional networking and training events.

The EMSTC teaches healthcare professionals emergency techniques, including CPR, emergency obstetrics, intubation, spinal immobilization, disaster response, and triaging practices that can be performed at the accident site, in the ambulance, and at the hospital. The EMSTC is playing a critical role in upgrading urgent care skills of PHC practitioners for managing medical emergencies. The center also teaches life-saving skills to non-medical professionals, such as flight attendants, firefighters, and traffic police who are sometimes called upon to provide emergency care. The courses focus on practical skills and include



The simulation of an aircraft crash and resultant fire, toxic leakage, and other emergencies at the Armavir nuclear plant help first-responders keep their skills honed. (Photo courtesy of Sargis Avetisyan.)

computer presentations, slides, overheads, handouts, and hands-on training on mannequins. Training modules are updated to reflect current trends in emergency care and are adapted to meet Armenia's unique needs. The EMSTC staff monitors and evaluates the quality of courses and their impact on local practitioners, assists schools of the health professions in improving training of medical and nursing students, and builds regional professional associations and related NGOs.

Key Events

1999

- “Harmony I” regional medical response exercise covering a simulated radiation accident exposure held in Yerevan.

2000

- EMS directors meeting and curriculum review workshop held in Kiev, Ukraine, results in agreement to establish association of Eurasian EMSTCs (June).
- Course on radiation disaster preparedness held in Kiev, Ukraine (October).

2001

- EMSTC TOT refresher course held in Tashkent, Uzbekistan (May).

2002

- EMSTC directors meeting held in Washington, DC (August).

2004

- TOT workshop on first-responder curriculum held in Tbilisi, Georgia (April).

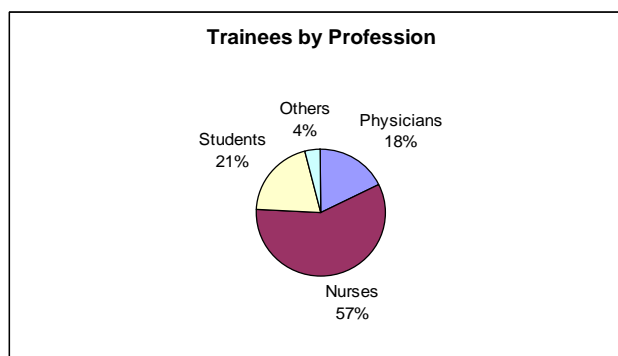
Achievements

Training Capacity

- A full staff of Armenian trainers was trained at the Yerevan EMSTC with the assistance of US partners and through AIHA-sponsored workshops and cross-center refresher trainings. A team of 16 trainers also received specialized training in nuclear disaster preparedness and response at the International Atomic Energy Agency. AIHA also encouraged collaboration among EMSTCs to discuss and share curricula.
- The EMSTC expanded its range of course offerings beyond the initial standardized curriculum provided by AIHA. The center independently devised 10 new courses in response to identified needs. These included a course on pre-hospital emergency care for family physicians and nurses and another for ambulatory nurses from rural areas.
- In 2004, trainers from Yerevan participated in a hands-on training-of-trainers workshop where trainers from the United States introduced a new first-responder curriculum adapted for use in the region by AIHA. The Yerevan EMSTC was given hard copies and CD-ROM versions of the trainer and student manuals.

Knowledge and Skills

- From 1998 to 2003, the Yerevan EMSTC trained more than 3,200 physicians, nurses, and other medical and non-medical personnel, thus playing a critical role in upgrading the urgent care skills of healthcare workers and providing life-saving skills to other first-responders. The distribution of trainees by profession is presented here.



Service Delivery

- An emergency department was established at the Emergency Scientific Medical Center and four trauma ambulances were deployed. This resulted in increased access to services with utilization rates of 170 to 200 patients per month or 35 to 60 patients per week.
- The addition of mechanical lung ventilators led to a three-fold decrease in mortality rates of multiple trauma patients and decreased the length of stay by about one month.
- The Emergency Scientific Medical Center achieved a “Level-I trauma center” designation by increasing the number of general resuscitation teams by 30 percent.

Sustainability

- The Yerevan EMSTC is recognized and funded by the Armenian National Institute of Health as part of St. Grigor Lusavorich Medical Center, which was previously known as the Emergency Scientific Medical Center.
- The center has generated revenue from non-governmental sources by charging students course fees.

B.2 HEALTHCARE MANAGEMENT

Background

Although substantial changes in healthcare systems have been realized in the countries of the former Soviet Union, sustaining those reforms depends on skilled administrators who can manage the transformation. This requires new methods of health professions education and health policy analysis. Since 1994, AIHA has provided basic health management training to all its partnerships through courses developed jointly with the Association of University Programs in Health Administration (AUPHA). These specialized, practical training workshops on management techniques and leadership skills were offered to partner institutions with a view to complementing individual partnership objectives. The workshops emphasized a strong “training-of-the-trainers” component whereby participants were given a solid foundation in selected topics, as well as in adult learning principles, to better enable them to disseminate their knowledge to others.

The success of these workshops resulted in a request from USAID for AIHA to establish a partnership program for expanding health management capacity in several countries in the region, primarily in Central and Eastern Europe. AIHA introduced these health management education (HME) partnerships in 1995 in an effort to enhance the education of current and prospective administrators, policymakers, and clinicians at the undergraduate, graduate, and executive management levels. The focus is on faculty and curriculum development, as well as health policy analysis, health services research and publishing, and healthcare financing. The first HME partnerships in Central and Eastern Europe achieved significant results and served as a model for subsequent HME partnerships in four countries of the former Soviet Union: Armenia, Georgia, Kazakhstan, and Kyrgyzstan. In Armenia, the School of Health Care Management (SHCMA) in Yerevan was partnered with the Department of Health Services Administration of the University of Alabama at Birmingham in 1999 to strengthen post-graduate and certificate programs in health services administration and nursing.

Over the years, AIHA has supported cross-partnership activities aimed at supplementing the objectives of individual HME partnerships, providing joint training opportunities, and creating strong networks for sharing and collaboration among the partner institutions.

Program Goal and Objectives

The overall goal is to improve healthcare management education and practices and to strengthen healthcare policy development in Eurasia. Specific objectives are to:

- Increase capacity for education and research in health management and policy development.
- Improve knowledge, skills, and competencies in healthcare management among healthcare professionals, administrators, and policymakers.

- Increase recognition of and international collaboration among healthcare management professionals.

Program Overview

The HME partnership in Armenia was established in 1999 (see section A.1.7 above for a partnership description and results). As a prelude to the start-up of the partnership, AIHA organized a study tour for representatives from the four new HME partnerships, including partners from SHCMA, to visit graduated HME partnership institutions in the Czech Republic, Romania, and Slovakia. The study tour not only greatly expanded the new partners' vision of what they could achieve and helped them to develop partnership workplans, but it also provided an opportunity for networking with counterparts from other countries in the region.

Between 1999 and 2002, AIHA supported the participation of partnerships in Armenia in a range of activities aimed at strengthening healthcare management, both within the PHC partnerships as well as within the HME partnership itself. Cross-partnership activities included meetings and workshops that introduced practical skills and promoted the development of a network of healthcare management professionals.

Key Events

1999

- Study tour to graduated HME partnerships in Central and Eastern Europe conducted (April).
- Special HME session at the AIHA annual conference held in Washington, DC (November).

2000

- TOT workshop on management and leadership held in Almaty, Kazakhstan (April).
- Case Method Workshop held in Almaty, Kazakhstan (May).
- Annual conference of AUPHA and the Academy for Health Services Research attended in Los Angeles (June).
- Caucasus management workshop in Borjomi, Georgia (May).
- Twentieth National Symposium for Healthcare Executives attended Sandestin, Florida, (August).

2001

- Training on case methods held in Yerevan, Armenia (May).
- Annual meetings of AUPHA and the Academy for Health Services Research attended in Atlanta, Georgia (June).

2002

- International conference on *Competencies for Healthcare Managers* held in Yerevan (April).

Achievements

Capacity and Competencies

- The *TOT Workshop in Management and Leadership* built regional capacity for health management training by providing participants with the skills and knowledge to serve as faculty for management training in their institutions and regions. Participants learned management and leadership concepts in AIHA's *Health Administration Module Series* and skills for organizing and facilitating workshops, including presenting, applying adult learning theories, using participatory training techniques and group processes, and leading a faculty team.
- The *Case Method Workshop*, organized for faculty of AIHA's health management education partnerships, allowed participants to refine cases started during previous exchanges and to interact with peers and faculty from other countries.
- In the Caucasus management workshop, participants were introduced to management and leadership concepts and skills. They learned to define the basic functions of management; apply the management framework to their daily roles as managers; understand a systems view of health services management; and use leadership, interpersonal, problem-solving, and communication skills.
- In 2003, AIHA conducted an assessment of the outcomes and level of success of the basic healthcare management courses developed and offered to partners over the previous four years. Fifty-four

former health management trainees, including five from Armenia, completed the self-assessment survey that was designed to encourage workshop participants to reflect and report on the skills they gained through these workshops and how those skills are being applied. The assessment showed that the trainings enabled participants to gain new skills and apply these skills through projects at their institutions. On average, Armenian participants indicated that they use 69 percent of the competencies. In addition, 60 percent of the respondents were found to possess and use 70 percent of these core competencies.

