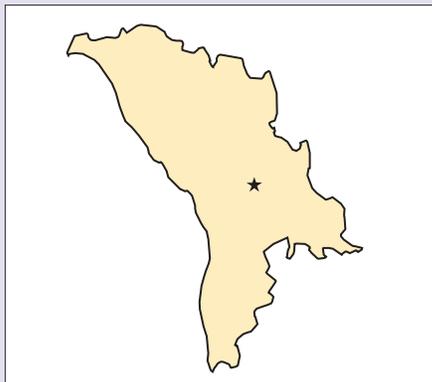


Republic of Moldova



- **Capital:** Chisinau (Kishinev)
- **Area:** 33,851 sq km
- **Population:** 3,656,843 (July 2012 est.)
- **Age Structure:** 0-14 years: 15.5% (male 344,101/female 325,995); 15-64 years: 74% (male 1,550,386/female 1,643,108); 65 years and over: 10.4% (male 164,512/ female 286,275) (2011 est.)
- **Life Expectancy at Birth:** Total population: 69.51 years; male: 65.64 years; female: 73.63 years (2012 est.)
- **Infant Mortality Rate:** Total: 13.65 deaths/1,000 live births; male: 15.59 deaths/1,000 live births; female: 11.58 deaths/1,000 live births (2012 est.)
- **Literacy Rate:** Total population: 99.1%; male: 99.7%; female: 98.6% (2005 est.)
- **GDP:** \$11.93 billion (2011 est.)
- **GDP per Capita:** \$3,400 (2011 est.)

U.S. CDC Direct Country Support

The cooperative agreement *Enhancing Pandemic Preparedness and Response Capacity in the Republic of Moldova* began in August 2009. FY 2011 was the third year of funding through the agreement. The Moldovan Ministry of Health (MOH)/National Centre of Public Health (NCPH) is working with the U.S. Centers for Disease Control and Prevention (CDC) under this agreement to strengthen human and infrastructure capacities for pandemic preparedness, influenza surveillance, monitoring and early response, communication and infection control.

Cooperative agreement activities were implemented by national counterparts from the ministries of agriculture, information, education, internal affairs, and trade and tourism, in close collaboration with the World Health Organization (WHO) Regional and Country Offices and other international partners.

Surveillance

In 2006, Moldova implemented hospital-based surveillance in nine sentinel sites, where data was collected on acute respiratory infection (ARI), influenza-like illness (ILI), and severe acute respiratory infection (SARI). National counterparts began to update the documents for implementing the integration of laboratory-based surveillance in accordance with recommendations made by CDC and WHO experts on a site visit. The MOH started laboratory-based surveillance at five sites in 2011. The doctors swab ARI, ILI and SARI cases following a case definition and sampling algorithm. Each sentinel site reports data to the National Viral Laboratory (NVL), which publishes regular surveillance reports regarding epidemiologic and laboratory data and reports weekly information through WHO's EuroFlu network.

Surveillance Activities

- Guidelines for data collection (ARI, ILI, and SARI) in the national influenza surveillance networks were adapted to international case definitions, following WHO requirements and CDC recommendations.
- Guidelines for sample collection, storage and shipment from sentinel sites to the NVL were developed.
- A MOH order for implementing laboratory-based sentinel site surveillance was approved.
- Five sites participated in integrating hospital and laboratory-based surveillance.
- Epidemiology, Laboratory, and Network Coordinators from NCPH made supervisory visits to influenza sentinel sites.
- The MOH National Focal Point of International Health Regulations 2005 (IHR) has provided the notification of new influenza cases and deaths to the WHO Focal Point.

Laboratory

The NVL was renovated for BSL-2 and BSL-2+ capabilities with the financial support of a World Bank project. The laboratory was fitted with new equipment to support these levels of influenza testing. Experts from CDC and WHO assessed laboratory capacity, provided recommendations for improvement, and provided assistance to national counterparts in the NVL in their efforts to become a National Influenza Center (NIC). The NVL uses molecular diagnostics (i.e. PCR), virus isolation and antigenic characterization techniques.

The NVL performs confirmatory ARI, ILI and SARI testing on suspected cases and provides support for training in specimen collection and quality control.

