

## **LRC Highlights October – December 2001**

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](http://www.aiha.com) or contact Mark Storey, AIHA Program Officer for Information and Communication Technology, at [mstorey@igc.org](mailto:mstorey@igc.org).

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### **1. Applications of Evidence-Based Practice**

The information coordinator and the surgical department staff at the Hospital #2 in Vladivostok, Russia, recently discussed an evidence-based case report "Antibiotic treatment for spontaneous bacterial peritonitis," – an infection that occurs at the hospital on a monthly basis. The group found no convincing evidence concerning the efficacy of using antibiotics to treat spontaneous bacterial peritonitis and identified several gaps that warrant future research. They concluded that until large, well-conducted trials have been published, antibiotic treatment for spontaneous bacterial peritonitis has to be based on clinical experience. Although clinicians cannot do a systematic review for every question raised in their daily experience, reviewing the literature in depth enables clinicians to comprehend where practices stem from, how these are founded on evidence, and sometimes, as in this case, how frail the evidence is to support routine practices.

As a result of a Practice Standard Review (PSR), the Central Rayon Hospital in Schuche, Russia is implementing the Gram stain method for the diagnosis of bacterial vaginosis. Following the completion of the PSR, the information coordinator together with a group of hospital staff have organized an educational campaign to convince the hospital administration and the head of the clinical laboratory to adopt the new diagnostic procedure. The group provided a comparative review of all diagnostic methods for bacterial vaginosis, gave a presentation on sepsis, and disseminated evidence-based information on the efficacy and cost-effectiveness of the Gram stain method. Their efforts resulted in the adoption of the Gram stain method by physicians in the OB/GYN, internal medicine and surgery departments. The LRC staff continues to educate the laboratory workers on the specifics of the Gram stain procedure.

Cochrane Library CD-ROMs and other evidence-based medicine resources at the Family Medicine Center LRC in Chisinau, Moldova were used to develop an EBP course for medical students and residents at the Moldova Medical and Pharmacy University Family Medicine department.

Facing a growing problem with viral conjunctivitis, staff at the LRC at Stavropol Krai Clinical Hospital in Russia used the Ovid database to find guidelines for the prevention of this infection. Using this information, the hospital staff quickly developed an action plan that has helped to prevent the further spread of viral conjunctivitis at the hospital.

The Infection Control Training Center at the Mechnikov Medical Academy in St. Petersburg, Russia, has been utilizing the LRC's resources for the development of clinical practice guidelines. In 2001, partnering clinics in St. Petersburg and Cherepovets implemented several guidelines developed by the Training Center, including guidelines on rational perioperative antibiotic prophylaxis, hand cleaning procedures, perinatal care, endoscopic procedures, endoscopic equipment sterilization, and health care worker biosafety. Since the implementation of these protocols, the clinics reported a decrease in hospital-acquired infections, hospital personnel trauma and infection rates as well as positive economic effects of these procedures.

Physicians in the cardiology department at the Children's Hospital #4 in Minsk, Belarus, used the LRC to conduct research on various treatment options for juvenile rheumatoid arthritis. Based on their research, they have implemented a new, more evidence-based method (involving intravenous immunoglobulin).

A senior research associate at the microsurgery and rehabilitation treatment department at the Oblast Trauma Hospital in Donetsk, Ukraine, used the LRC Medline and Ovid databases to find information on the systemic inflammatory body response. The materials he found provided a modern perspective on this issue and a basis for a new treatment methodology, which will increase the success rate in the treatment of severe open trauma of the extremities.

Based on a Practice Standard Review conducted by the LRC at the Kurgan Maternity Hospital in Russia, the hospital has started using room air for neonatal ventilation (instead of pure oxygen) for newborns with only a medium degree of severity. In addition to improved clinical outcomes, there have been noticeable financial benefits involving decreased costs of equipment amortization and lower oxygen usage.

Based on information obtained through the Internet, physicians at Stavropol Krai Clinical Hospital in Russia have started using the antibiotic cerfazolin during many surgical interventions to prevent infections. This method has led to a drop in postoperative pyoinflammatory complications at the gynecology department from 24 to just a few per year.

The LRC at the Association of Educational Programs in Health Administration in Moscow, Russia, has been closely collaborating with the Moscow Evidence-Based Center on a number of projects. Together, they have organized a workshop for general practitioners on evidence-based medicine and taught physicians to work with the Cochrane database. The center has also completed the first evidence-based report "Screening and management of arterial hypertension on primary care level in Russia." As a part of this project, two Moscow polyclinics received access to the Internet.

