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USP Drug Quality and Information Program (USP DQI)

Fourth Quarter Program Report – FY 2006

July – September 2006

Common Agenda

- C. Wachira, J. Carpenter, S. Phanouvong, A. Smine, J. Murphy, and K. Burimski met with RPM Plus and USAID to discuss activities in South-East Asia and to leverage on collaborations in the region.
- M. Foster researched and developed the USP DQI Branding Strategy and submitted it to M. Peddicord on July 21, 2006 in compliance with new rules fro USAID grantees; samples of USP DQI stationeries and website layouts were also submitted
- J. Carpenter and M. McGinnis revised the *Matrix of Drug Quality Reports in USAID-assisted Countries*; a copy was sent to WHO in New York, at their request
- M. Foster updated the "About USP DQI" flyer to reflect current programs
- A. Smine, C. Wachira, and M. McGinnis drafted a Drug Quality paper reflecting the current status of USP DQI, its programs and purpose; this paper was included in a packet of information sent to the CDC.
- S. Phanouvong participated in the 2006 World Congress of Pharmacy and Pharmaceutical Sciences, Salvador Bahia, Brazil, August 25-31, 2006, by way of a presentation on "Good Distribution Practices: Packaging, Storage, and Distribution" in a Symposium on Quality Issues on August 28, which was attended by some 80 delegates.

Mainstreaming

- J. Murphy, K. Burimski, and C. Wachira met with USAID and MSH-RPM Plus colleagues to discuss and finalize specifics of the drug registration technical assistance for Azerbaijan.
- J. Murphy assisted C. Wachira in drafting a START proposal for technical assistance activities for the USAID initiative in Azerbaijan
- J. Murphy drafted a technical brief on basic drug quality issues for use in USAID's "Maximizing Access and Quality" program, per a request from USAID

SO 2: Maternal Health

- L. Callahan revised the USP pharmacopeial monograph on oxytocin to include the temperature excursions for storage conditions as they relate to the use of oxytocin in developing countries

SO 3: Child Survival

- M. Hajjou, A. Barojas, S. Bradby, and A. Smine tested zinc samples from UNICEF and Tanzania
- A. Smine and E. Toledo provided SO3- Zinc partners with technical assistance regarding GMP
- J. Carpenter and A. Smine revised and submitted the Zinc Guidelines paper to WHO for review

- In close collaboration with USAID, E. Toledo has been working with Square Pharmaceutical, Bangladesh to prepare them for a GMP assessment, as USAID examines their potential as a zinc supplement supplier
- J. Carpenter, A. Smine, E. Toledo and C. Wachira met with the SO3 Zinc team to finalize FY07 workplan of activities
- J. Carpenter facilitated the review of revised zinc tablet monograph that includes the new data on disintegration by the USP expert committee and now it is up for public review

SO 4: HIV/AIDS

- D. Seyoum participated in the XVI International AIDS Conference in Toronto, Canada August 13 – 18, 2006. At a satellite symposium, he made the presentation on "Drug Resistance Mutations in HIV-1." This presentation was made to an audience of approximately 250 participants.
- B. Davani developed the monographs for Nevirapine Oral Solution and Nevirapine Tablets. These monographs are under public review; the monograph for Nevirapine Oral Solution will be published in USP NF 32(4), and the monograph for Nevirapine tablets will be published in USP NF 32(3).
- D. Seyoum worked on the development of information on antiretroviral drug interactions; this information will be disseminated on the USP DQI website and at a relevant conference in the future
- D. Seyoum reviewed HIV/AIDS related articles for the USP DQI website monthly update
- D. Seyoum reviewed abstracts for the International AIDS Society AIDS 2006 Conference

