

LRC Highlights January – March 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

Based on the results of a Practice Standard Review, the staff of the Women's Wellness Center in Kutaisi, Georgia, developed and implemented guidelines on the diagnosis and treatment of cervical dysplasia. During the literature review for the PSR, the WWC physicians discovered that their use of an electroexcision procedure for the treatment of cervical dysplasia is out of date. The latest available evidence recommended a more effective cryodestruction method, which is being used in leading clinics in Europe and the USA. In January, after purchasing specialized equipment and nitrogen for this procedure, the WWC staff began to implement the new cryodestruction method. After three weeks of using the new procedure, the staff observed positive changes among patients suffering from cervical dysplasia. They have also noted that the new procedure is significantly less painful for the patients, which is an important factor for many women treated at the WWC.

The LRC at the Women's Wellness Center in Iasi, Romania, has supported the development of clinical protocols for the prevention and treatment of infectious diseases for the Center's patients. Concerned by the high rate of pregnant women suffering from *Toxoplasma gondi*, the Center staff used the LRC's on-line databases and the Internet to develop a new protocol for the prevention of congenital infection and for the treatment of toxoplasmosis during pregnancy. The current literature also suggested infection screening during pregnancy, but staff was discouraged by the high costs associated with this procedure. The problem was solved using the Internet, which helped determine risk factors for toxoplasmosis. The Center will soon provide toxoplasma screening for women with high-risk pregnancies. Another high priority protocol was developed for the treatment of *Chlamydia trachomatis* for pregnant women, adolescents and sexual partners. Because the rate of this infection in Iasi reaches 10% and health consequences such as pelvic inflammatory diseases, infertility and premature labor are quite

significant, the Center staff were compelled to address the problem by creating an institution-wide treatment protocol.

In Olomouc, Czech Republic, several Palacky University faculty, teaching hospital physicians, scientists, students and information managers established a multidisciplinary evidence-based medicine working group. The main goal of the group is to promote EBM in the academic medical field and to collect, select and develop information and training materials about EBM for undergraduate and postgraduate education at the Palacky University Faculty of Medicine. The starting point of this initiative was the idea of an information chain, which enables interaction among students, teachers, physicians and medical librarians. The role of the LRC in this project is to provide training and to assist with information retrieval, bibliographic research, document delivery, information quality assessment, decision-making, and communication enhancement. The working group has already organized three events to promote evidence-based practice in Olomouc: 1) An opening lecture on principles of EBM at the Annual Student Conference; 2) An interactive lecture "How to Search for EBM Articles" using standard biomedical databases; and 3) A workshop "How to Read Articles in Biomedical Journals". The goal of this workshop, conducted by the LRC staff, was to teach students how to work with medical literature by focusing on: article selection, creation of groups/randomization, comparison groups, research plan and deviations, outliers, blinding, value of retrospective data, exclusion of subjects, and quantification of treatment outcome. The workshop also included a practical exercise where students were asked to analyze two articles, looking for errors in the methodology of clinical studies.

The LRC at the National Republican Center for the Emergency Medicine in Tashkent, Uzbekistan, is actively involved in the development of clinical practice guidelines for the institution. In January, the LRC staff helped create new guidelines for the diagnosis and treatment of spontaneous pneumothorax. Based on the literature review, the researchers determined that paracentetic therapy, a standard method used at the Center, is not always the most effective treatment for spontaneous pneumothorax, often requiring additional pleural tappings and resulting in extended hospital stays for the patients. After reviewing these findings and following the newly developed guidelines, the surgery department staff began to use diagnostic thoracoscopy and pleural cavity drainage more widely. Currently, the staff is studying the effects of newly instituted treatment on health outcomes in the surgery department.

The LRC at the Faculty Hospital in Kosice, Slovakia, is actively supporting the work of the East Slovakian Open Medical Club, which brings together a group of physicians who are promoting evidence-based medicine in clinical practice. In their monthly meetings, the physicians share experiences about the application of clinical guidelines in Slovak hospitals, brainstorm about ways to involve academia in EBM work, and discuss tools and techniques for finding evidence-based resources,. The members have also established a procedure to disseminate information from the Cochrane Library for all involved hospitals. New Hot Topics from the Cochrane Library are regularly sent by e-mail to 81 member physicians in Slovakia or by postal service to other members without electronic communication.