In October, the LRC staff at the Women's Wellness Center in Kutaisi, Georgia, prepared a new guideline for the management of uterine fibroids. The necessity of this guideline was dictated by the high number of patients treated for this condition at the WWC. Prior to the development of these guidelines, the WWC staff did not have any protocols for the management of this disease and every physician managed it differently.

Following up on an information request from the pediatrics department on the treatment of upper respiratory diseases, the LRC at the Schuche Rayon Hospital in Kurgan region, Russia, found an evidence-based resource that helped physicians reevaluate their current practices. The article argued for the pill-based antibiotic treatment of pulmonary conditions such as bronchitis and pneumonia, which, among other results, has a better psychological effect on the child. Following this article review and the distribution of a chart with specific antibiotic treatment recommendations, physicians began to more widely prescribe oral antibiotics for the treatment of pulmonary conditions among children.

The LRC at the National Republican Center for the Emergency Medicine in Tashkent, Uzbekistan has participated in the development of diagnostic and treatment guidelines for gastrointestinal bleeding. The LRC CD-ROMs and other evidence-based medicine resources were used to compare the latest literature with the current practice. The completed guidelines include endoscopic diagnostic and treatment procedures and specific indications and contraindications for various types of treatment using the Forest classification.

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## **2. LRC Impact on Patient Care**

Immediately prior to a complicated esophagus operation, a thoracic surgeon from the Krai Clinical Hospital in Stavropol, Russia, consulted the Internet for information on treating a puncture of the pericardial bursa. This information helped to optimize the course of the surgical procedure.

In September, the Kurgan City Health Administration required the neonatal intensive care unit at the Maternity Hospital to begin using the artificial surfactant Kursorf. Being unfamiliar with this drug, the hospital staff searched the Internet at the LRC and found a review article comparing several artificial surfactants, including Kursorf. Currently, the hospital neonatologists are successfully using this drug in their practice.

At the satellite LRC at the Sabirabad Rayon Hospital in Azerbaijan, the Internet helped in the treatment of viral conjunctivitis for a patient whose condition was not improving with standard medications. The patient's primary care physician referred to the LRC to find information about new antiviral drugs. The patient quickly recovered after receiving the new medication.

After all traditional methods had failed in the treatment of a patient with encephalomyelitis, the primary care physician turned to the LRC at the Mirkasimov Republican Hospital in Baku, Azerbaijan for more information. With the help of the LRC staff, the physician found a resource that suggested rheumatism as an etiologic factor of this disease. The patient's condition significantly improved after the physician prescribed antirheumatoid treatment.

Staff at the Sea Port Polyclinic in Odessa, Ukraine, used the LRC to find guidelines on the prevention and treatment of cholera. This information was used during the observation of a group of sailors who returned from a cholera-infected region. Based on these guidelines, the physicians were able to quickly discharge unaffected patients and conduct additional tests on those workers who have come in contact with cholera-infected persons.

Staff from the pathology department at the City Maternity Hospital in Sarov, Russia, recently requested information on the treatment of arterial hypertension among pregnant women from the LRC at Medical-Sanitary Unit #50. Resources found on the Consilium-Medicum Web site recommended the use of hypotensive drugs based on blood circulation type. The pathology department began the implementation

of this new method, which will help quickly lower arterial blood pressure among pregnant women and diminish the negative effects of hypotensive drugs on the fetus.

The staff of the Women's Wellness Center in Uzhgorod, Ukraine, are using the LRC at the Trans-Carpathian Oblast Hospital to research modern methods of infertility treatment. With the help of the information coordinator, they found the Shugarsky-Guner immune infertility test, which they have started to use at the center. With this test, they have already identified seven such cases.

Using LRC resources, the head of the internal medicine department at the Kyrgyz State Medical Academy in Bishkek, Kyrgyzstan, prepared an article on pneumoconiosis, which he submitted to the Central European Journal of Public Health. The article was published on-line in October.

LRC-researched documents and guidelines on diphtheria were used by the staff of the Odessa Sea Port Polyclinic in Ukraine to analyze the vaccination level of the sea port workers, to evaluate the performance of general practitioners, and to establish a vaccination calendar. The same resources were used to write an article on diphtheria, published by the port newspaper.

Physicians at the Women's Wellness Center in Iasi, Romania, used LRC Internet resources to update their prenatal courses. They found new information on nutrition, exercise during pregnancy and childcare. Using Internet resources, the LRC also prepares patient education materials on healthy life style, pregnancy, menopause, sexually-transmitted infections and family planning.