SO 5: AMR/Infectious Diseases

- D. Seyoum attended and participated in the 66th FIP Congress in Salvador de Bahia, Brazil August 25 – 31, 2006; at this congress:
    - Reported the status and successes of the working group on AMR to the FIP Information Section. The working group has also organized a symposium on Antimicrobial Drug Resistance (AMR) at the 66th FIP Congress. As one of the most active working groups, the AMR working group was invited to propose another symposium for the upcoming FIP Congress in Beijing; based on this invitation, on behalf of the working group, D. Seyoum will be proposing a symposium on other aspects of AMR.
    - As the chairman of the FIP Pharmacy Information Working Group on AMR, D. Seyoum organized and co-chaired a symposium on AMR at the 66th FIP Congress in Salvador de Bahia, Brazil. This symposium examined the many facets associated with AMR, including the status of AMR in various geographical locations throughout the world. The objective of this symposium was to enable the participants understand the causes and magnitude of the problem of AMR from a regional and a global perspective; understand the epidemiology, treatment, and prevention of community- and nosocomial-acquired antibiotic-resistant bacterial infections; define the roles of pharmacists and professional health organizations in setting strategies to reduce the problem of AMR; define the measures that should be taken to curb the problem of AMR. D. Seyoum also presented a paper entitled "Antimicrobial Drug Resistance – Overview" at this symposium.
- D. Seyoum participated in the 46th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) September 25 – 30, 2006, in San Francisco, CA
- D. Seyoum reviewed AMR/Infectious Diseases related articles for the USP DQI website monthly update
- D. Seyoum participated in the 46th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) September 25 – 30, 2006, in San Francisco, CA
- D. Seyoum reviewed AMR/Infectious Diseases related articles for the USP DQI website monthly update

Smolensk Medical Academy DIC (detailed activities report-Appendix 1)

- 3 students in Russia completed the Distance Learning Continuing Education Course provided by the Smolensk Medical Academy; 17 students are currently enrolled. 2 students completed the Distance Learning Continuing Education Course provided by secondary Distance Learning Continuing Education Centers, and 41 are currently enrolled. In total, 269 students from Russia and the NIS have completed the course, including 18 students trained by secondary Centers
- On the www.antibiotic.ru website, 40 new topics were added, including five devoted to seven to AMR five on HIV infection and one to STDs. Titles of selected topics include: "Antiretroviral medications associated with elevated blood pressure among patients receiving highly active antiretroviral therapy", "Influence of antiretroviral therapy during pregnancy on its outcomes", "Hepatic steatosis in HIV-infected patients with hepatitis C", "Suppressive antibacterial therapy with metronidazole to prevent recurrent bacterial vaginosis."

Vladivostok DIC (detailed activities report-Appendix 1)

- The Vladivstok DIC staff responded to more than 380 inquiries from health care professionals.
- Prepared information at the request of health care professionals of Primorski Krai on the following subjects: "Efficacy and safety of fosfomycin injections", "Safety of the drug Xeroform in neonates", "Surfactants use in adult patients with acute respiratory distress syndrome", "Clinical trials of paracetamol infusions in surgery."
- Participated in a multi-center Russian study "Indicators of quality of management of hospitalized patients with community-acquired pneumonia."
- Participated in the work of Central Regional Hospital and territorial Formulary commissions. Conducted expertise of 3 drugs proposed for inclusion/exclusion from Territorial Formulary

Ryazan Oblast Hospital DIC

- Ryazan Oblast Hospital DIC staff responded to 372 drug information inquiries
- Submitted 24 adverse drug reactions reports to the Federal Adverse Drug Reactions Center, 6 on antibiotics

Novgorod DIC

- The Novgorod DIC staff responded to 303 requests from health care professionals and consumers, including 99 requests on antimicrobials
- Participated in the development of new Oblast Formulary List for centralized medicines purchases.
- Submitted 3 reports about serious adverse drug reactions not listed in the drug package insert to Federal Adverse Drug Reactions Center
- Conducted 4 conferences for physicians of Novgorod and Novgorod Oblast. Problems of rational antibiotic therapy were discussed at all conferences

SO 5A: Tuberculosis

- D. Seyoum continued working on antituberculosis drug resistance and multidrug-resistant tuberculosis (MDR-TB). The final version of this review will be presented at a satellite symposium of the 37th Union World Conference on Lung Health of the International Union Against Tuberculosis and Lung Disease (IUATALD) in November in Paris, France
- D. Seyoum reviewed tuberculosis related articles for the USP DQI website monthly update

