LRC Highlights
April – June 2002

AIHA information coordinators recently reported the following activities and accomplishments in their monthly activity reports for the Learning Resource Center (LRC) project.

If you would like more information about any of these highlights, please contact the information coordinator at the partner institution. The e-mail addresses of all AIHA partnership information coordinators are available on AIHA's Web site.

For more information about AIHA's Learning Resource Center project, please see AIHA's web site at www.aiha.com or contact Mark Storey, AIHA Program Officer for Information and Communication Technology, at mstorey@igc.org.

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1. Applications of Evidence-Based Practice

[Note: In order to promote the principles of evidence-based practice, all LRCs are required to regularly conduct what is termed a "Practice Standard Review" (PSR) in which they evaluate the available evidence for a particular clinical intervention, health policy, or educational method.]

With the help of the LRC, the staff at the Institute of Obstetrics and Pediatrics in Bishkek, Kyrgyzstan, developed clinical practice guidelines for the treatment of anemia among children. These guidelines are tailored to the specific nutritional and climatic conditions present in Kyrgyzstan and stipulate the use of a special anti-anemia dietary supplement. Currently, the scientific manufacturing department of the Institute is producing this anti-anemia supplement, which is cheap, easily available and has no contraindications. Following the implementation of the new guidelines, physicians at the Institute clinic have noticed a reduction in the number of bed-days among anemic children. Similarly, the nutrition department collected information about the production of dry milk-based kasha, which the manufacturing unit plans to mass produce to supply the country with affordable and highly nutritional kasha.

Following the completion of two PSRs, on the use of Diprivan for anesthesia for minor gynecologic interventions and on antibiotic prophylaxis in gynecology, physicians at the Regional Perinatal Center in L'viv, Ukraine, conducted two seminars to discuss the implementation of these approaches in their practice. During the first seminar anesthesiologists and gynecologists discussed the medical and economic benefits of combined anesthesia of Diprivan with ketamines and decided to use this type of anesthesia for appropriate cases in the future. At the second seminar, OB/GYN specialists reviewed PSR results and agreed to use cephalosporin for the prevention of septicopyemia in gynecologic operations.

To improve information searching and critical appraisal skills among students, the Kazakhstan School of Public Health in Almaty has made the Practice Standard Review a required project for graduate students.

The PSRs developed during the last semester cover a variety of health topics, including nosocomial infections, sanitary inspection of railway transport, healthcare legislation, and medical and social disability examination.

The process of preparing a Practice Standard Review (PSR) helped physicians at the Zhovkva Rayon Hospital in L'viv Region, Ukraine, to confirm that their treatment practices for Alzheimer's disease are in compliance with international standards. However, the physicians recognized that they are rarely able to make early Alzheimer's diagnosis. To improve on that measure, the staff is planning to introduce surveys for patients over 65, which the LRC staff is currently helping to translate from English into Ukrainian.

Using information from the Internet and the Cochrane Collaboration CD-ROM, the staff of the Infection Control Training Center at the Mechnikov Medical Academy in St. Petersburg, Russia, developed several practice guidelines for partnering clinics. A hospital in Murmansk implemented the guidelines on rational antibiotic prophylaxis and hand cleaning procedures, and a hospital in Cherepovets is beginning to implement new infection control standards.

The medical staff at Hospital #2 in Vladivostok, Russia, have revised their exercise tolerance testing guidelines according to the latest available evidence. They are using the Bruce protocol, which is the most widely adopted guideline and has been extensively validated. The protocol has seven stages, each lasting three minutes, resulting in 21 minutes' exercise for a complete test.

The information coordinator from the Jessenius Faculty of Medicine, Comenius University in Martin, Slovakia, gave a presentation on information retrieval at the Evidence-Based Medicine workshop held at the Slovak Postgraduate Academy of Medicine. He also demonstrated several EBM Internet sites during seminars for nursing students.