To find the best methodology for researching the effects of workplace airways pollutants on workers and to determine the most efficient and cost-effective experimental study of such pollutants on guinea pigs, the LRC staff at the Hospital of Occupational Medicine in Cluj-Napoca, Romania, has turned to the Ovid database. Based on the results of this search, the physician charged with this experiment saved a lot of money and guinea pigs by abandoning the initial methodology and accepting a new research approach, which has had very successful results.

For the purposes of developing a guideline for the treatment of oncology patients with concurrent cardiovascular conditions, the information coordinator at the Polyclinic #36 in Minsk, Belarus searched the Ovid database for the latest research. The materials he found are being analyzed by the staff of the

Research Institute of Oncology and by physicians from the Republican Center “Cardiology” who will jointly develop the treatment protocol.

A team of medical staff of the Vladivostok Hospital #2 in Russia has evaluated the application of Percutaneous Endoscopic Gastrostomy (PEG) tubes as well as medical, legal and ethical considerations of this procedure for patients and physicians. Although PEGs are a common and seemingly routine procedure, there are many complex issues surrounding their placement. Decisions regarding PEGs can be particularly complicated and challenging in patients near the end of life, when legal and ethical questions about the provision of food and water are of major concern. Furthermore, several studies have called into question the lack of medical benefit of PEGs in elderly demented patients, while other analyses have revealed a relatively high mortality rate in certain patients within one month of PEG placement. These findings have alerted the hospital staff to the need for widely accepted clinical guidelines to assist physicians in selecting patients for PEG but, unfortunately, such guidelines are not currently available. The evaluation team has concluded that physicians should be open and direct in describing current controversies surrounding the lack of proven medical benefit and the relatively high mortality rate in elderly demented patients undergoing PEG. Until such time when validated clinical guidelines are available, hospital primary physicians and gastroenterologists will need to work together to properly refer and select patients for PEG.

2. LRC Impact on Patient Care

Staff of the LRC at the Institute of Pediatrics in Bishkek, Kyrgyzstan, conducted a search for educational materials for the Asthma School at the institute clinic. Based on this information, the children suffering from asthma and their parents were taught basic prevention and primary care procedures for asthma attacks. Following this training, the clinic staff has noticed a drop in asthma-related emergency room admissions.

Concerned by the high number of pregnant patients suffering from anemia at the Women’s Wellness Center in Kutaisi, Georgia, the information coordinator searched the Internet and the Cochrane Library CD-ROM to check for the most current treatment recommendations. She found that the WWC is using the same medications as suggested in the medical literature, but the dosage and duration of treatment varied. After only two weeks after implementing the new regimen, the WWC staff observed positive results among its anemia patients.

Using the information found through the LRC, the staff of the resuscitation department at the Joint City Hospital #6 in Baku, Azerbaijan, has revised the methods of prolonged anesthesia for cesarean section and surgeries of the lower extremities and pelvis. The introduction of the new drug has helped physicians to avoid catheterization of subarachnoid and peridural cavities and has led to a decrease in the number of surgical complications in the department.

To prevent the distribution of falsified and low quality medical products in city pharmacies, the LRC staff at the Dubna Health Care Department in Russia is conducting weekly reviews of pharmaceutical Web sites (www.drugreg.ru; www.farmoboz.ru). They send regular updates and information about suspicious products to all city pharmacies.

The staff at the Stavropol Krai Clinical Hospital in Russia used the LRC scanner and e-mail to conduct several teleconsultations. The cardiologists from the Moscow Research Institute in the name of Bakulev did not confirm a preliminary diagnosis of a heart disease for one of the patients and advised against a

surgery. The patient was very pleased. Another teleconsultation helped devise a surgical strategy for a patient with multiple gunshot wounds.

3. LRC Outreach Into the Community

Following a presentation to the directors of its affiliate clinics on the value and capabilities of the Internet by the information coordinator of the National Republican Center for the Emergency Medicine in Tashkent, Uzbekistan, six of the twelve affiliates have found the necessary resources and funds to connect to the Internet. Currently, the LRC staff is training representatives from the affiliate clinics on Internet searching skills. Other affiliate centers routinely send their staff to Tashkent to collect current medical information for their clinical practice.