SO 5B: Malaria

- A. Smine and C. Wachira prepared the terms of reference and budget, secured funding, nominated participants, and continued to coordinate with RPM Plus and all partners to organize a drug quality workshop in Tanzania in November 2006
- A. Smine worked with USAID, WHO, and the Moroccan Center of Pharmacovigilance on the terms of reference and the planning of a Pharmacovigilance workshop for French Speaking African countries

- A. Smine participated in the HANMAT malaria network (Ethiopia, Eritrea, Sudan, Somalia, Yemen, Djibouti, and South Sudan), in which he conducted one day workshop on drug quality
- A. Smine met with two pharmaceutical manufacturers in Morocco to discuss ways of better supporting GMP manufacturing of essential drugs that are of interest to WHO, UNICEF, and USAID
- A. Smine met with the EMRO office and the USAID Mission in Cairo during a USP scientific workshop in Egypt to introduce USP and discuss possibilities of collaboration.
- C. Wachira, J. Carpenter and D. Seyoum drafted and submitted for consideration a comprehensive proposal for the development of a drug information center in Kenya to USAID
- A. Smine and M. Foster researched and produced a "Report on Drug Quality" for Senegal, Madagascar, and Ghana detailing USP DQI-activities undertaken to improve the quality of medicines in those countries; these reports were included in a packet of information sent to the CDC
- M. Foster and M. McGinnis developed a paper detailing the USP DQI program in Africa, which included information on each individual African country where USP DQI is active; these country profiles will be used to update the USP DQI website

- E&E-1: Freedom Support Act/Moldova/NIS (detailed activities report-Appendix 1)
- J. Carpenter and DIC staff met with the representative of the organization Pharmacists Without Borders to discuss future collaborative activity with regards to its Diabetic School training program for primary care doctors; the Center signed a memorandum of understanding with this organization to develop information about diabetes focused on diagnosis, monitoring, and management
- J. Carpenter was invited to speak about the importance of drug information to a group of 30 nurses attending a continuing education seminar at the Center of Continuing Education of Nurses and Pharmacists
- J. Carpenter met with USAID mission in Moldova and updated them on the status of the DIC in Chisinau
- J. Carpenter conducted the final assessment of the DIC established by USP DQI a year ago at the National Institute of Pharmacy in Chisinau, Moldova; the center will be supported by the agency and will continue to provide services to the various departments of the agency and the Ministry of Health

E&E-2: SEED Romania DIC (detailed activities report-Appendix 1)
- J. Carpenter met with the USAID mission in Romania and the US Consul in Cluj and briefed them on the current status of the DIC
- J. Carpenter visited, along with the DIC staff, Gheorghe Sincai grade school in a village outside Cluj and spoke to the children about avian flu. Staff disseminated leaflets and posters on AI prevention to the schoolchildren
- J. Carpenter conducted the final assessment of the DIC established by USP DQI two years ago at the Iuliu Hatieganu University of Medicine and Pharmacy in Cluj, Romania; the center will be integrated into the Department of Pharmacy and rotation at the center will be part of the pharmacy curriculum

RDM/A1 and 4: Mekong and Mekong Expansion
- J. Murphy, D. Seyoum, and S. Phanouvong participated in a training course for malaria program managers in drug quality monitoring and basic lab techniques in Manila, Philippines. S. Phanouvong was a co-instructor
- S. Bradby and L. Straker coordinated the purchase of essential lab equipment (1 HPLC and dissolution tester) for Laos National Drugs Quality Control Center
- C. Wachira, J. Murphy, A. Timmermans participated in a meeting to discuss infectious diseases base-line data survey methodology on July 1, 2006 in Bangkok, Thailand. Representatives from the USAID Mission for RDM/A, WHO Roll Back Malaria, Mahidol and Chulalongkorn Universities, Thai FDA, Department of Medical Sciences Vector Born Diseases Malaria, tuberculosis, and HIV/AIDS Clusters, and Pharmaceutical Systems Research and Intelligence also participated