The physicians at the Vladivostok Hospital #2 in Russia have recently discussed the need for developing telemedicine capabilities at their hospital. They turned to the LRC for more information and found a systematic review on this topic written by Pamela Whitten, Charles Kingsley, and Jim Grigsby. (See http://www.msu.edu/~pwhitten/cost1.htm for the review.) According to the review, there is a lack of good published evidence showing that telemedicine is a cost-effective alternative means of delivering care. The literature search in the review identified more than 600 cost-related articles on telemedicine, but only 4% of articles satisfied the inclusion criteria set for the review. The authors say that the poor quality of the published studies shows that a peer-reviewed publication should not be taken as an adequate guarantee of quality for economic evaluations of telemedicine.

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2. LRC Impact on Patient Care

Recently, an anesthesiologist/resuscitation specialist from the cardiology unit at Central Clinical Hospital in Moscow, Russia, used the eMedicine Web site (www.emedicine.com/heartdisease) to determine drug therapy for an ICU patient with polyvalent allergy, intolerance to certain medications and complex heart rhythm abnormalities. Within five minutes, the physician calculated all possible drug interactions and determined appropriate drug therapy for this unusual case.

The LRC at the Stavropol Krai Clinical Hospital in Russia has established e-mail communication with a military hospital in Gudermes, Chechnya to provide consultations for complicated patient cases. The heads of bone pathology and contaminated surgery departments have recently provided treatment recommendations for four patients in Chechnya. The Stavropol physicians already received news that their teleconsultation advice led to health improvements for those patients.

A pharmacist at the Pereyaslavka Rayon Hospital in Khabarovsk region, Russia, used the Internet and CD-ROMs available at the LRC to conduct research on pharmacy management, licensing of pharmacy kiosks, medication categories for formularies, drug advertising campaigns and legislative documents. This information was later used at a training session for the pharmacy staff. The pharmacist also used this research to prepare for the introduction of a new formulary-based drug management system, which will use rational purchasing and dispensation of medications.

Before sending a teleconsulation request to help diagnose a patient with subfebrile temperature and lymphadenopathy, the information coordinator at the Kyrgyz State Medical Academy Medical Center in Bishkek, Kyrgyzstan, conducted an on-line literature search. After reviewing one of the researched articles on differential diagnosis, the physicians suspected that the patient might be HIV-infected. With this in mind, another set of lab tests was done, which confirmed the HIV status of the patient.

In collaboration with an experienced oncologist, the information coordinator at the University Hospital of Obstetrics and Gynecology in Tirana, Albania, is preparing regular lecture presentations for staff on breast disease treatment. The institution is planning to treat patients with breast diseases in the future, and every week about 20 physicians from two maternity houses attend these lectures. The information coordinator has already prepared ten lectures, which incorporate images found on the Internet.

An epidemiologist at the Mirkasimov Republican Hospital in Baku, Azerbaijan, used Internet resources and educational video tapes available at the LRC to organize two workshops for hospital nurses on equipment sterilization and prevention of nosocomial infections. Together with the LRC staff, she also prepared educational posters on the dangers of improperly sterilized medical equipment, which were displayed in procedure rooms.

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3. LRC Outreach Into the Community

In June, the LRC staff at the Institute of Pediatrics and Children's Surgery in Almaty, Kazakhstan, began producing an electronic bulletin for the regional health departments and children's hospitals in Kazakhstan. Distributed via an electronic mailing list, the bulletin features grant sources available in Kazakhstan, information about Kazakh medical publishers, Internet resources on health and medicine, and other information. Two bulletins have already been distributed to subscribers.

The Center for Disaster and Emergency Medicine in Tbilisi, Georgia, has been using its Web site, www.cdem.org.ge, to make first aid and other training courses available to the public. Recently, the following courses were posted on-line: Russian-language EMS course for primary healthcare specialists, adult CPR and child choking simulators, and an English-language course on workplace first aid.

The information coordinator at the Kyrgyz State Medical Academy Medical Center in Bishkek continues to disseminate health resources through electronic mailing lists, which were set up for healthcare professionals participating in Family Medicine and KyrgyzMedUz projects. Since the beginning of 2002, subscribers throughout Kyrgyzstan received 23 digests and six bulletins featuring medical news, issues related to family medicine, and thematic overviews on topics such as diarrhea, disaster medicine, herpes infection, HIV and STIs.