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### **3. Internet Consultations**

In November, the LRC at the University Hospital Center "Mother Teresa" in Tirana, Albania facilitated two teleconsultations between the ophthalmology department and a professor in Indianapolis, USA. The case histories and images (taken with the LRC digital camera) for two pediatric patients were sent to the professor by e-mail. In the first case, the consultant offered treatment recommendations for a two-and-a-half-month old baby diagnosed with bilateral retinoblastoma. In the second case, the professor diagnosed the six-year old patient with superior oblique palsy and advised surgery for the inferior oblique myectomy.

For over a year, the Clinical Training Center of Semipalatinsk State Medical Academy in Kazakstan has been participating in a Nagasaki – Semipalatinsk project for the diagnosis and treatment of patients with thyroid pathologies. The Japanese partners have provided diagnostic, computer and telecommunication equipment for the development of electronic patient records for all patients tested at the diagnostics department. On a weekly basis, this database is transmitted to Nagasaki, with all complicated cases flagged for a teleconsultation by Japanese specialists. The LRC at the Clinical Training Center is facilitating this process through the e-mail communication with the Japanese partners.

During this quarter, several LRCs in Central Asia communicated with each other using the Web cameras that have been provided to all current partnership LRCs. The LRC at the Family Medicine Center "Demeu" in Astana, Kazakstan and the LRC at the Kyrgyz State Medical Academy in Bishkek, Kyrgyzstan, discussed future LRC activities during a Web-based teleconference. The Kyrgyz State Medical Academy LRC also conducts regular teleconferences with its satellite LRC at the KSMA Medical Center.

The LRC at the Sea Port Polyclinic in Odessa, Ukraine, received an e-mail information request from a polyclinic patient who was visiting the United Kingdom. The patient asked about the potential side

effects of the medication L-Terocsin. His complaints about increased blood pressure matched the known side effects for this drug. The physician e-mailed the patient a few recommendations, which helped to lower his blood pressure.

The LRC at the Donetsk Oblast Trauma Hospital in Ukraine provided teleconsultation support to Arkhangelsk Oblast Hospital in Russia for a patient with a splinted fracture of the left tibia and compound splinted fracture of the left femur. Trauma specialists at the Donetsk Scientific Research Institute of Traumatology and Orthopedics, affiliated with the Donetsk Oblast Trauma Hospital, reviewed the case and offered specific short- and long-term recommendations for the treatment of each trauma.

The L'viv Regional Perinatal Center in Ukraine continues to maintain e-mail contact with its graduated partners in Buffalo, NY. Using e-mail, gynecology specialists recently sent a case history, clinical data and an ultrasound image for a patient of undetermined diagnosis to the Buffalo partners. As a result of this teleconsultation, the patient was correctly diagnosed with pseudoneuroma of iliolumbar artery and was sent to surgery.

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#### **4. LRC Outreach Into the Community**

To improve access to medical resources in the neighboring Sabirabad district, the LRC at the Mirkasimov Republican Hospital in Baku has supported the opening of another LRC at the Sabirabad Rayon Hospital. The staff of the main LRC has trained an information coordinator in Sabirabad to work with e-mail and to search for medical information on the Internet. In the short time since the opening of the satellite center, its resources have already been used to help find treatment alternatives for several patients.

To reach out to regional hospitals in Kyrgyzstan without Internet access, the information coordinator at the satellite LRC at the Kyrgyz State Medical Academy Medical Center in Bishkek, receives information requests by e-mail. In November, colleagues from the Jalal-Abad region requested information on telemedicine, and staff from the Naryn hospital wanted to know about upcoming training courses on infectious diseases for health managers. After searching the Internet for these resources, the information coordinator sends the results to the regions by e-mail.

The LRC at the Inspectorate of Public Health in Cluj-Napoca, Romania, has begun collaborating with the library at the University and Medicine and Pharmacy in Cluj to recruit specialists from affiliated hospitals for teleconsultation purposes. The LRC staff has also been sharing its CD-ROM and other resources to make them more widely available to the library users.

As a part of the Fergana, Uzbekistan – Atlanta, Georgia partnership outreach campaign, the lyceum in the city of Margilan, Uzbekistan received a computer, a Web camera and Internet access to bring together the students of Margilan and Atlanta. The mission of the LRC at the Fergana Affiliate of the National Center for Emergency Medicine was to train the lyceum teacher how to use the computer, search the Internet and use the Web camera. Following this training, Margilan students have expressed interest in computer technologies and participated in a teleconference with their Atlanta counterparts.