- S. Phanouvong facilitated the preparation of and participated in a stakeholders' workshop on July 5-6, 2006, in Danang City, Vietnam, organized by the Ministry of Health's Drug Administration of Vietnam and the National Institute for Malariology, Parasitology, and Entomology. Also participating were 86 representatives from the Ministries of Health, Trade, Interior, and Customs; police, prosecutor, and provincial health agencies; and national priority health programs (Malaria, TB, HIV/AIDS). The participants exchanged experiences and lessons learned and discussed the way forward for more effective USP DQI support in ID medicines quality in Vietnam.
- S. Phanouvong and A. Timmermans assisted in the preparation of and participated in the "6th National Meeting on Food and Medicines - Strengthening Collaboration and Coordination of Key Stakeholders in Addressing the Problems of Counterfeit and Substandard Medicines, 16 – 18 August 2006, Vientiane, organized by the Ministry of Health and Department of Food and Drugs of Laos.
- S. Phanouvong participated in 18th Singapore Pharmacy Congress: Patient-Centred Practice, Innovation-Centred Research, June 30- July 3, 2006, by presenting a presentation in Bioequivalence and Quality Assurance Session on 'Drug Quality Surveillance for Detection of Counterfeit and Substandard Medicines: a Case Study on Antimalarials in Mekong Sub-region' on July 3, 2006. The session was attended by some 60 delegates, including FIP Vice-President and Scientific Secretary, who also gave a talk on bioequivalence issues.
- On August 7-11, 2006, per the request of the Asian Collaborative Training Network for Malaria (ACTMalaria), S. Phanouvong facilitated a Joint Training Workshop on Establishing the Antimalarial Drug Quality Monitoring for selected surveillance sites in the Philippines and Indonesia, in collaboration with the German Pharma Health Fund Foundation, and the Department of Health of the Philippines. Eighteen participants from drug quality regulatory agencies, national laboratories for drug quality control, and the national malaria control programs participated in the workshop.

RDM/A-3: AMR Survey

- J. Murphy continued working on clinical information on antimicrobial drug resistance to develop a paper for submission in peer-reviewed journal

RDM/A-5: Centers of Excellence in Quality Assurance of Medicines

- E. Toledo conducted a GMP assessment of the manufacturing unit at Mahidol University, Faculty of Pharmacy on July 16-18
- E. Toledo developed the Corrective Action Plan (CAP) for Mahidol that details the steps to address deviations from GMP standards
- J. Murphy visited with the three participating partners, Chulalongkorn and Mahidol in Thailand and UST-CeDRES in Manila, in August to discuss and finalize the workplans for FY06.
- J. Murphy drafted initial work plans (one for each of the participating institutions) and discussed them for input with C. Wachira and the USP DQI team for finalization
- E. Toledo in collaboration with J.Murphy, C. Wachira, and A. Timmermans in finalized the corrective action plan for Mahidol University's GMP facility for implementation.
- A. Timmermans met with PSyRIC and the Kenan Institute to finalize the establishment of a USP DQI office in Bangkok

RDM/A-6: HIV/AIDS

- J. Murphy, K. Burimski, and S. Phanouvong assisted in-country partners in Vietnam in preparing a draft proposal for activities intended to expand the role of pharmacists in the management and treatment of HIV/AIDS in Ho Chi Minh City

Cambodia

- E. Toledo and S. Phanouvong organized and conducted a training course on 'Good Manufacturing Practice Auditing fundamentals: Practical Application' in Phnom Penh, July 10-14, 2006, for 27

inspectors and internal auditors from the Department of Drugs and Food, and three major pharmaceutical companies in Phnom Penh (Cambodia Pharmaceutical Enterprise, Medical Supply Pharmaceutical Enterprise, and Pharma Product Manufacturer
- S. Bradby and L. Straker coordinated the purchase of essential lab equipment (one flurorospectrophotometer) for Cambodia National Laboratory for Drug Quality Control