During its Open House event, the LRC at the Schuche Rayon Hospital in Kurgan Oblast, Russia, highlighted the availability of resources related to adolescent issues, health promotion, and domestic violence as a way to encourage stronger ties to local groups and organizations working with these issues.

Invited members of the local community learned about the LRC and received brochures about Internet resources and drug prevention. The LRC staff, a local school director and the department of education officials discussed plans to organize health promotion presentations and to distribute educational materials to students and teachers. The local newspaper "Star" published two articles, with photos, about the LRC Open House.

The LRC staff at the Mirkasimov Republican Hospital in Baku, Azerbaijan, prepared an events calendar, which includes workshops and all partnership activities for the Sabirabad region. The electronic version of the calendar was sent by e-mail to local representatives of international health organizations, such as International Medical Corps and the Red Cross, to share their plans for the upcoming months.

The staff at the Infection Control Training Center at the Mechnikov Medical Academy in St. Petersburg, Russia, have recently organized two workshops on Internet resources for health professionals. The first workshop, a part of the continuing medical education program, was attended by epidemiologists from state sanitary and epidemiologic centers all across Russia. The second training, called "Epidemiology on the Internet," was organized for local interns, residents and epidemiologists.

The Web site for the Institute of Pediatrics and Children's Surgery in Almaty, Kazakhstan, now features an on-line teleconsultation service, which was announced in the local edition of the popular magazine, "Liza," in April. Following the publication of the announcement, pediatric specialists at the Institute have provided consultations on several cases from concerned parents in Karaganda and Moscow.

As a result of the LRC Open House at the Pereyaslavka Rayon Hospital in Russia, the LRC staff established contacts with a local youth club, which will be helping to support the dissemination of health promotion resources among the local population. The information coordinator also reached an agreement with an English teacher from the local school to provide students with access to the LRC's English-language training CD-ROM resources.

To demonstrate the capabilities of information technology, the information coordinator at the Institute of Obstetrics and Pediatrics in Bishkek, Kyrgyzstan, organized a real-time teleconsultation with a regional children's hospital in Jalal-Abad during its Open House event. During the teleconsultation, a pediatric specialist at the Institute received x-ray images and brief patient record information necessary for diagnosis. The Internet provider in Bishkek and the department of informatics and technology at Jalal-Abad State University provided technical assistance during this teleconsultation. This display of information technology peaked the interest of Jalal-Abad physicians, who also wanted to learn more about the Internet and its capabilities.

On April 7, for World Health Day, the staff of the Center for Primary Prevention of Cardiovascular Diseases at City Polyclinic #36 in Minsk, Belarus, organized a variety of events highlighting physical activity and healthy life style. They made a presentation at a local school entitled "Physical activity and healthy heart," disseminated a brochure on drugs for adolescents and featured Internet and other information resources available at the LRC.

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4. LRCs as Health Promotion Centers

The staff at the National Center for Disease Control in Tbilisi, Georgia, researched patient educational materials on the Internet to develop educational brochures on hepatitis prevention. These brochures were distributed to partnering organizations throughout Georgia for further dissemination to the public.

The LRC staff at the Model Family Medicine Center "Demeu" in Astana, Kazakhstan, used the Internet to develop a training program on drug prevention among adolescents. This course took into account known psychological and pedagogical approaches to youth outreach. The LRC also produced an educational brochure, which was distributed among local teenagers.

In collaboration with the Women's Wellness Center, the LRC staff at the Oblast Clinical Hospital in Uzhgorod, Ukraine, developed educational presentations on health promotion, the dangers of smoking, modern contraception methods, and prevention and early diagnosis of mental disorders.

The LRC staff at the Chuguev Rayon Hospital in Kharkiv region, Ukraine, used Internet resources to prepare a workshop for hospital nurses on alcoholism and smoking among women. During the workshop, participants received printed materials and brochures on this topic. The LRC staff videotaped the training session for educational purposes in the future.

Using information found on the Internet, the LRC staff at Children's Hospital #2 in Kiev, Ukraine, created educational poster boards on breastfeeding, which were displayed in the infant department. The information coordinator also made presentations at staff meetings on flu and HIV/AIDS prevention.