The LRC at the Family Medicine Center "Demeu" in Astana, Kazakstan, was featured by the local media during this quarter. The ACTV television station highlighted the work of the LRC, its resources and mission in its daily news program. The editor of the local newspaper "Evening Astana" visited the LRC and learned about its plans and activities. In September, the LRC and its resources were introduced to the US Ambassador to Kazakstan, the head of the Kazakh Health Care Agency and the head of Astana Health Administration who visited the FMC "Demeu."

The Municipal Government Office in Banska Bystrica, Slovakia is setting up an agreement with a local hospital Novamed. This hospital is equipped with an electronic patient record system and participates in a variety of health information systems and evidence-based medicine projects. Through this collaboration, the Municipal Government Office will share its LRC CD-ROMs and access to the Ovid database with the staff of Novamed.

In October, the LRC at the Dubna Health Care Department in Russia provided information on flu prevention and treatment to the local television station for an educational TV program.

The administration of the Women's Wellness Center in Iasi, Romania, has required the Center physicians to establish e-mail accounts for communication with their patients. This new form of interaction has improved the patient-doctor relationship, providing patients with quick answers to their questions and ensuring confidentiality. The LRC staff has also noticed a greater interest among physicians in electronic communications and other LRC resources.

The Web site for the Minsk State Medical Institute in Belarus, now features an electronic library section that includes scientific research works, lectures, and other resources developed by faculty and students. The electronic library is located at <http://lib.msmi.minsk.by> .

Since the beginning of 2001, the LRC at the Institute of Pediatrics and Children's Surgery in Almaty, Kazakstan, has been contributing medical news to the institute's quarterly journal *Pediatrics and Children's Surgery in Kazakstan*.

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## 5. LRCs as Health Promotion Centers

Together with Neal Schulman, the author of several children's books, the staff of the LRC at the Fergana Affiliate of the National Center for Emergency Medicine in Uzbekistan, have created a book on trauma prevention for children. This book will be published in Russian and Uzbek languages and disseminated to the local population as a part of the partnership patient education campaign. In supporting the partnership's trauma prevention objectives, the LRC is also involved in the process of collection and statistical analysis of trauma data for the Fergana region, which will lead to future auto trauma prevention initiatives.

As a part of the partnership health education outreach campaign, the LRC Mobile unit at the Kurgan Maternity Hospital in Russia visited a summer camp to conduct training sessions with adolescents. Students received information on sexually transmitted infections (STIs) and primary health care techniques.

Teenagers play an important role in the dissemination of Internet resources available at the LRC at the Women's Wellness Center in Iasi, Romania. They come to the WWC to participate in the "Teen-Age Club," and use LRC resources to get additional health-related information. The LRC also extended access to senior students, future physicians, looking for resources in preparation for their diploma courses.

The LRC at the Republican Clinical Hospital in Chisinau, Moldova has been developing patient information sheets on cardiosurgery, which will be distributed during hospital staff visits to different regions of the country. The staff will also deliver presentations, created using LRC resources.

The LRC at the Central Rayon Hospital in Schuche, Russia, has been publishing an information bulletin for patients treated in the gynecology and internal medicine departments. Patients recommend medical topics that they are most interested in, and then the duty nurse together with the LRC staff research the information and produce the bulletin.

The LRC at the Sea Port Polyclinic in Odessa, Ukraine, widened its outreach efforts by providing information on water and food safety, prevention and treatment of acute intestinal infections, and traveler's diarrhea to the port newspaper. These resources were also used to develop plans for water disinfection in offices and industrial plants.

The LRC at the Women's Wellness Center in Iasi, Romania, is planning to post women's health information on-line for the WWC patients and other Internet users, and is recruiting local computer science students to help with the update of the Center Web site.

The LRC at the City Hospital #25 in Donetsk, Ukraine, provided information resources for the partnership educational outreach campaign on the dangers of smoking. To prepare for this program, the LRC staff contacted colleagues in Russia to learn about new smoking cessation methods and researched articles with recommendations by physicians and psychologists. They also found a Web site that hosts a discussion forum by former smokers who share their experiences and offer advice to those wishing to quit smoking.

The information coordinator at the Armenian-American Mammography University Center in Yerevan, Armenia, conducted a training session among the AAMUC staff on the early diagnosis of breast cancer. The LRC resources were also used to develop an educational brochure "Cervical Cancer Can Be Prevented," which describes cervical cancer risk factors, preventive methods, and information about PAP smear. These brochures were distributed to the AAMUC staff for patient education purposes.