Laboratory Activities

- Developed standard operating procedures (SOP) for the shipment of specimens from sentinel sites to the NVL.
- Procured consumables and reagents for laboratory diagnosis of influenza.
- Purchased hardware for the reporting of results from the influenza laboratory network at the national level to WHO and other international partners.
- Tested 482 influenza specimens from sentinel and outbreak sites. A total of 266 samples tested positive, including 154 for 2009 H1N1, 41 for influenza A (H3N2), and 71 for influenza B.
- Submitted a total of 65 positive clinical samples which were confirmed by the WHO Collaborating Center in London as part of WHO Global Influenza Surveillance and Response System (GISRS). The WHO Shipment Fund Project covered in transportation costs.
- Participated in the WHO External Quality Assessment Project (EQAP) for the detection of influenza virus subtypes A and B.
- Conducted supervisory visits and provided logistical support to sentinel sites in the influenza surveillance network.

Preparedness

The 2009 H1N1 influenza pandemic revealed challenges and gaps in the *National Pandemic Preparedness Plan (NPPP)* in 2009. Intersectoral interaction, coordination and communication proved to be weaker than expected, and public and private sector organizations and essential services providers were not sufficiently engaged in pandemic preparedness and response. A NPPP working group updated the plan to ensure a high-level political commitment and involvement by the whole of society.

Pandemic Preparedness Self-Assessment Indicators were developed and tested in collaboration with ECDC and WHO partners.

Preparedness Activities

- An intersectoral working group was established to review and update the NPPP.
- The existing legal framework for pandemic preparedness and sentinel surveillance was adjusted based on the recommendations of the NPPP working group and international experts: 1) case definition guidelines and clinical management protocols were elaborated; 2) a set of documents related to preventive measures was issued; and 3) documents for implementing laboratory-based sentinel surveillance were approved.
- The MOH held a successful series of national planning exercises.
- Assessed national capabilities for pandemic preparedness and response together with ECDC and WHO using monitoring and evaluation tools to optimize planning.

Training

Moldova hosted the following training activities:

- A workshop on influenza surveillance and pandemic response, and collection and analysis of ARI, ILI and SARI data from the sentinel sites was held for 150 people.
- A series of training courses on strengthening the informational system for epidemiological alert and sentinel-based surveillance was held for 240 participants.
- Sixty participants attended regional seminars for sentinel sites with discussion on the following topics:
 - Improvement of the biosafety sample collection and shipment to the NVL.
 - Improvement of the process of information collection for ARI, ILI, and SARI based on a standard case definition.
 - Strengthening the reporting system of ARI, ILI, and SARI by improving the process of preparing and providing regular weekly reports at the national and international levels.
 - Improvements of the storage condition of original clinical materials to ensure cold chain condition was mentioned for epidemiologists, laboratory staffs, and clinicians.

Publications

- Browning, DM, Zwetyenga, J., Best practice for developing standards for infectious disease laboratories in Europe, WHO Regional Office for Europe. World Health Organization (WHO). Regional Office for Europe. 2010. E-publication.

Contacts

Radu Cojocaru, MD, PhD
Program Manager
Department for Surveillance of Extremely Dangerous Pathogens
National Centre of Public Health
Chisinau, Moldova
Email: rcojocaru@cnspl.md; radu_cojocaru@hotmail.com

Angelina Ursu, MD, MPH
Executive Coordinator
Avian Influenza Control and Human Pandemic Preparedness and Response
National Centre of Public Health
Chisinau, Moldova
Email: cphm_md@yahoo.com

Ion Bahnarel, PhD, MD, MPH
General Director
National Centre of Public Health
Chisinau, Moldova
Email: ibahnarel@cnspl.md

Stela Gheorghita, MD, PhD
Epi Coordinator
Department for Surveillance of Infectious Diseases
National Centre of Public Health
Chisinau, Moldova
Email: sgheorghita@cnspl.md

Igor Spinu, MD, PhD
Network Coordinator
Department for Influenza Surveillance
National Centre of Public Health
Chisinau, Moldova
Email: ispinu@cnspl.md

Veronica Dubalari, Biol
Lab Coordinator
Department for Influenza Surveillance
National Centre of Public Health
Chisinau, Moldova
Email: influenza@cnspl.md