Professional Collaboration

- Armenian representatives attended the annual conferences of AUPHA and the Association for Health Services Research. The conferences provided an opportunity to gain knowledge of current trends in health management, examine case studies from around the world, and network with counterparts.

B.3 LEARNING RESOURCE CENTERS

Background

The Learning Resource Center (LRC) program promotes improvements in healthcare practice and policy by providing health professionals with access to research information as well as a framework for applying this knowledge in clinical, educational, and policy settings. AIHA establishes LRCs within existing healthcare institutions by providing one or more computers with Internet access and a collection of online and CD-ROM-based health and medical databases. Each LRC is managed by specially trained staff who are responsible for providing training, outreach, and information support to personnel, patients, and members of the local community. LRC staff are also responsible for working with healthcare professionals at their institutions to conduct periodic literature reviews that facilitate evidence-based evaluation of current standards of practice relating to clinical diagnosis and treatment, preventive health services, and health promotion or education.

Program Goal and Objectives

The overall goal of the LRC program is to promote improved healthcare practices through increased access to, use of, and understanding of available knowledge resources. Specific objectives are to:

- Increase access to up-to-date health and medical information, primarily through the Internet.
- Promote the adoption of evidence-based practice.
- Improve the ability of partner institutions to sustain access to knowledge resources.
- Increase the development and use of information and communication technology tools and applications, including databases, local area networks, telemedicine, and Web sites.

Program Overview

Through the LRC project, AIHA has incorporated a combination of strategies to begin to overcome barriers to accessing information. One of the distinguishing features of AIHA's approach is that the LRCs are designed to give health professionals access at the point of care and thereby improve the convenience of using information. Another element of the project involves active staff outreach and education. To accomplish this, AIHA has promoted the development of a cadre of staff at partnership institutions to serve as agents of change or opinion leaders at their institutions. Each LRC is managed by an information coordinator who is responsible for making the resources of the LRC accessible to staff, patients, and members of the local community. The LRC is also staffed by an evidence-based practice specialist who is responsible for broadly promoting the adoption of evidence-based practice and an IT specialist who supports the technical aspects of the project. These key leaders are charged with the task of encouraging their colleagues to begin using information and communication technology integrally in their day-to-day practice.

In addition to staff outreach and training, core functions of the LRCs include staff promotion of evidence-based medicine, exchange and information dissemination, and health promotion. Staff are responsible for the creation and use of tools such as Web sites and databases to support these activities and for information systems planning activities. Finally, because LRCs are supported by AIHA for a limited time, each is also responsible for building support and sustainability.

The LRC project is executed as a two- to three-year program that includes periodic training workshops and ongoing project activities. A series of training workshops, held during the first years of the program, introduce a range of skills and themes that help LRC staff and their colleagues to develop a more sophisticated attitude toward information. These training workshops cover such topics as basic and advanced Internet tools and applications, medical information searching techniques, principles of evidence-based practice and critical appraisal of information, training and outreach, strategic planning for sustainability, Web site development, basic database design, computer networking, and information systems planning.

In establishing each LRC, AIHA's approach is grounded in the belief that Eurasian partners must be prepared to commit their own resources to the project. This commitment is formalized through the signing of a project agreement that outlines the responsibilities of AIHA and the overseas partner institution. AIHA equips each LRC with computers and other equipment determined by a needs assessment (e.g. printer, scanner, digital camera, LCD projector); access to e-mail and the Internet; and various online and CD-ROM databases and educational resources. The Eurasian partner agrees to establish a separate, secure room for the center that must be open and accessible to all staff and to designate staff who are compensated by the institution to serve as the information coordinator, evidence-based practice specialist, and information technology specialist.

Since 1995, AIHA has established seven LRCs in Armenia, five of which were established during the last cooperative agreement:

1996	Erebouni Medical Center (Yerevan)
	St. Grigor Lusavorich Medical Center (Yerevan)
1999	Armavir Polyclinic (Armavir)
	Sevan Polyclinic (Sevan)
	Vanadzor Polyclinic No. 5 (Lori)
	School of Health Administration, NIH (Yerevan)
2001	Armenian American Wellness Center (Yerevan)

Due to partnership-related reasons, the LRCs at Vanadzor Polyclinic No. 5 (Lori) and the School of Health Administration, NIH (Yerevan) were officially closed in early 2001. The other five LRCs continue to function and serve their institutions.

Key Events

1999

- *Caucasus Regional Information Coordinator Workshop* held in Tbilisi, Georgia (August).
- LRCs opened at the National Institute of Health's School of Health Administration in Yerevan and at Vanadzor Polyclinic No. 5 in Lori (September).
- First *Information Coordinator Training Workshop* held in Almaty, Kazakhstan (October).
- LRCs opened at the Armavir and Sevan Polyclinics (November).
- Second *Information Coordinator Training Workshop* held in Washington, DC (November).

2000

- Third *Information Coordinator Training Workshop* held in Almaty, Kazakhstan (June).

2001

- LRC established at the Armenian American Wellness Center in Yerevan, Armenia (February).

- Fourth *Training Workshop for Information Coordinators* held in Almaty, Kazakhstan (June).
- *Medical Informatics Study Tour for Information Coordinators* held in Palo-Alto, California and Portland, Oregon (March/April).

2002

- *Caucasus Regional LRC Dissemination Conference and Site Visit* held in Tbilisi, Georgia (April).

Achievements

Capacity-Building of LRC Staff

- Information coordinators from Armenia's new partnerships were successfully oriented to their role in maintaining the LRCs. They also received training on basic computer skills (Windows and MS Office applications), using Cyrillic on computers, and basic Internet skills (e-mail, Web, etc.).
- Through a series of training activities, information coordinators learned about Medline and Internet information retrieval, Web-page design and development, Internet tools, database design, evidence-



Armenian information coordinator Vigen Khojayan (near left) and colleagues from Moldova and Romania work on developing institutional Web pages for their partner sites. (Photo courtesy of AIHA.)

- based practice, information-quality assessment, health information systems, and computer training methodologies. Mastery of these topics has been demonstrated through the successful design of programs within each LRC.
- Just prior to AIHA's annual conference in 1999, old and new partnership information coordinators gathered for several workshops and networking activities. New information coordinators received additional training on Web page design as they completed initial design of Web pages for their partner institutions. They also attended a two-day course on evidence-based practice and toured the National Library of Medicine in Bethesda, Maryland. Information coordinators from graduated partnerships met with the new information coordinators to offer their advice and share their experiences.
- Information coordinators participated in a series of site visits to US healthcare institutions (Stanford University and Oregon Health Sciences University) that demonstrated the growing importance of technology in healthcare and provided various models with which to compare their own institution's needs and future development.
- LRC staff from various partnerships collaborated to strengthen their centers through the *Caucasus Regional LRC Dissemination Conference and Site Visit*. Representatives presented models, best practices, and lessons learned related to the success of their LRCs. The conference also featured site visits to local healthcare institutions that demonstrated successful models of the application of information technology to improve the quality of care. The dissemination conference featured presentations and discussions on successful sustainability strategies that are being employed by LRCs throughout the region.

Capacity-Building of Other Health Professionals

- Since 1997, staff of the Armenian LRCs have trained more than 700 physicians and other healthcare professionals in the use of computers and the Internet.

Access to Information

- Information coordinators and EBP specialists have fulfilled more than 10,200 information requests in Armenia since 1997. This has helped their colleagues find information related to clinical practice,

health, policy, curricula development, health management, and other topics. This does not include independent information searches performed by those healthcare professionals trained at the LRCs.

- Cumulatively, LRC resources in Armenia are serving the community of 3,041 health professionals from their institutions and 5,000 outside visitors.

Evidence-Based Practice

- Eighty-three percent of partnership institutions with functioning LRCs have successfully demonstrated the use of evidence-based methodologies in reviewing standards of clinical and educational practice at their institutions by conducting practice standard reviews twice a year.
- Thirty percent of partner institutions have established regular and ongoing processes for widely and routinely evaluating standards using the latest available evidence.