Together with the Nursing Resource Center, the LRC at the Palacky University Faculty of Medicine in Olomouc, Czech Republic has organized a national seminar "Information Resources for Nursing Research and Practice" for 150 nurses, hospital managers and nursing school teachers. The Czech Ministry of Health funded this workshop, which utilized information and methodology from the AIHA "Technology and Health Promotion for Nurses" workshop, held in July 2001 in St. Petersburg, Russia.

For "Pediatrician Day," a pediatrician from the Schuche Rayon Hospital in Kurgan region, Russia, used the resources of the LRC to prepare a Power Point presentation on breastfeeding. In addition to the presentation, which was based on information from a breastfeeding workshop and from the EurasiaHealth Web site, the pediatrician prepared and disseminated hand-outs for other regional pediatricians.

The LRC staff at the Medical-Sanitary Unit #50 in Sarov, Russia, is continuing to utilize local Usenet newsgroups to provide health care information to the community. During this quarter, the LRC staff posted information for potential patients, announced the upcoming LRC Open House and in the process of answering health-related questions began to slowly inform patients about the importance and advantages of evidence-based practice.

4. LRCs as Health Promotion Centers

To spread health promotion resources to a wider audience, the LRC at the Donetsk City Hospital #25 in Ukraine has recruited volunteers among school children. Using the Internet, the LRC staff created age-appropriate educational brochures on substance abuse, HIV/AIDS and STI prevention, which are being disseminated by local adolescents among their peers. The information coordinator has also trained six teenagers on issues related to HIV/AIDS and STI prevention. Three of the six students will be chosen as instructors to conduct educational sessions for other students and to disseminate educational materials. The LRC staff is planning to develop brochures on other health promotion topics in the near future.

The hospital newspaper "Pulse" published by the LRC of the Korsakov Rayon Hospital in Sakhalin, Russia, now includes a special section entitled "LRC News." The new section highlights information and educational resources available through the LRC to hospital patients and staff. For "Women's Health Month," the LRC staff has developed educational brochures and created a special insert on women's health topics for the local newspaper. Utilizing their new desktop publishing capabilities, the LRC has also begun to offer paid design and desktop publishing services to the public.

The LRC staff at the Joint City Hospital #6 in Baku, Azerbaijan, has developed educational brochures on STIs, tuberculosis, reproductive health, malaria and other topics, which were distributed to refugee populations through general practitioners.

The staff of the Center for Primary Prevention of Cardiovascular Diseases at City Polyclinic #36 in Minsk, Belarus, has used Ovid database and other LRC resources to prepare seven lectures for the local community on stroke prevention, proper nutrition and the dangers of smoking and alcohol consumption. In March, they had four television appearances and published three articles in the "Minsk Courier" newspaper on the services and resources available at the Center for Primary Prevention of Cardiovascular Diseases and its LRC.

In February, the information coordinator at the Donetsk City Hospital #25 in Ukraine trained twelve staff members to search the Internet for medical information. Using newly acquired skills, six of those physicians developed educational presentations for the rest of the staff. These presentations focused on nursing leadership, breast cancer, cardiovascular disease and rabies prevention, modern x-ray examination methods and physician-patient communication. The LRC staff has also developed educational programs on weight loss and stress prevention. After familiarizing the hospital staff with these new resources and approaches, the information coordinator is planning to involve staff in regular health promotion and education sessions for the local community.

The LRC at the Pereyaslavka Rayon Hospital in Russia has developed health education brochures and information sheets for the patients. Using materials found on the Internet, the LRC staff created hand-outs on upper respiratory infections, dental health, travelers' diarrhea, chicken pox and dermatitis. These materials were disseminated among the patients during health promotion discussions led by the hospital nurses.

A popular newspaper in Kurgan, Russia has recently established a regular editorial column led by a gynecologist from the Maternity Hospital #1. Using materials available at the LRC and her personal experience, the physician has already published four articles on the dangers of abortion, contraceptive measures and other family planning topics. In the future, the column's subject areas will broaden to include materials on healthy lifestyles, infant care, obstetric issues and LRC resources. The Maternity Hospital is also working to establish its own publication for the hospital staff. The idea to create a journal of hospital news came from the staff of the psychological support group, which was established on the basis of the LRC. Using LRC resources, they are developing the content for the journal, and the information coordinator will design the final product. Currently, the hospital staff is participating in the contest for the official title of the journal.