LAC-1-Amazon Malaria Initiative
- A. Smine and V. Pribluda participated in the AMI steering committee meeting in Washington
- A. Smine wrote a drug quality chapter to be added to a review paper about AMI
- V. Pribluda and A. Smine participated in a Technical Meeting on the Quality of Malaria Medicines at the School of Pharmacy of the Federal University of Minas Gerais (Facultad de Farmacia de la Universidad Federal de Minas Gerais - UFMG) in Belo Horizonte, Brazil
- V. Pribluda and A. Smine visited four laboratories in Minas Gerais and Para, Brazil to assess their capability to support quality control for malaria medicines
- V. Pribluda coordinated, with the Official Medicine Control Laboratory in Guyana (FDD), a training session in GLP and laboratory techniques to be given during FY 07 Q1
- V. Pribluda collected country reports and prepared result summaries of the MiniLabs for October 2006 Steering Committee Meeting
- V. Pribluda collected and sent documentation for AMI external evaluation

LAC-2- South American Infectious Diseases Initiative
- A. Barojas, V. Pribluda, M. Hajjou, S. Bradby, and A. Smine reviewed QC data for antibiotic and anti-tuberculosis medication from Paraguay and Bolivia
- A. Smine and V. Pribluda participated in the SAIDI steering committee meeting in Washington
- A. Smine coordinated drug testing with the QC lab of Peru
- V. Pribluda and A. Barojas participated in a follow-up meeting for Logical Framework activities in Paraguay
- V. Pribluda collected and sent documentation for SAIDI external evaluation
- A. Barojas participated in the SAIDI-Paraguay Regional Meeting held in Asuncion, Paraguay
- A. Smine attended a SAIDI partners meeting in Lima, Peru
- A. Smine coordinated drug testing with the QC lab of Peru

Madagascar
- A. Smine coordinated the preparations for training one staff member on pharmacovigilance in Morocco for three months, in agreement with the USAID mission, WHO, and RPM Plus
- A. Smine reviewed the first report of data from 4 provinces in Madagascar and provided guidance on changes and budget for the next two rounds
- A. Barojas, S. Bradby and A. Smine assisted the QC lab in Madagascar in fixing the HPLC
- Dr. Smine arranged for three participants from Madagascar to attend the drug quality workshop in Tanzania

Senegal
- A. Smine and C. Wachira traveled to Senegal and reviewed the proposal from the National QC lab of Senegal to conduct a comprehensive study of the quality of artesunate in the private sector. They also met with the new Director of DRA, USAID, PNLP, MCP, and RPM Plus staff in Senegal
- M. Hajjou, A. Barojas, S. Bradby, and A. Smine tested ACT samples from the public sector in Senegal
- A. Smine arranged for three participants from Senegal to attend the drug quality workshop in Tanzania

Uganda

- N. Davydova worked with the National Drug Quality Control Laboratory (NDQCL) – Uganda to determine the specifications of necessary laboratory equipment to better serve the needs of the National Drug Authority (NDA) in testing antimalarial medicine and insecticides
- N. Davydova purchased equipment specified by NDQCL: HPLC and GC systems including Hydrogen, Nitrogen and Zero Air Generators, Air Compressor System, and Deionized water processor, and took responsibility for their shipment and installation
- N. Davydova and S. Bradby provided training of NDQCL staff and representatives from NDA and local pharmaceutical manufactures (total 19 participants) on good laboratory practices and major testing methods, such as HPLC, GC, Dissolution, and UV according to *International pharmacopeias*
- N. Davydova met with the NDA to discuss the proposed work plan and to provide guidelines on sampling and testing antimalarial drugs from the market to assess the impact of the training and to establish an antimalarial drug quality baseline
- N. Davydova met with USAID-Uganda to discuss the training and related activities which USP DQI provided to support NDQCL and discussed USP DQI proposed activities to further strengthen the NDA and drug quality control in Uganda.
- N. Davydova arranged for two participants from Uganda to participate in the drug quality workshop in Tanzania