Sustainability

- Information coordinators all received training in grant-proposal writing.
- Three of the Armenian LRCs are expected to cover Internet connectivity costs through their institutions' budgets. The other two anticipate connectivity funding through ongoing relationships with their US partners.
- Four of the five Armenian LRCs are partially recovering maintenance costs by renting equipment and facilities, charging external clients for information and clerical services, or other such activities.

Additional information and highlights of activities and accomplishments of the active LRCs established during the 1998-2004 cooperative agreement can be found in Appendix A.

B.4 NEONATAL RESUSCITATION

Background

AIHA partnerships initiated the Neonatal Resuscitation Program (NRP) as a cost-effective clinical approach with great life-saving potential for newborns. Essential neonatal resuscitation techniques in delivery rooms and birth houses serve not only to decrease infant mortality rates, but to reduce the number of developmental disabilities resulting from blood and oxygen deprivation in the first minutes of life. Several partnerships formalized this program by opening Neonatal Resuscitation Training Centers (NRTCs) beginning in 1994. These first NRTCs then served as models for other centers established over the years with AIHA support. A total of 17 NRTCs have been established, including one in Yerevan that opened September 1996.

The NRTCs use a standardized training course that gives healthcare professionals a set of basic skills in newborn care that are standard practice in delivery rooms in the United States and Western Europe. This training enables practitioners to assist infants when they experience difficulty breathing on their own through techniques that require minimal use of equipment, such as thermal management, infant positioning, suctioning, and stimulation. The training curriculum and materials are based on the American Heart Association/American Academy of Pediatrics (AHA/AAP) neonatal resuscitation program. AIHA and its partners translated the AHA/AAP *Textbook of Neonatal Resuscitation* and *Instructor's Manual for Neonatal Resuscitation* into Russian. In addition, other teaching and educational materials, such as student evaluation tests and data collection forms, were created or translated for use in the NRTCs throughout Eurasia.

The NRTCs are responsible for disseminating knowledge and conducting monthly training courses in neonatal resuscitation, as well as gathering statistics from medical institutions that have had personnel trained at the center. This statistical information is used to evaluate the impact of training. The NRTCs serve as reference centers and provide training for medical professionals from other regions.

Program Goal and Objectives

The overall goal of the program is to decrease infant mortality and morbidity rates in the immediate newborn period through the implementation of appropriate neonatal resuscitation skills in delivery rooms. Specific objectives are to:

- Increase capacity to provide training in evidence-based neonatal resuscitation and care as the standard of clinical practice.
- Improve sustainability of the neonatal resuscitation program.

Program Overview

The Yerevan NRTC was initially established in 1996 at the Erebouni Hospital by the Yerevan/Los Angeles partnership and training was provided by US partners. In 1999, after the partnership graduated, AIHA began providing the Yerevan center with necessary materials and supplies and provided additional training to the center's staff as well as opportunities to network with colleagues from other countries in the region. Armenian partners participated in the region-wide NRP steering committee organized by AIHA to develop regional standards for the practice of neonatal resuscitation and to provide guidance on legislation for neonatal resuscitation in Eurasia. Through the efforts of the committee, which includes MOH representatives, academics, and medical professionals from the NRTCs, progress has been made in strengthening the program in each country, including in Armenia.

Key Events

2000

- *Neonatal Dissemination Conference* held in L'viv, Ukraine (April).
- *Neonatal Resuscitation TOT Workshop* held in Tbilisi, Georgia (May).
- TOT workshop held in Moscow, Russia (November).
- First NRP Steering Committee Meeting held in Moscow, Russia (November).
- NRTC directors meeting in Kiev, Ukraine (November).

2001

- NRP steering committee meeting held in Tbilisi, Georgia (May/June).
- Training on NRP guidelines conducted in Moscow, Russia (November).
- NRP steering committee and NRTC directors meetings held in Moscow, Russia (November).

2002

- NRP steering committee meeting conducted in Kiev, Ukraine (May).

Achievements

Training Capacity

- From 1999 to 2003, eight instructors and 750 healthcare providers from 20 Armenian hospitals were trained in neonatal resuscitation techniques. NRP trainers were trained on the new AAP guidelines approved in 2000. The training was conducted by two American NRP experts who had been teaching the new guidelines in the United States for almost a year. The new guidelines were accepted by all trainers and implemented in all countries. The MOH of Armenia subsequently adopted the use of the revised NRP Guidelines as the standard of care for newborns nationwide.
- The NRP TOT workshop comprised a two-day provider course, a one-day instructor course, and two days of basic neonatal/birthing content, including lectures and skills-building in neonatal asphyxia, hypoglycemia, and respiratory distress syndrome. Trainees were certified as NRTC instructors.

Sustainability

- At the dissemination conferences, participants addressed perinatal and neonatal care, including resuscitation of newborns, neuro-developmental follow-up for high-risk infants, and ethical and moral concerns in the care of newborns. Participants discussed strategies for sustainability and continued dissemination of the NRP, including peer review, quality assurance, and project evaluation.

- Attending steering committee and NRTC directors' meetings allowed the Yerevan NRTC staff to network with colleagues from other countries in the region. The meetings covered guidelines, quality monitoring processes, ethical issues concerning newborns, communication strategies, and sustainability of NRTCs. The committee also discussed key problems and barriers to improving neonatal resuscitation practices and newborn care in Eurasia. These problems had been identified by medical professionals, MOH representatives, and academics.
- Even after the end of AIHA support, the Armenia NRTC has continued to function and train healthcare providers in neonatal resuscitation skills.

Impact

- AIHA conducted two rounds (in 2001 and 2003) of a study designed to measure improvements in neonatal health outcomes affected by implementation of the NRP in six countries, including Armenia. The *10,000 Births Study* examined whether the NRP had a positive effect on selected neonatal morbidities and mortality. Evaluating the program's clinical impact involved a three-tiered approach that included quality monitoring—course evaluation tool and peer evaluation process to evaluate course standards and instructor effectiveness along with site evaluations to determine the applicability of course content in clinical settings—and culminated in a study to determine the impact on clinical outcomes for infants. The study methodology, which collected data on newborns at birth and again at seven days of life, was developed by NRP specialists from the United States and a Ukrainian counterpart. The results of the two studies covering 15,000 infants were consistent and supported the positive effect of organized NRP training on infant morbidity and mortality. In the first study, the percentage of all medical staff trained was linked to improved outcomes. In the second study, the training of the key medical staff member, the neonatologist, was linked to improved outcomes. The finding indicates that the critical factor in improving outcomes for infants given the current circumstances in Eurasia is universal training of neonatologists in the NRP's curriculum. For example, there is improvement in all categories of Apgar scores between 1 and 5 minutes of life, suggesting training or intervention of staff results in fewer infants at five minutes with lower Apgar scores. *(A full report of study results can be found on AIHA's Web site.)*

B.5 NURSING

Background

Beginning with the first round of AIHA partnerships in 1992, nursing quickly emerged as a key priority area for countries in Eurasia. Partners identified challenges to improving nursing care and practice in their countries, including the lack of professional standards for nurses and of an independent nursing care structure. AIHA took the lead in organizing a region-wide nursing task force that held annual international nursing conferences where common problems and new approaches could be shared, as well as workshops where new skills could be taught. Over the years, AIHA's nursing program grew to encompass a wide array of activities that supplemented and enhanced the work of partnerships in nursing-related areas. These activities included development of nursing curricula, CPGs, and practice standards; establishment of Nursing Resource Centers (NRCs) to support continuing education for nurses; support to national nursing associations; promoting leadership development through the International Nursing Leadership Institute (INLI); and pilot programs in nursing quality improvement and distance education. Through these activities, AIHA and its partners have built capacity, improved care, and provided sustained leadership and vision for nursing in the region.

Program Goal and Objectives

The overall goal is to improve patient care by strengthening nursing practice and nurses' contribution to systemic healthcare reform in Eurasia. Specific objectives are to:

- Enhance nursing education to meet international standards and increase the status of nursing as a profession.

- Improve nursing practice through nurse training and by introducing new models of nursing care and elevating nursing roles and responsibilities.
- To increase access of nurses to information resources and networking opportunities through sustainable NRCs.

Program Overview

During 1998-2004, Armenian nurses participated in AIHA’s nursing program, which encompassed ongoing support for the NRCs, nursing leadership development, PHC nursing skills-building, and two pilot programs focusing on hospital nursing quality and distance learning.

Nursing Resource Centers: With the goal of providing nursing faculty, students, and practitioners with the resources they need to support evidence-based learning, AIHA established two NRCs at partnership institutions in Yerevan in 1997. The NRCs were supplied with computers and other educational equipment, as well as a range of educational materials including textbooks, videotapes, and anatomical models. By linking the NRCs to the Internet, AIHA fostered a supportive community of nurse leaders connected to their professional counterparts worldwide.