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## **6. Promoting LRC / Partner Sustainability**

The LRC at the Polyclinic #5 in L'viv, Ukraine, has become an Internet subprovider, offering the best quality of Internet connection in its city district. As a result, the quality of the Internet connection at the LRC has significantly improved and the status of the LRC in the community has risen. Shortly after setting up the subprovider connection, the LRC received its first customer – a local firm, linked to the LRC by a dedicated line. In the future, with an increase of customers, the LRC staff hopes to make its Internet connection costs self-sustainable.

The LRC at the Women Wellness Center in Kutaisi, Georgia, and the local medical college signed a contract offering medical students paid subscription to the LRC resources and services. The administration at the college has already paid for several students' subscriptions, which covers the use of the Internet, CD-ROMs, e-mail access and other resources at the LRC.

The LRC at the School of Public Health in Almaty, Kazakstan, is offering a new type of paid service – LCD projector and laptop computer rental. In October, the LRC equipment was used at the 3rd CIS Cardiology Congress in Almaty. The LRC also provides paid computer training and instruction on Microsoft Office products, e-mail, and Internet searching skills.

The LRC at the Family Medicine Center "Demeu" in Astana, Kazakstan has implemented a fee schedule for copying services, which covers the costs of paper supplies for the center.

As a part of a regional “Informatization of Medicine” program, the Stavropol Krai Clinical Hospital in Russia was chosen as the site for a regional teleconsultation center. The hospital began purchasing necessary software and equipment and has established new staff positions for a nurse-dispatcher and a programmer-engineer. The LRC is anticipated to become a part of a larger teleconsultation center, which will be financed through paid services and funds from the Stavropol Informatization of Medicine program.

In December, the Odessa State Medical University in Ukraine won a grant to participate in the WHO World Health Survey program. This project will evaluate the health status of the Ukrainian population and the level of satisfaction with the health care system in different regions of the country. LRC resources were used to help the OSMU staff develop the grant proposal, questionnaires and a business plan for this program.

The LRC at the Women’s Wellness Center at the Obstetrics and Gynecology Hospital in Tirana, Albania is participating in the data collection process for the WHO Mother and Child Health program. The LRC, with the help of a local technology company, will be receiving data from all regional obstetric and gynecology hospitals in Albania and transmitting it to WHO and the Albanian Ministry of Health. The results of this data collection project will be analyzed to determine the areas of intervention for maternal and child health care delivery in Albania. The staff of the LRC have also submitted a grant proposal for the creation of an obstetrics training course to the Soros Foundation.

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## **7. Best Practices/Recommendations for LRC Operations**

The LRC at the Odessa State Medical University in Ukraine has organized a prize competition to attract more practicing physicians and nurses. The rules are as such: each user receives 0 points for an information request, 5 points for working with printed materials or CD-ROMs for an hour, 10 points for independent Internet search for an hour, 50 points for participation in the Practice Standard Review process, 100 points for article preparation, and 100 points for participation in a teleconference. Physicians and nurses are eligible for a 10% bonus. The prize – a 2-hour dial-up card, a book or a CD-ROM – goes to users with 300 points. Users with 500 points can choose between a 10-hour dial-up card, a double CD-ROM or a book. Users with 1000 points can receive a weekend dial-up card (or 30 hours) or a book. The highest prize is the dial-up card for 100 hours and the LRC CD-ROM for users with 5000 points. In addition to points, the users have to complete a test on computer knowledge, which is conducted at the end of each month. The winner is the person with the highest number of correct answers. The winner can choose the prize based on his or her number of points. After this competition, the winner’s points drop to zero, but other contestants keep their points and can try their knowledge the following month. After only a couple of months of this contest, the LRC has noticeably increased the number of users among local practicing physicians and nurses.

Once a week, the LRC at the Mirkasimov Republican Hospital in Baku, Azerbaijan, conducts an Open House. The LRC staff familiarizes users with various Internet resources and offers basic computer training.

The information coordinator at the University of Medicine and Pharmacy in Chisinau, Moldova, has recruited a group of young faculty and students to support the daily activities of the LRC. The assistants’ responsibilities are divided into international relations (working with University partners, searching for grant opportunities), scientific research, interaction with other youth medical organizations, search for medical news, and search for general information (recreation, hobbies, etc).

With the help of the LRC, the University of Medicine and Pharmacy in Bucharest, Romania has recently improved its network, offering Internet access from every computer and individual e-mail accounts for all Master's degree students. The Cochrane Library, Health for All, and OECD databases were loaded on the server so that they are now accessible from every computer on the network.

The physicians at the dentistry department at Children's Hospital #4 in Minsk, Belarus used the LRC scanner to take pre- and post-surgical photos of patients with congenital cleft lip and palate. These images were later submitted to a medical journal.