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5. Promoting LRC / Partner Sustainability

Following the Central Asia Regional LRC Dissemination Conference, the general director of the National Republican Center for Emergency Medicine in Tashkent, Uzbekistan announced the conference results to the staff and urged greater LRC participation in the Center activities. Since then, the LRC has been relocated to larger premises, with a special room for a future computer classroom and an office for the information coordinator. The Center administration also purchased a new computer for the LRC and agreed to assign additional staff to support the Center's activities. Reflecting the higher status of the LRC at the institution, its staff now regularly receives monthly monetary bonuses.

In collaboration with Olomouc Teaching Hospital, the LRC at the Palacky University Faculty of Medicine in Olomouc, Czech Republic, received a grant from the Czech Ministry of Healthcare called "Application of information technology and long-term IT training for continuous healthcare quality improvement at the Olomouc Teaching Hospital." The goals of this project, which will continue through 2003, are to 1) assess the current state of computer literacy among healthcare professionals at the Teaching Hospital; 2) define the standard level of IT knowledge for different categories of healthcare professionals; 3) determine implementation methods to achieve the proposed standards and develop a modular training course; 4) verify the efficiency of proposed methods in terms of healthcare quality enhancement; and 5) improve nurses' capabilities to routinely use electronic patient records. The information coordinator used resources and experience gained from the AIHA Medical Informatics Study Tour (November 2000) while developing this grant proposal.

The National Information Learning Center in Tbilisi, Georgia, has signed a contract with the Ministry of Labor, Health and Social Affairs to publish a new journal on medical education and to develop a Web site for the Ministry, its programs and its fundraising agency.

The LRC at the Emergency and Disaster Medicine Center in Vladivostok, Russia, received a grant to publish 4000 copies of the "Till the Doctor Comes" book on first aid procedures. According to the terms of this grant, each secondary school in Primorsky region will receive two copies of this book. In June, the book was officially announced at a special ceremony at the Institute of Postgraduate Education. The ceremony was widely publicized on local radio and television.

The LRCs at Javorszky Odon Hospital in Vac, Hungary, and Maternity Hospital in Riga, Latvia, are receiving free Internet access from their Internet Service Providers (ISPs). They were able to negotiate free access in return for the placement of ISP satellite equipment on the hospital buildings' rooftops.

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6. Application of Information Technology—Databases and Information Systems

Prior to the development of a new information system for the admission ward of the National Republican Center for Emergency Medicine in Tashkent, Uzbekistan, the LRC staff closely examined the existing information flow and patient services within the department. The LRC staff analyzed the patient route within the admissions unit, the length of each diagnostic and treatment procedure, the workload of each department team, the overall effectiveness of the organizational structure, and the length and necessity of each paperwork procedure. Based on these observations, the researchers were able to determine the weak spots within the existing structure—e.g. only one X-ray room, lack of express analyzers for biofluids, time spent on redundant paperwork, lack of qualified EMS physicians—and developed a list of recommendations, justifying the need for an electronic health information system. Using Delphi software, the LRC staff developed a database management system for the admissions department. Following the development and installation of this new system, the LRC staff set up training courses for the admission ward staff to learn the new database.

In April, the Family Medicine Clinic in L'viv, Ukraine, implemented a new electronic patient record system, which in addition to patient information includes the results of diagnostic, preventive and immunologic exams. The system also contains a database of clinical signs of diseases, medication information and various classifications. The system works well with statistical applications, which provide varying degrees of data analysis—from an individual physician to the clinic as a whole. The administration and LRC staff hope that this system will reduce the overall time each physician spends on paperwork and provide useful data analysis, which would ultimately improve the quality of medical care at the clinic.

The LRC staff at the Oblast Clinical Hospital in Uzhgorod, Ukraine, is developing a bibliographic reference database for the regional medical library. This LRC has a long history of collaboration with the library by sharing information resources, posting information about the LRC and fulfilling information requests.

The LRC staff at the Center for Primary Prevention of Cardiovascular Diseases at City Polyclinic #36 in Minsk, Belarus, helped develop a patient record database, which is being used to analyze risk factors for cardiovascular diseases.