International Nursing Leadership Institute: Twelve Armenian nurses participated in AIHA’s INLI program, which was initiated in 1999. INLI offered an integrated year-long curriculum designed to develop a core of skilled nurse leaders. Taught by US nurse faculty, participants received intensive training in a range of leadership and management skills including in project development, management ethics, supervision, and quality management. During 2002-2003, INLI graduates were invited to submit proposals for small grants to implement projects developed during the INLI course.

PHC Nursing: In the context of new model primary care clinics being established by the PHC partnerships, and the development of team-based clinical practice guidelines and patient care protocols, AIHA and its partners established a steering committee to identify the training needs of PHC nurses. The committee formulated a basic agenda for skills-building workshops for nurses, which were held in each region.

Hospital Nursing Quality Improvement: In 2002, in collaboration with the Center for Health Outcomes and Policy Research of the University of Pennsylvania and the American Nurse Credentialing Council (ANCC) of the American Nurses Association (ANA), AIHA established the Nursing Quality Improvement Initiative (NQII) Program. The program was aimed at creating centers of excellence (or “magnet” hospitals) that validate high standards of nursing care at four former partner hospitals—two in Armenia and two in Russia—to enable them to meet ANCC standards.



A nurse at St. Grigor Lusavorich Medical Center in Yerevan receives Journey to Nursing Excellence ribbon from US sister magnet hospital nurse. (Photo courtesy of Linda Aiken.)

St. Grigor Lusavorich Medical Center (previously known as the Emergency Scientific Medical Center) and Erebouni Hospital participated in the NQII program. Partner hospitals and US magnet hospitals contributed staff time and in-kind goods to the project. North Shore University Hospital partnered with Erebouni Medical Center and Wake Forest University Baptist Medical Center partnered with St. Grigor Lusavorich Medical Center. The US hospitals assisted the Armenian hospitals in developing policies and procedures corresponding to magnet

status. Although the Magnet Commission decided not to consider applications for official magnet status from non-English speaking countries, it recognized the two demonstration sites with “Journey of Excellence” Awards at the end of 2004. This award honors their achievements in improving nursing policy and practice.

Distance Learning in Nursing: A second nursing pilot project implemented in Armenia provided Internet-based, online shared learning experiences between graduate nursing students from Erebouni College and students at the University of Nebraska Medical Center's School of Nursing. This project was initiated in 2002 to test the feasibility of distance learning as a vehicle for faculty development and enhanced educational programs in nursing.

Key Events

1999

- First Session of INLI Class I held in London, England (June).
- Second Session of INLI, Class I held in Louisville, Kentucky (November).

2000

- American Organization of Nurse Executives (AONE) Study Tour to Chicago, Illinois, conducted (March).
- International nursing conference, *Primary Healthcare: Methods, Models and Practice*, held in Tbilisi, Georgia (April).
- NRC community outreach workshop conducted in Yerevan, Armenia (June/July).
- Final session of INLI, Class I held in St. Petersburg, Russia (July).
- First session of INLI, Class II held in St. Petersburg, Russia (July).
- PHC Nursing Steering Committee meeting held in Moscow, Russia (December).

2001

- Second Session, of INLI, Class II held in Washington, DC (April).
- International Council of Nurses (ICN) Congress conducted in Copenhagen, Denmark (June).
- Sigma Theta Tau Nursing Honor Society induction held in Copenhagen, Denmark (June).
- Final session of INLI, Class II held in Copenhagen, Denmark (June).
- PHC nursing skills-building workshop held in Yerevan, Armenia (March).
- PHC Nursing Steering Committee meeting held in Kiev, Ukraine (July).
- Workshop on *Technology and Health Education for Nursing* held in St. Petersburg, Russia (August).
- *Global Nursing Perspectives Workshop* in Atlanta, Georgia (October).
- First session of INLI, Class III held in Indianapolis, Indiana (November).
- PHC nursing skills building workshop held in Yerevan, Armenia (December).

2002

- Second session of INLI, Class III held in Tbilisi, Georgia (March).
- Final session of INLI, Class III held in St. Petersburg, Russia (June).
- PHC nursing steering committee meeting in St. Petersburg, Russia (June).

Achievements

Professional Development

- The INLI program contributed to the professional development of individual nurses as well as to the elevated status of the nursing profession. In a self-assessment completed by 10 of the 12 INLI graduates from Armenia, eight reported that INLI helped them gain respect from their physician colleagues and four reported that they were involved with nursing associations as a result of their participation. Two nurses reported a promotion to leadership positions: nurses from Vanadzor Polyclinic No. 5 and the Armavir Polyclinic were promoted to chief nurse after graduating from the INLI program.
- Three graduates of the INLI program in Armenia received small grants to complete projects on primary care skills training for rural nurses and clinic nurses and in association building, leadership, and curriculum development.
- An Armenian nurse was invited to join the international nursing honor society, Sigma Theta Tau, and two others joined the American Organization of Nurse Executives.
- AIHA conducted a qualitative assessment of INLI in mid-2003 with the purpose of evaluating it from the perspective of its participants. Ten nurses from Armenia took part in the survey, which

revealed that the program was largely successful in meeting its objective of helping nurses to develop new leadership skills and competencies. As a result of the program, all Armenian INLI graduates had initiated individual projects, three of which were successfully completed, leading to considerable changes within the healthcare environments in which the nurses work. (*A full report of survey results can be found on AIHA's Web site.*)

- Ten nurse faculty members from Erebouni College completed graduate courses at UNMC, primarily online through the Distance Learning in Nursing Program. They took courses on: “Advanced Practice in the Healthcare Delivery System,” “Nursing, Health, and Culture in Organizations and Communities,” and “Curriculum Design for the Future.”

Nursing Practice

- A series of workshops held in Yerevan in 2001 trained 36 primary care nurses from Armenia in physical assessment, communication, health promotion, and patient education. The workshops covered time management, mental and adolescent health, asthma, gerontology, and dental health. Each participant was given a physical assessment kit consisting of a stethoscope, blood pressure cuff, ear scope, penlight, and tuning fork.
- The partnership self-assessments conducted in 2003 indicated that all of the Armenian community-based primary care partnerships have institutionalized written standards for nurses and adopted new professional roles for them, including independent patient assessment and care planning, infection control, and patient education and counseling.
- A three-year pilot program for nurses to improve the quality of hospital care culminated in 2004 with the prestigious “Journey to Excellence” award by the American Nurses Credentialing Center

“In the week I was in Armenia, I accompanied the nurses on some of their home visits. The nurses had taken the information we had shared with them and developed it beyond our expectations. To witness the transformation was incredible.”

—*Marsba Sweatt,*
R.N., *University of Texas Medical Branch at Galveston*

(ANCC) to four hospitals—two in Russia and two in Armenia—that had participated in now-graduated partnerships. The program introduced evidence-based standards of professional nursing based on ANCC’s accreditation program for nursing care excellence, which recognizes excellence in hospitals in its Magnet Program. Each hospital was assisted by US experts in nursing standards and a partnership with a US hospital that had achieved ANCC Magnet status. Teams of nurses and physicians were formed to implement standards that led to substantial

improvements in quality of care and patient satisfaction. These hospitals now serve as national models of excellence in healthcare quality.

Nursing Resource Centers

- Two NRCs were established in Armenia under the previous cooperative agreement and both centers continued to operate with minimal financial support from AIHA during 1999-2004. AIHA conducted an assessment of the NRCs between December 2002 and February 2003 using standardized survey instruments during site visits to the two Armenian NRCs located in Yerevan. The purpose of the assessment was to evaluate the extent to which the NRCs have been able to carry out their missions and to determine their current status and activities. The assessment revealed that both Armenian NRCs were still fully operational and engaged to varying degrees in the types of activities for which they were established. Both centers offer clinical skills training, regularly host a variety of meetings, offer library services, and are involved in various monitoring and evaluation activities. (*A full report of survey results can be found on AIHA's Web site.*)
- The Armenian NRCs served as centers of continuing research and education, conducting courses on clinical practice, maternal and child health, information systems, and emergency care for more than 2,500 nurses from 1998 to 2003.

- In addition to clinical skills training, the NRCs initiated various activities advocating for the nursing profession, including training for nursing students and interaction with the Armenian Nursing Association.