Other activities

- A. Smine updated drug sampling guidelines for sentinel sites
- J. Carpenter participated in the Antiretroviral Program Management Issues in Low Resource Settings at Boston University, sponsored by both Boston University and WHO. This workshop had 50 participants from the US and other countries
- A. Smine drafted a concept paper about Pharmacovigilance for French speaking countries in Africa
- A. Smine drafted a concept paper about drug quality study of ACTs in selected African countries
- E. Ushkalova delivered a presentation devoted to problems of drug quality and counterfeiting at Russia Far East “Man and Drug” conference in Vladivostok
- J. Murphy drafted a presentation for the GFATM procurement and supply chain management meeting, scheduled in Copenhagen
- D. Seyoum reviewed articles submitted to the Bulletin of WHO. Articles reviewed include those related to tuberculosis and Essential Drugs
- S. Phanouvong followed up on the progress of developing the basic testing method for oseltamivir capsules with the German Pharma Health Fund (GPHF). The first testing protocol developed by the GPHF was submitted to USP DQI in mid-September 2006
- S. Phanouvong, A. Smine, E. Zhao and A. Timmermans collected and consolidated information, per the request of the USAID RDM/A Mission, on artemisinin production in China and the status of its manufacturers pre-qualification
- C. Wachira arranged for three participants and a presenter from Kenya to attend and participate in the drug quality workshop in Tanzania

Planned for Next Quarter

- Participate in WHO Regional Workshop for National Malaria Control Programs in Manila October 3-7, 2006 by presenting a talk on Field Monitoring of Antimalarial Drug Quality: Lessons Learned from the Mekong Experience
- Present at and facilitate the Africa Regional Drug Quality workshop in Tanzania.
- Present at and participate in the USAID RDMA Strategic Partners meeting in Thailand
- Present at USAID’s “MiniUniversity” continual education meeting.

- Develop Drug Quality curriculum for the USAID E-Learning platform in close collaboration with USAID and Johns Hopkins.
- Present at and facilitate a joint Pharmaceutical Management of Malaria workshop with RPM Plus in Cambodia
- Continue development of the third edition of the Infectious Diseases Textbook
- Start preparations for the USP DQI symposium at the "Man and Drug" conference in Moscow. Identify topics for presentations, speakers, invitees, etc.
- Conduct an assessment of and initiate USP DQI TA for Kenyatta National Hospital (KNH) in Nairobi, Kenya, Drug Information Center in Nairobi, Kenya
- Make a presentation on antituberculosis drug resistance and multidrug-resistant tuberculosis (MDR-TB) at a satellite symposium of the 37th Union World Conference on Lung Health of the International Union Against Tuberculosis and Lung Disease (IUATALD)
- Continue to review tuberculosis, malaria, HIV/AIDS, and AMR/infectious diseases-related articles for the USP DQI website monthly update
- Revise and disseminate *Matrix of Drug Quality Reports in USAID-assisted Countries*
- Finalize the zinc specification guidelines
- Assist in the preparation of and participate in the Inter-Ministerial Meeting in Phnom Penh, Cambodia on October 9-10, 2006
- Draft discussion document on rapid assessment of QA/QC in the medicines supply and distribution systems
- Develop and finalize the protocol for field testing '*Ensuring the Quality of Medicines in Low-Income-Countries: an Operational Guide'*

Appendix 1

Smolensk DIC:

- The Smolensk team moderated antimicrobial therapy forums for health care professionals on the www.antibiotic.ru site
- The Smolensk team developed and placed on the website Russian and English versions of the map of antimicrobial resistance in Russia (http://www.antibiotic.ru/map/rus/,http://www.antibiotic.ru/map/eng/)
- The online version of the Infectious Diseases Textbook was visited 58,964 times during this quarter, bringing the total number of visits to 3,371,414
- The online version of the Guide to Infection Control in the Hospital was visited 5,507 times this quarter, bringing the total number of visits to 217, 452
- E. Ushkalova wrote and published three articles on the rational treatment of infectious diseases in medical journals "Pharmateca"and "Trudnii patient" and the pharmaceutical journal "Da Signa": "Place of macrolides in the treatment of community-acquired pneumonia", "Clarithromycin in the treatment of respiratory infections", and "Azithromycin in the treatment of upper respiratory tract infections."
- E. Ushkalova reviewed AMR/Infectious Diseases-related articles for the USP DQI website monthly update
- The Smolensk team presented results of the Distance Learning Course to 350 participants at three conferences
- Six electronic drug bulletins from www.antibiotic.ru were e-mailed to 2529 subscribers.