Kharkiv Oblast Student Hospital LRC in Ukraine is using the Internet to develop educational brochures on mental health and other health promotion issues for the students of city colleges and universities. A social worker also used the LRC to create a patient satisfaction survey for the hospital.

The Women's Wellness Center in Iasi, Romania posted information about its services and the resources and capabilities of its LRC in the local phone book. The WWC contact information listing also includes e-mail address and a Web site. Using the Internet, several women have already signed up for prenatal classes conducted at the Center and many more patients are regularly communicating with their WWC physicians through electronic mail.

The LRC at the Mirkasimov Republican Hospital in Baku, Azerbaijan, have created and disseminated educational brochures on self-breast exams for the refugees of the Sabirabad region. The staff of the

hospital has also delivered a presentation in Sabirabad on breast cancer prevention using the LRC's laptop and LCD projector.

5. Promoting LRC / Partner Sustainability

The National Republican Center for the Emergency Medicine in Tashkent, Uzbekistan, recently established a new scientific department based on the LRC. This department was assigned 15 staff, with the information coordinator as its head. The activities of the department are divided into four sections: analytic, international relations, human resources development and new technologies. The work of each sector heavily relies on the resources and equipment of the LRC. The analytic section, which is headed by the information coordinator assistant, utilizes LRC communication technologies to collect statistical data from the Center affiliates around the country. This information is then entered into the databases developed by the LRC staff. The international relations section uses e-mail to communicate with partners and colleagues abroad. The human resources development section actively uses LRC information resources to update training curricula and to provide staff with up-to-date medical information. The fourth section, headed by another information coordinator assistant, investigates new technologies and their application in modern healthcare. Because the objectives and activities of the entire department are so closely tied to the overall goals of the LRC, the new department's budget is also being used for the LRC purposes.

The Postgraduate Medical School in Prague, Czech Republic has received a grant for 2001-2003 from the Ministry of Education to develop a Medical Virtual Library. Together with the Institute of Clinical and Experimental Medicine and the Institute of Hematology and Blood Transfusion, the Postgraduate Medical School LRC will work to create a virtual medical library with authorized access to full-text journal articles and other documents for remote users. The project will focus on cataloguing electronic resources, creating a unified interface for information retrieval, electronic journal archiving, document delivery and copyright of electronic resources, future funding, and training of end-users. The team has already chosen specialized software for the integration and sharing of medical scientific resources.

The National Information Learning Center in Tbilisi, Georgia, has won a Soros Foundation grant for \$20,000 to establish a "Public Health Web-site for Georgia." Also, the NILC is close to establishing a branch center at the National Medical Center Hospital in Digomi, which is under construction with the support of the World Bank. The branch will have a local area network and will provide telemedicine and library resources (through the NILC hub) to the hospital staff and other personnel of the nearby facilities.

The Odessa State Medical University in Ukraine has won a WHO grant for \$45,000 to conduct a socio-epidemiologic survey to evaluate the health status of the Ukrainian population. The LRC played an active role in the preparation of the grant application and, according to the grant budget, \$3,000 will go for equipment and supplies purchases for the LRC. OSMU has recently applied for two other grants: to REACH for HIV/AIDS prevention activities and to the Novib Foundation for an alternative financial system for healthcare expenditures (based on a credit union model).

Together with the Department of Emergency Situations and Radiation Pollution, the Center for Disaster and Emergency Medicine in Tbilisi, Georgia, has applied for a grant from the International Atomic Energy Agency (IAEA) on radiation accident preparedness in Georgia. The main objectives of the project are to develop a radiation safety program for the Georgian population and to develop national capabilities to cope with the consequences of radiological emergencies. The LRC at the Center for Disaster and Emergency Medicine played an active role in the writing of the grant proposal and will participate in the implementation of the project. This includes electronic communication, personnel

training and development and distribution of educational materials for the population. To support LRC involvement in these activities, the grant proposal includes the purchase of additional equipment for the LRC. IAEA has recently notified CDEM of its approval and will sponsor the project for a biannual program cycle starting in 2003.