B.6 WOMEN'S HEALTH

Background

AIHA launched its women's health initiative in 1995, with the help of a US-Eurasian task force comprised of women's health clinicians and educators. The goal was to develop a model for the delivery of integrated and comprehensive healthcare services tailored to the needs of women from adolescence to post-menopause. The resulting Women's Wellness Center (WWC) model built on the work of AIHA's initial hospital-based partnerships and used existing programs, administrative structures, and professional relationships in family planning, health education, clinical training in obstetrics, and neonatal resuscitation. The WWCs were designed to provide primary and selected specialized clinical services using a client-centered approach and emphasizing wellness, preventative care, and patient education. Two WWCs opened in Yerevan, Armenia, in May 1998—one at Erebouni Medical Center and the other at ARMA Medical Center. They are part of a network of 32 WWCs established to date. During 1998-2004, AIHA supported the WWCs through cross-partnership workshops and conferences, limited supplies and Internet connectivity.

Program Goal and Objectives

The overall goal is to provide a client-centered approach to women's healthcare through services addressing women's health needs throughout their lifetimes. Specific objectives are to:

- Increase capacity to deliver comprehensive services to women of all ages.
- Increase implementation of women's health CPGs.
- Increase use of contraceptives among women of reproductive age wishing to avoid pregnancy.
- Improved sustainability of WWCs.

Program Overview

The two WWCs in Yerevan provide a comprehensive range of clinical outpatient services. In addition, they have developed health promotion, disease prevention, and educational programs such as patient classes, public education campaigns, telephone hotlines, and support groups addressing topics from intimate partner violence and substance abuse to coping with cancer. Among the core WWC services provided are:

- Perinatal care, including pregnancy, breastfeeding, and childbirth classes;
- Family planning and reproductive health, including fertility and contraception counseling;
- Education and clinical intervention for peri- and post-menopausal women;
- Prevention, diagnosis, and treatment of STDs;
- Cancer education and screening, including cervical cancer screening and clinical breast exams;
- Counseling on HIV/AIDS and domestic violence;
- Education, screening, and treatment for chronic diseases, along with referral to specialists as needed;
- Community outreach on women's health issues, including breast health.

According to community needs, available local resources, and individual strengths, each WWC focuses on other aspects of women's health as dictated by the needs of the community. For example:

- Staff at the Erebouni WWC conduct women's health outreach in other regions of Armenia, including Havar, Mardakert, and Stepankert. They also conduct continuing education seminars for nurses and physicians and contribute articles on women's health issues to the medical center's journal, *Erebouni Vestnik*.
- The Armenian American Wellness Center, which was founded to support breast health, has expanded to provide a full range of women's health and primary care services.

Key Events

1999

- Seminar on the role of women's healthcare providers in domestic violence prevention held in L'viv, Ukraine (July).
- *Advances in Family Health Communication Workshop* in Antolya (October).
- *STD Case Management Workshop* held in St. Petersburg, Russia (December).

2000

- *Breast Health Community Outreach Workshop* held in Kiev, Ukraine (April).
- Women's health CPG steering committee meeting held in Kiev, Ukraine (April).
- *Breast Health Case Study Review Workshop* held in Kiev, Ukraine (May).
- *Adolescents-at-Risk Study Tour* held in Washington, DC, and Philadelphia, Pennsylvania (August).
- *Adolescents-at-Risk Workshop* held in Kiev, Ukraine (November).

2001

- *Sexually Transmitted Infection Case Management Workshop* held in Tbilisi, Georgia (January).
- *Intervention and Prevention of Domestic Violence Workshop* held in Tbilisi, Georgia (May).
- *WWC Quality Improvement and Dissemination Conference* held in Kiev, Ukraine (December).

2002

- HIV/AIDS pre- and post-test counseling training held in Kiev, Ukraine (May).
- *Breast Health Case Study Review Workshop* held in Odessa, Ukraine (July).

2003

- *Women's Health CPG Workshop* held in Odessa, Ukraine (September).

Achievements

Service Capacity

- Representatives from the Armenian American Wellness Center in Yerevan attended a three-day breast health quality assurance workshop.
- Healthcare professionals from Armenia participated in a breast health community outreach workshop. Three US trainers reviewed the components of breast health and early detection and assisted in identifying resources and strategies to promote breast health. Participants developed action plans for follow-up in their home communities.
- An STD case management workshop included an epidemiological update on STDs and HIV in the former Soviet Union, a session on the transmission and control of STDs and HIV, and sessions on diagnosis and treatment.
- Physicians and psychologists from the Armenian WWCs received HIV/AIDS pre- and post-test counseling training.
- Participants in the *Adolescents-at-Risk Study Tour* to Washington, DC, and Philadelphia learned about risk reduction and health programs for adolescents in the United States and identified models and approaches that could be adapted to conditions in Eurasia.
- Participants of the *Adolescents-at-Risk Workshop*, held as a follow-up to the study tour, were introduced to the concept of adolescent health, as well as the health status of adolescents in Ukraine and the services available to them. Reproductive health, mental health, substance abuse, and social problems



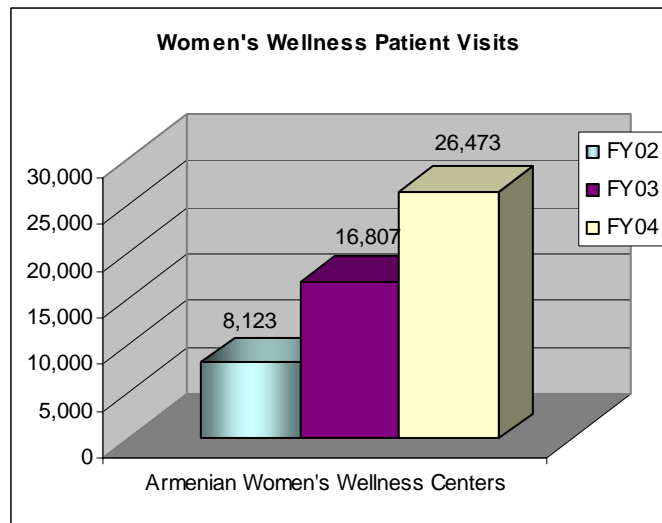
A radiologist at the Erebouni WWC conducts a prenatal ultrasound check up. (Photo courtesy of Erebouni Hospital.)

facing young adults were covered. Participants discussed community mobilization and the need to develop adolescent healthcare services guidelines. They also developed action plans.

- During a domestic violence workshop, multidisciplinary teams comprised of teachers, police, prosecutors, psychologists, doctors, and nurses addressed domestic violence in the Caucasus region. Three US trainers presented background data on domestic abuse in Armenia, Azerbaijan, and Georgia. The faculty later split the group by profession to develop specific intervention strategies and helped participants create strategic plans for their own communities.

Service Delivery

- The WWCs offered breast health programs that included teaching the basics of breast self-exam and performing clinical exams. The Armenian American Wellness Center conducted mammography screening. Ultrasound and mammography facilities substantially expanded the scope of diagnostic services to include needle localization of nonpalpable growths, sonographically monitored aspiration biopsy of new glandular growths, and core-biopsy of glandular growths. The facilities and labs enabled the WWCs to offer diagnosis at pre-clinical, non-palpable stages of the disease and treatment options in an efficient and timely manner. Although breast screening has not decreased the number of cancer patients, detection at Stages I and II has increased, thereby increasing survivability.
- Between 2001 and 2004, the WWCs saw a dramatic increase in the number of patient visits, one indication that the centers were filling an unmet need of Armenian women.
- In 2003, the Armenian WWCs administered two patient satisfaction surveys designed by AIHA to measure the level of satisfaction for a number of variables associated with center characteristics, staff, and service. The Erebouni Center scored 6.4 on a 7-point scale (with 7 being “very satisfied”), and the ARMA Center scored 6.2, for the mean satisfaction ratings for almost all variables. These scores were among the highest of all WWCs participating in the survey.
- Diagnostic ultrasound was introduced at the Erebouni WWC and reduced perinatal mortality rates from 26 per 1,000 births in 1994 to 10.5 per 1,000 births in 2000.
- Both Armenian WWCs offered prenatal care services and introduced childbirth education programs that encouraged registration for prenatal care within first 12 weeks of pregnancy.



Clinical Practice Guidelines

- Representatives from the Yerevan Mammography Center at AAWC participated in the Breast Health Case Study Review Workshop, which provided an opportunity for WWC staff to review accomplishments and challenges facing their centers. Participants discussed processes for implementing CPGs and quality control, analyzed challenging mammography cases, and agreed on creating an inter-partnership network for ongoing peer consultation and collaboration.
- The Breast Health Case Study Review Workshop included lectures, group discussions, and mammogram and sonogram image analysis. Three participants from Armenia joined their Ukrainian colleagues to review the breast health section of the Women's Health CPG Reference Manual and identified areas that need to be revised, modified, or added.

