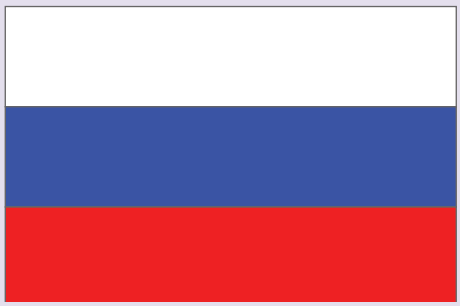
Russian Federation



- **Capital:** Moscow
- **Area:** 17,098,242 sq km
- **Population:** 138,082,178 (July 2012 est.)
- **Age Structure:** 0-14 years: 15.2% (male 10,818,203/female 10,256,611); 15-64 years: 71.8% (male 47,480,851/female 52,113,279); 65 years and over: 13% (male 5,456,639/female 12,614,309) (2011 est.)
- **Life Expectancy at Birth:** Total population: 66.46 years; male: 60.11 years; female: 73.18 years (2012 est.)
- **Infant Mortality Rate:** Total: 9.88 deaths/1,000 live births; male: 11.36 deaths/1,000 live births; female: 8.3 deaths/1,000 live births (2012 est.)
- **Literacy Rate:** Total population: 99.4%; male: 99.7%; female: 99.2% (2002 census)
- **GDP:** $1.85 trillion (2011 est.)
- **GDP per Capita:** $17,000 (2011 est.)

Highlights

- Organized sentinel surveillance for severe acute respiratory infection (SARI) in 18 hospitals.
- Implemented real-time RT-PCR in 45 regional base laboratories (RBL) for influenza surveillance.
- Recognized the Research Institute of Influenza (RII) as a World Health Organization (WHO) National Influenza Center (NIC).

U.S. CDC Direct Country Support

The cooperative agreement *Sustaining and Enhancement of Influenza Surveillance and Response* was awarded to the Russian Federation in September 2011. This agreement aims to enhance the level of preparedness and response to annual influenza epidemics and future pandemics.

Influenza activity during the 2010–2011 season was high and associated mainly with influenza A(H1N1) pdm and influenza B viruses. The group most affected was children. Sentinel surveillance data determined that patients with chronic cardiovascular and lung diseases, asthma and healthy, pregnant women should be priority groups for vaccination.

The U.S. Centers for Disease Control and Prevention (CDC) provided support by analyzing and presenting findings on conclusive antigenic analysis of influenza strains isolated in Russia.

Surveillance

Influenza activity is supported through collaboration with 49 regional base laboratories (RBL) which send weekly data to the NIC on acute respiratory infections (ARI), influenza-like illness (ILI) morbidity, hospitalization and death cases. Laboratory information including virus isolation, indirect immunofluorescence assays (IFA) and RT-PCR data resulting from investigation of identified patients are

also required. Isolates are sent to the NIC for antigenic and genetic investigation. As a result of integration of epidemiological and laboratory data, and comparison of intensity of morbidity with epidemic thresholds and baselines, an epidemic's beginning and ending can be determined in each region.

Surveillance Activities

- Conducted supervisory visits to sentinel sites and RBLs in Kaliningrad and St. Petersburg.
- Implemented the WHO European Regional Office (EURO) requirements and CDC recommended surveillance standards.
- Established internet connectivity between the NIC and 49 RBLs at the Federal Center for Hygiene and Epidemiology.

Laboratory

The Russian NIC at RII has worked closely with CDC to establish state-of-the-art laboratories. Virologists and epidemiologists from NIC laboratories participated in training courses with scientists from CDC and RII on typing, subtyping, PCR, real-time PCR and reverse genetics techniques. Notable progress in laboratory surveillance capacity has been achieved over the past five years, and the success of this partnership has led to significant enhancements benefiting both Russia and the Global Influenza Surveillance and Response System (GISRS). The Russian influenza surveillance network now includes 59 laboratories throughout Russia which are working in collaboration with two NICs—one in St. Petersburg and one in Moscow.

Laboratory Activities

- Tested 9,565 specimens for influenza virus isolation (580 were positive for influenza).
- Tested by rRT-PCR a total of 49,934 specimens (12,224 of them were positive for influenza).
- Submitted 26 influenza viruses in a lyophilized condition to the WHO Collaborating Center (CC) in Atlanta and another 26 influenza viruses to the WHO CC in London as part of WHO's GISRS.
- Conducted two supervisory visits and provided consultative support to laboratories in the network.

Preparedness

CDC support, through WHO, has considerably advanced the pandemic influenza preparedness pandemic plan which could be used as a model for updating pandemic plans in other countries adjusting specific state resources and possibilities. An analysis of the previously implemented pandemic preparedness plan was conducted at RII.

Preparedness Activities

- Included new suggestions in the State pandemic plan and regional pandemic plans are currently under development.

Training

The NIC at RII continues to provide technical assistance and training to ensure the functionality of the sentinel surveillance system (SS) in Russia and Commonwealth of Independent States (CIS) countries. The following trainings were organized:

- Training of virologists from nine sentinel RBLs in influenza virus isolation and identification at the NIC.
- Training of nine epidemiologists from sentinel RBLs in operation sequences to input sentinel surveillance data into the automated computer database at RII via the internet.

- Training of 18 workers from nine sentinel RBLs on completing the new SS forms. Six NIC scientists provided lectures during this seminar.
- Training of epidemiologists and virologists from six CIS countries in influenza virus isolation and identification at the NIC: "Strengthening Capacities of Influenza Laboratory Experts: WHO Practical Course on Influenza Virology" in Saint Petersburg, the Russian Federation, May 16–20, 2011.

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