Vladivostok DIC:

- Answered 382 requests from health care professionals, including 107 requests on antimicrobials
- Prepared information at the request of health care professionals of Primorski Krai on the following subjects: "Efficacy and safety of fosfomycin injections", "Safety of the drug Xeroform in neonates", "Surfactants use in adult patients with acute respiratory distress syndrome", "Clinical trials of paracetamol infusions in surgery."
- Participated in a multi-center Russian study "Indicators of quality of management of hospitalized patients with community-acquired pneumonia."
- Participated in the work of Central Regional Hospital and territorial Formulary commissions. Conducted expertise of 3 drugs proposed for inclusion/exclusion from Territorial Formulary
- Analyzed rationality of prescribing narcotic, psychotropic, and antibacterial drugs in the Central Regional Hospital of Primorski Krai (18 case reports). Developed a report on rationality of prescribing these drugs in the Central Regional Hospital of Primorski Krai in the first half of 2006
- Sent 21 reports about serious adverse drug reactions not listed in the drug package insert to the Federal Adverse Drug Reactions Center
- Developed, published, and distributed among health care professionals 100 copies of the new issue of the Drug Bulletin. The main topics of the Bulletin are:
  - Monitoring of rationality of antmicrobial therapy: the results of pharmacotherapy expertise in the city of Arseniev.
  - Probiotics: current scientific data.
  - Do nootropics have future from the positions of evidence-based medicine?
  - News of www.antibiotic.ru
- Consulted physicians of the Central Regional Hospital of Primorski Krai on rational pharmacotherapy of various diseases. 70 % of consultations concerned rational antimicrobial therapy

- Delivered 2 presentations at the Russia Far East "Man and Drug" conference in Vladivostok: "Medico-economic control of pharmacological treatment." and "Rational antimicrobial therapy from pharmacist's point of view."

Ryazan Oblast Hospital DIC staff:
- Answered 372 drug information requests
- Sent 24 adverse drug reactions reports to the Federal Adverse Drug Reactions Center, 6 on antibiotics

Novgorod DIC:
- Answered 303 requests from health care professionals and consumers, including 99 requests on antimicrobials
- Participated in the development of new Oblast Formulary List for centralized medicines purchases.
- Sent 3 reports about serious adverse drug reactions not listed in the drug package insert to Federal Adverse Drug Reactions Center
- Conducted 4 conferences for physicians of Novgorod and Novgorod Oblast. Problems of rational antibiotic therapy were discussed at all conferences

Russia Far East Project
- Seventeen students are enrolled currently in two Vladivostok Distance Learning Continuing Education Centers; thirteen have completed the course in total

E&E-1: Freedom Support Act/Moldova/NIS
- The Center developed a 1 year summary of activities (attached to trip report)
- The DIC is now involved in reviewing new drug dossiers for regulatory approval
- The DIC provides the necessary information to the MoH, with regards to procurement of medicines for the hospitals in the country

Moldova DIC of the National Institute of Pharmacy:
- Answered 118 requests from pharmacists, physicians, and nurses
- Developed, published, and distributed among health care professionals 3500 copies of the Drug Bulletin devoted to rational drug use, including antimicrobials
- Conducted two DIC presentations for pharmacists and nurses in out-patient settings of Chisinau.
- Delivered a poster-presentation about DIC activities at the international exhibition MoldMEDIZIN & MoldDENT
- Participated in round table discussions of "Actual Issues of Pharmaceutical Activities" at MoldMEDIZIN & MoldDENT

E&E-2: SEED
- The Cluj DIC developed a 2 year summary report of activities (attached to trip report)
- The Cluj DIC started collaborative activities on AI with John Snow International re: information awareness campaign
- Information leaflets developed by the DIC and disseminated in schools in Cluj and surrounding areas were used by an NGO, A Better Life in Moldova (a partner of Moldova World Children Fund), for distribution to abandoned children in Moldova, especially in boarding schools and orphanages that keep poultry farms for the protein supply of the children.