Contraception

- The family planning counseling and services offered by the Yerevan WWCs led to a significant decrease in the number of unwanted pregnancies in the communities served by the centers. According to the centers, the overall number of clients using some type of contraception increased to more than 57 percent of clients served (baseline data was not available). The centers also reported that the increased availability of contraceptive services contributed to a reduction in the crude abortion rate within the catchment areas by 21 percent in the first five years.

Sustainability

- Both WWCs in Yerevan are locally funded and continue to provide a full range of women's health services. They cited the use of fee-for-service mechanisms as an important contributing factor in their sustainability. In the self-assessment survey, both centers responded that they were "completely confident" that their WWC will be fully operational within the timeframes of one year, five years and 10 years, taking into consideration their center's current financial situation and ongoing sustainability activities.

C. SUCCESS STORIES

Surgery Avoided, Smile Restored at the AAWC

Azganush is an energetic mother and grandmother who smiles constantly. But her smile quickly disappeared when she learned that she would need a hysterectomy to treat the chronic pain she was experiencing. "My husband and I were in shock, and I was so depressed," Azaganush explained. Then a friend who had been treated at the Armenian American Wellness Center recommended that Azaganush seek a second opinion there. As a member of AIHA's Yerevan/Washington, DC, partnership, the Center became the first facility to offer Pap smears in all of Armenia. They also introduced many other modern diagnostic procedures to help ensure early detection of breast and cervical cancers, as well as innovative, patient-centered treatment and support programs.

AAWC gynecologist Lilit Hakobyan examined Azaganush and ordered several tests. When all of the tests came back normal, she repeated them. Again, the tests came back normal and Dr. Hakobyan determined that Azaganush did not have a condition that would require a hysterectomy. Instead, the woman's pain could likely be managed with medication. Azaganush was unemployed and could not afford to pay for the medicine, so the AAWC prescribed it at no cost. The drugs were effective in treating Azaganush's symptoms and follow-up tests were also normal, confirming that the original recommendation had been faulty. Because of the screening and treatment that she received at the AAWC, Azaganush was able to avoid an invasive and unnecessary surgical procedure. Based on her experience, Azaganush now recommends the Center to all her friends and family. "I insist that everyone go to the AAWC when they complain of pain, even though there are other clinics nearby," she said, the characteristic smile once more lighting up her face.

The Making of a Mother

When 24-year-old Ruzan* came to the Erebouni Women's Wellness Center and reported that she had experienced two miscarriages during her fifth or sixth week of pregnancy, staff scheduled an ultrasound to determine what was causing her problem. The ultrasound revealed a uterine abnormality not inconsistent with a successful pregnancy while other diagnostic tests indicated that Ruzan had a relatively common and easily treatable viral infection that sometimes causes pregnancy complications.

A few months later, Ruzan returned to the WWC reporting a delay in menstruation and other tell-tale symptoms. Another ultrasound revealed that she was approximately six weeks pregnant and was experiencing complications yet again. The WWC staff recommended bed rest and prescribed a preventive course of drugs to lower the risk of premature delivery. Taking into account Ruzan's past history of miscarriages, her uterine

abnormality, and fetal pelvic presentation, a decision was later made to deliver by Cesarean section. The procedure was performed at Erebouni Medical Center when the patient was at full term and both mother and daughter were healthy.

**The patient's name has been changed at her request.*

A Lesson on How a Computer Can Save Lives

In November 2001, 49-years-old Arsen* registered at an Armenian hospital with severe breathing difficulties and a preliminary diagnosis of pneumonia. The hospital asked Dr. Ovasess Sarkisyan, head of the Pectoral Surgery Department at the Emergency Scientific Medical Center in Yerevan, to consult on the case. Dr. Sarkisyan confirmed and refined the diagnosis. Arsen's condition was critical and the hospital staff had little experience managing such advanced cases, so Sarkisyan asked information coordinators from ESMC's LRC to conduct research using the Center's database and Internet resources. Based on the information they gathered, physicians revised the treatment, but Arsen's condition still remained severe. After 20 days, intensive care unit specialists started artificial ventilation of Arsen's lungs.

Because ESMC had been a member of AIHA's Yerevan/Boston partnership, Sarkisyan and the other physicians who were caring for Arsen decided to consult with their US partners. Despite the fact that AIHA and USAID support for the program had ended in 1999, the partners had continued to engage in collaborative activities and they were well-prepared to exchange crucial data, including Arsen's case history, computer tomography and X-ray images, and the treatment protocol they had been following thanks to the information and communication technology available at the LRC. The US partners responded immediately with suggestions for changes to the treatment protocol and recommended that the Armenian team perform a tracheotomy on Arsen.

Based on these recommendations, Dr. Sarkisyan performed the tracheotomy and further revised treatment protocols. Within the next few days, Arsen's condition improved significantly and, after 10 days, there was no need to continue artificial ventilation of lungs. Arsen remained in the hospital and continued to improve for another 20 days before being discharged from the hospital under the close supervision of a local therapist.

In the critical first days of Arsen's treatment, his family members and even medical personnel at the hospital were skeptical about the involvement of LRC staff and the US partners. They questioned how a computer or a doctor living half-way around the world could help save a patient in Armenia. But their attitudes changed as soon as Arsen's condition started to improve. ESMC staff, on the other hand, stress that the case is remarkable not for its uniqueness but for its commonness; American medical personnel and LRC resources save lives in Armenia every day. Sometimes their impact is direct, as in this case. Sometimes it is far more indirect, as with the lives saved through improved paradigms of care developed at ESMC and other Armenian institutions through AIHA's partnership programs.

**The patient's name has been changed at his request.*

Nurse, Teacher, Leader: INLI Provides Ever-Expanding Benefits

As a nurse at Erebouni Medical Center, Maya used her participation in AIHA's Yerevan/Los Angeles partnership and the International Nursing Leadership Institute not only to advance professionally, but to improve the quality of healthcare services available in her community. Explaining that the knowledge, skills, and self-confidence she gained through the partnership and INLI resulted in many positive changes for her, Maya said, "I came to recognize myself as a teacher and leader because of the INLI courses and I developed a greater capacity to work as part of a team. I improved my communication skills and became more confident in my abilities as a nurse and a trainer."

These newfound skills have allowed Maya to use her nursing abilities not just to provide patient care but to extend benefits throughout the community through improved nurse training and outreach activities. Through

INLI, Maya developed a program of post-graduate education for nurses that has trained and supported some 111 nurses as they conducted community outreach activities in the Erebouni district, including at three secondary schools. The nurses also did home visits and worked with individuals at nursing homes and orphanages. As a result of Maya's project, smoking rates dropped at the secondary schools and targeted populations improved their management of chronic cardiovascular disease and diabetes.

Maya's commitment to her community did not end with her graduation from INLI in 2001. She serves as director of the Nursing Resource Center at Erebouni Medical College and is continuously planning and conducting workshops for both nurses and community members on health topics ranging from immunization to smoking cessation. She is also an active member of a number of professional organizations, including the international nursing honor society Sigma Theta Tau, the Armenian Nursing Association, and the American Organization of Nurse Executives.

Maya illustrates the personal and professional impact that AIHA programs have had on Armenian healthcare professionals. But she also shows how one person's growth can extend benefits to those her colleagues, her patients, her institution, and even her entire community. The impact of the partnership and cross-partnership activities is self-sustaining because it spreads ever outward from individuals such as Maya.

LRC Finds Funding for Pap Smears

AIHA has included proposal writing as a key component of the training for LRC staff to encourage them to make use of outside sources of funding for projects initiated by the LRCs and their host institutions. The AAWC LRC staff used the Internet to identify possible funding sources and develop a project proposal to increase outreach to vulnerable groups. They submitted the proposal to PATH, a US-based nonprofit organization that supports effective use of technology in health efforts worldwide. The PATH selection committee awarded the AAWC \$19,000 to provide free Pap smears, testing for sexually-transmitted infections, and treatment to socially vulnerable populations.

D. AIHA CONFERENCES

An important and signature component of AIHA's partnership program is regularly-held regional and all-partnership conferences that provide a forum for networking and sharing among partners. Armenian partners actively participated in these conferences, which provided them with opportunities to practice professional presentation skills, meet colleagues from other regions and countries with similar experiences, and gain information and skills on topics of common interest. Regional conferences for Caucasus partnerships further promoted cooperation among partners in the neighboring countries of Armenia, Azerbaijan, and Georgia thereby building bridges between healthcare providers and communities. Between 1999 and 2004, dozens of Armenian partners benefited from their participation in the four annual partnership conferences, two Caucasus regional partnership conferences, and a final Armenia conference convened by AIHA. These are briefly described below in reverse chronological order.