6. Best Practices/Recommendations for LRC Operations

The LRC at the Palacky University Faculty of Medicine in Olomouc, Czech Republic, is working to improve computer literacy and information searching techniques of end-users – physicians, undergraduate and postgraduate medical students. The LRC staff is acutely aware that a permanent increase in the amount of available clinical information worldwide can only be useful if it is cogent, unambiguous and available at the point where clinical decisions are made. Therefore, the LRC training emphasizes the issue of quality of information available on the Internet. To this end, the LRC staff developed two curricula to enhance the skills of undergraduate and postgraduate students involved in medical research – one on biomedical information retrieval and a second on how to prepare PowerPoint presentations. The LRC is also collaborating with the Institute for Postgraduate Medical Education in Prague on developing a curriculum for continuing education of health librarians and end-users of biomedical information. The training program consists of three modules for basic, intermediate and advanced users. Each module has core subjects arranged in tracks covering four topics: electronic communication, Internet discovery tools, illustrating and presenting data, Website construction. The core subjects are supplemented with additional specific topics such as biomedical communication, evaluation of Web resources, grant writing and evidence-based medicine. The LRC staff already taught two courses, “Internet discovery tools” and “Illustrating and presenting data.” The course materials are available online at <http://www.ucjlf.upol.cz>

The administration of Minsk State Medical University in Belarus is planning to institute quarterly monetary bonuses for the university faculty who actively use the Internet in their teaching practice. They hope to encourage the wider use of information technologies among faculty to update and improve the current university curricula.

Twice a week the staff of the Joint City Hospital #6 in Baku, Azerbaijan, meets at the LRC to review educational videotapes presented by the US partners. Hospital physicians have also organized a small self-study group to learn English language using the LRC CD-ROMs and the Internet.

The faculty of the Kazakhstan School of Public Health in Almaty is actively using e-mail, provided through the LRC, to communicate with students. In January, the faculty requested that all final exams be delivered via e-mail. This incentive has helped to increase the use of the LRC among students.

7. Application of Information Technology, Telemedicine, and Databases

The LRC at the Darnitsky Rayon Central Polyclinic in Kiev, Ukraine, has been actively involved in designing statistical databases for the local health district. In 2001, the LRC staff have developed:

- a mortality database for 1998-2001 and perinatal mortality database for 1996-2001, which helped identify high risk families for genetic disorders;
- an infectious diseases database for 1997-2001 with ability to organize data by place of employment or study;
- a morbidity database for children suffering as a result of the Chernobyl nuclear accident;
- and databases on vaccination, bronchial asthma, diabetes, and disability in the Darnitsky district.

The LRC has also organized training for the staff of the district health care institutions to provide basic computer skills.

In cooperation with the Latvia Medicine Information & Technology Center, the LRC of the Latvian Medical Academy's Clinical Children's Hospital has organized monthly training sessions on information technologies for the hospital residents. They have already conducted several lectures on palm-size computing, Internet searching techniques and electronic resources for surgeons. The LRC staff and the Latvia Medicine Information & Technology Center are also working together on developing an electronic patient record system for primary healthcare physicians called "Doctor's Office." They have already completed a demo version of the database.

The LRC at the Center for Disaster Medicine in Murmansk, Russia, has set up a local area network, which, in addition to information sharing advantages, provides access to the Internet for the staff, dispatchers and the Center administration. The LRC staff is also working on developing an Intranet system, which would be able to call up from the database status reports, lists of duty staff, information on active and completed tasks for the duty period, administrative data and other useful information.

The LRC staff at the Institute of Public Health in Tirana, Albania has facilitated the collaboration with CDC Atlanta for the upgrade of the Alert software, which the Institute uses for early detection and prevention of epidemics. Following the upgrade, the information coordinator conducted training for the rest of the staff on the use of the software's new features and periodical monitoring procedures.

The LRC at Tajik Medical University in Dushanbe has developed a database called "From University Applicant to Physician," which contains academic and financial records for each student studying at the university. Currently, this database is used at the dean's and rector's offices, academic records department, and accounting and administrative offices.