Final Armenia Partnership Conference, Yerevan, Armenia, October 26-27, 2004

As a culmination of its program in Armenia, AIHA organized a conference to recognize all the institutions involved in the partnerships over the last decade and to disseminate program successes. Representatives from current and former partnerships in Armenia, along with government officials and representatives from USAID and other donor organizations, were invited to attend. The conference provided a venue for partners to share lessons learned over the last decade with representatives of Armenian healthcare institutions, government officials, and representatives of national and international organizations working in healthcare. The conference also showcased the numerous sustainable partnership accomplishments and discussed how cooperation with national and international agencies has ensured replication of successful models and interventions.

Caucasus Regional Conference, *Tbilisi, Georgia, July 9-10, 2003*

AIHA's Caucasus Regional Partnership Conference brought together representatives of current and former partnerships in Armenia, Azerbaijan, and Georgia, along with government officials from the three countries and representatives of USAID. The regional conference was convened to share ideas and disseminate partnership successes to a larger audience. Particular areas that were covered included: improved service delivery, healthcare management and financing, infectious disease control, quality improvement, and training. The meeting also provided an opportunity for the partners to work in country-level groups with USAID staff to better support regional strategies and coordinate with other donor organizations.

2002 AIHA Annual Partnership Conference, *Washington, DC, July 31- August 2, 2002*

In addition to celebrating the organization's 10-year anniversary, the 2002 conference focused on disseminating partnership successes and discussing the emerging health challenges created by HIV/AIDS. More than 500 health professionals representing current and graduated partnerships, as well as numerous VIPs and other guests, participated. Graduating partnerships—including the Yerevan/Birmingham partnership—were recognized during a ceremony on the conference's first day.

2001 AIHA Annual Partnership Conference, *Washington, DC, April 9- 11, 2001*

The conference theme of "Primary and Community-based Healthcare Solutions: Building on Models of Change," was in keeping with AIHA's programmatic emphasis on developing community-based approaches to improving the quality of primary healthcare in Eurasia. Conference participants included key healthcare leaders from 18 countries, including the ministers of health of Kazakhstan and Tajikistan, and more than 500 health professionals from Eurasia and the United States. AIHA partners participated on panels throughout the conference to present their successful healthcare models and ways they have met the challenges of providing primary healthcare services and training family physicians. Additional topics included: health promotion and education, effective methods to conduct needs assessments, the development of clinical practice guidelines, methods to encourage community involvement, infection control and multi-drug resistant strains of infections, integrated approaches to women's health services, and mother-to-child transmission of HIV/AIDS.

Caucasus Regional Partnership Meeting, *Tbilisi, Georgia, February 28- March 2, 2001*

US and Eurasian representatives from each Caucasus partnership continued discussions begun in Budapest on cross-partnership collaboration in the region and shared challenges and successes for future partnership growth and development.

2000 AIHA Partnership Conference, *Budapest, Hungary, July 17- 19, 2000*

Some 250 healthcare professionals from Eurasia and the United States participated in the 2000 conference whose theme, *Developing Common Strategies for Improving Primary Care and Community Health*. The conference offered plenary presentations and breakout sessions focusing on community mobilization, health promotion strategies, and practical skills-building for primary care providers. Partnerships also met in sub-regional sessions to share best practices and facilitate coordination on issues related to workplan implementation, primary healthcare clinical practice guidelines, and performance indicators and outcomes. Throughout the conference, partnerships had opportunities to meet and work on their respective workplans, and US partners attended meetings specially designed for partnership coordinators on administrative and financial issues and AIHA's evaluation activities.

1999 AIHA Annual Partnership Conference, *Arlington, Virginia, November 14- 16, 1999*

Representatives of all current partnerships attended AIHA's 1999 Annual Partnership Conference, titled "Partnering for Healthier Communities." Approximately 700 partners from Eurasia and the United States joined distinguished guests for the event, which focused on past successes of partnerships as well as future directions in primary healthcare and community health for new partnerships. Selected partners also

participated in pre- and post-conference meetings addressing health management education, infection control, women's health, and emergency medical services.

E. MID-TERM EVALUATION

In March 2000, an independent team of senior academicians, health service researchers, and health professionals began convening as the Continuing Evaluation Panel (CEP) to conduct a comprehensive examination of AIHA's partnership program. In a unique approach to evaluation endorsed by USAID, which was closely involved in the process, the CEP spent one year assessing accomplishments of the AIHA Partnership Program and evaluating the sustainability and ongoing impact of graduated partnerships, as well as the mid-term status of partnerships established since 1999. During the assessment, the CEP visited seven partnership locations in Armenia and conducted structured interviews with 11 individuals associated with the AIHA partnership program in the country. Based on the qualitative data gathered, the panel concluded that the AIHA Partnership Program has been highly successful and is an exemplar of the use of the partnership model in international development. The evaluators discovered that most of the original partnership programs continued despite termination of AIHA program support and many of them had expanded their work to additional sites and become increasingly influential in the development of new health services, better education for health professionals, and improved governmental decision-making in healthcare.

Among the examples of impressive accomplishments by the original hospital-based partnerships the CEP cited was the improved cost-efficiency of care delivered at Erebouni Hospital in Yerevan, where 1,000 hospital beds were reduced following implementation of US-style planning and care processes introduced by the Yerevan/Los Angeles partnership:

“Reflecting US hospital standards, the Erebouni Medical Center in Yerevan, Armenia, also made major changes in an effort to improve care and achieve greater efficiency. The director invited the US partner to assist in determining a realistic number of beds for the center and followed this by significantly reducing bed capacity. Physician and nursing roles were restructured, and care processes were reformed throughout the hospital.”

The CEP also found that many partners report that participation in the AIHA program helps renew “hope and optimism” in the face of difficult conditions as resources “dwindled dramatically and the ability to maintain what they believed to be acceptable levels of care became impossible”:

“...the director of the primary care clinic in Lori, Armenia (Lori/Los Angeles partnership), cites hope as key to maintaining the community's only clinic in the face of dire shortages of even the most basic resources—heat and water. She and her staff report that they have not received any salary for more than a year, but they report daily to the clinic, study English, take advantage of any training opportunities that are made available, provide health education to their community, and deliver what care they can within their limited resources.”

The full report of the CEP evaluation can be found at the following link on AIHA's Web site:
<http://www.aiha.com/resources/Doc/CEP%20Final%20report.pdf>

IV. CONCLUSIONS

AIHA's eight partnerships and numerous cross-partnership programs in Armenia made significant contributions to improving healthcare services in the country. During 1998-2004, together with its Armenian and US partners, AIHA implemented a successful program that leaves behind a legacy of new institutions and services such as model primary care clinics and training centers, modern diagnostics and screening exams, and innovative community education and outreach programs. In addition to the many facilities and services that provide tangible evidence of success, partnerships effected change on a more fundamental level. They enabled participants to develop new conceptual frameworks, gain new knowledge and skills, and bring about a profound shift in thinking about health and healthcare. Partners did more than reform services, develop protocols, and train healthcare professionals. The real success of the Armenia Health Partnership Program is that it created local capacity that not only serves as a foundation for continued reform, but also as a model that can be utilized and adapted to address new and ongoing challenges.

Integration and Improvement of Services

AIHA partnerships and cross-partnership activities have focused on improving the quality and scope of healthcare services in Armenia by adopting an approach that is comprehensive, integrated, and more responsive to the needs of the population. Partners have emphasized community-based programs that encourage a multidisciplinary team method that not only includes physicians, nurses, and other care providers, but patients as well—all with a view toward primary care and health promotion. Because practitioners have gained a more expansive view of their patients' health, they have significantly increased their emphasis on preventive care, health screenings, and outreach activities. Targeted populations are receiving more comprehensive care through the PHC centers and Women's Wellness Centers and report, overwhelmingly, that the quality of their care has improved.

Nurses, in particular, have played a key role in improved services as they have taken on increased roles and responsibilities in addition to working more collaboratively with physicians. They are more active in the provision of patient care, are leading community health activities, and strengthening education and training for future cadres of nurses.

Learners, Leaders and Change Agents

The Armenian healthcare professionals involved in AIHA partnerships and programs have benefited not only from the technical skills their American counterparts shared, but also from the collaborative learning process that drives partner activities. Thousands of doctors, nurses, and other healthcare professionals have received training through AIHA and partner activities between 1998 and 2004. Equally importantly, these professionals have used their new skills and knowledge to create in-service training programs for their colleagues, as well as more formal educational programs for future doctors and nurses. The Armenian partners have developed a new view of their role, coming to see themselves not just as providers or managers of healthcare, but as educators and agents of change as well. This is especially the case with Armenian nurses, many of whom now have a newfound professionalism and pride in their profession, and demonstrate critical leadership, educational, and clinical skills.

Sustainability

AIHA's partnership program leaves behind affordable models of care, sustainable institutions, and the human capacity for ongoing education and change. Some of the most significant results of AIHA's program in Armenia are low-cost interventions, such as the many community education and outreach services that have continued long after the formal end of the partnerships. These programs yield significant results in early diagnosis and treatment, promotion of healthy lifestyles, and disease prevention.

The partnership program also contributed to sustainability by mobilizing and enabling communities to increasingly take responsibility for their own health matters. These communities are now more likely to be

able to identify future problems affecting their community's health and design workable solutions. Partnerships also played a role in accelerating health policy reforms at the national level by creating new institutional capacities and developing model programs that could be scaled up.

In addition, all of the new centers established by AIHA partnerships have been able to continue full activities after funding ended. The Lori PHC Skills Training Center continues to train rural providers using Armenian instructors who were trained through the partnership. The model primary care centers created under the Armavir, Gegarkunik, Lori, and Yerevan partnerships continue providing exemplary patient care. The information coordinators of the LRCs received grant-writing and fundraising training that allows them to obtain continued funding for computers and Internet connectivity. The results of a 2004 survey of the Armenian LRCs show that in all cases the leadership remains committed to paying the salary of the information coordinator, and in most cases, the leadership also thought that funding would be available to maintain equipment and purchase books and other materials. Other centers established by AIHA partnerships in the previous funding cycle, such as WWCs, NRCs, an EMSTC, and an NRTC, have also been able to sustain their activities without continued AIHA funding.

Building Relationships

One of the most important legacies of the partnership program are the relationships formed between US and Armenian partners, among Armenian and other Eurasian partners, and among the Armenian partners themselves. If past experience is a guide, these relationships can be expected to last long past the end of the formal partnership arrangements. Some US and Armenian partners may even seek new funding to continue their joint efforts. Chances are also very good that the Armenian partners will continue to communicate with and learn from AIHA's broader family of partnerships for many years to come.

For the Armenian partners themselves, participation in the AIHA program has brought them together through shared experiences and shared successes. As found in the CEP evaluation report, they have found hope and optimism that positive change is possible and that they can play a role in that change. Among the Americans who participated, there is a newfound respect for their Armenian colleagues and an appreciation of the resource-poor conditions under which the Armenians work. The goodwill exhibited by individuals at all levels of the partnerships has resulted in a lasting and valuable contribution to international understanding and respect.

Remaining Challenges

While AIHA and its partners have made many important contributions to the efforts of USAID and the Ministry of Health of Armenia to improve healthcare for the citizens of the country, Armenia's health sector continues to face serious challenges. Training centers and trainers need resources if they are to continue expanding their reach and updating their knowledge through refresher courses. For example, the primary care training modules under development at the training center established by the Lori/Milwaukee partnership were left unfinished and the center needs assistance developing additional modules for rural practitioner teams.

While the potential exists to expand access to essential, high-quality health services—as demonstrated by Gegarkunik's replication at the Gegarin clinic using private donations and the Yerevan/Washington, DC, partnership's establishment of a satellite site in Gavar—it remains to be seen whether the model PHC clinics created by the partnerships can be replicated elsewhere in the country and fully integrated into the country's healthcare system.

Nevertheless, AIHA's programs have shifted the paradigm of how stakeholders perceive and interact with—and within—the Armenian healthcare system. Having built institutions and programs that are both more relevant and more responsive to the populations they serve, Armenian healthcare leaders are well poised to sustain these services and seek out new opportunities to improve care in the coming years.

* * *

APPENDIX A:

ADDITIONAL INFORMATION ON LEARNING RESOURCE CENTERS

Armavir Polyclinic LRC (Armavir)

Opened: November 1999

Total staff trained: 154

Serves a community of 216 staff health professionals and 367 external visitors per year

The LRC at the Armavir Polyclinic in Armenia has been actively supporting the collaboration between Armavir partners and Carelift International, a US-based humanitarian aid organization. The LRC serves as the main administrative center for official meetings, preparation of the humanitarian aid dissemination paperwork, and other activities. Recently, the LRC staff prepared a special illustrated report with success stories demonstrating how donated medical equipment and supplies have helped the patients of the Armavir region. (2003)

To maintain Internet connectivity and LRC activities after the discontinuation of AIHA funding, the administration of Armavir Polyclinic in Armavir, Armenia, has negotiated additional funding from the US partners at the University of Texas Medical Branch in Galveston. (2004)

Sevan Polyclinic LRC (Sevan)

Opened: November 1999

Total staff trained: 34

Serves a community of 38 staff health professionals and 83 external visitors per year

The LRC at the Sevan Polyclinic in Armenia has been a great source of drug-related information for the polyclinic staff. Because the polyclinic regularly receives a variety of new medications, some of which are unfamiliar to the staff, the Internet and CD-ROMs are often used to help learn about the drugs' indications, dosage, side effects, and other information. Recently, using the Internet, the LRC staff provided their colleagues with information on Chloroquine Phosphate, a preventive drug for malaria. In another related example, a physician was able to find a locally available substitute medication, which saved the patient a trip to Yerevan, more than 60 km away. (2002)

Information coordinator from the Sevan Polyclinic in Armenia responded to a teleconsultation request from Romania dealing with a case of sacrococcygeal teratoma. The information coordinator and her colleagues directed the Romanian physicians to two similar cases they found at the University of Iowa Virtual Hospital Web site. (2000)

Armenian American Wellness Center LRC (Yerevan)

Opened : February 2001

Total staff trained: 58

Serves a community of 56 staff health professionals and 445 external visitors per year

With the help of the Internet, the Armenian American Wellness Center in Yerevan, Armenia, was able to help a pregnant patient receive appropriate dental care. The woman's dentist was unsure about pulling a tooth in fear of causing a miscarriage. Severe pain and the fear of losing the baby brought the patient to the AAWC, where, using the mama.ru Web site, the staff were able to consult specialists from the St. Petersburg VIP Dental Clinic. The Russian dentists recommended to extract the tooth and provided specific information on anesthesia and extraction procedures. Following the teleconsultation, the woman returned to her dentist, who, using these recommendations, successfully removed the tooth. (2004)

Twice a month the staff of the American-Armenian Wellness Center in Yerevan conduct educational sessions for local women on issues related to pre- and post-menstrual conditions. During these sessions women receive brochures and other information on healthy lifestyle, domestic violence, screenings, and sexual health. They also get a listing of Web sites where they can find additional information on these and other topics. (2003)

Several times every month a group of staff from the Armenian American Wellness Center in Yerevan, Armenia, travels to the regions to offer free screening services to women. During these visits, physicians and LRC staff organize educational presentations and distribute printed materials on breast and cervix health, healthy lifestyle, and other women's health issues. (2004)

Lessons Learned

A decade of experience in setting up and guiding the activities of the Learning Resource Centers has highlighted several important lessons and factors that contribute to the LRC success. Among the most critical ones is the selection of appropriate staff to lead and manage LRC activities. In general, physicians, other medical professionals, and librarians have been the best fit for LRC activities in terms of professional expertise and abilities. In addition, the human factors such as leadership qualities, the ability to engage others, and superior communication skills have proven to be critical components for the success of many LRCs.

Another institutional factor that plays a significant role in the ability of the LRCs to succeed is the support of institutional leadership. Many chief administrators in Armenia and other regions have become proponents of information resources and technologies after having witnessed their positive impact on clinical effectiveness, cost savings, and staff training. The engagement of institutional leadership is especially critical in helping LRCs to build the support necessary for long-term sustainability. In recognition of this, new LRC programs that are being set up by AIHA in other regions include chief administrator participation in workshops and other activities from the beginning of the project.

Ongoing support and regular contact with each LRC by AIHA ICT staff has also been an important aspect of smooth and successful LRC activities. Keeping the lines of communication open and regular between the Information Coordinators and the ICT staff in Tbilisi and Washington has helped LRC staff to feel connected to the project and engaged in the activities of their own LRCs and the virtual LRC community. The LRC network, which is sustained through an electronic mailing list (lrc@mail.aiha.com) and individual contacts between LRCs within and outside their regions, provides an important access to the breadth of expertise and experience developed by LRCs in a variety of medical, institutional, and regional settings. To sustain this important link, AIHA has initiated a virtual LRC Association, which would provide opportunities for collaboration among LRCs and other interested institutions in the NIS/CEE region.

For additional information and examples of best LRC practices in the areas of evidence-based medicine, community outreach, sustainability strategies, telemedicine, distance learning and development of health information systems, please see the *Learning Resource Center Project Best Practices and Lessons Learned: A Guide to Improving Healthcare through Information and Communication Technology* available at lrc.aiha.com.