

**National Center for Disease Control
and Public Health (NCDC)
Of Georgia**



In 1995 under the health sector reform, the system of Sanitary Epidemiological Station (SES) coming from Soviet period was divided into two separate units: Sanitary Inspection and the Public Health Service.

NCDC was built on the foundation of the Georgian Station for Plague Control, established in 1937; Research Center for Especially Dangerous Pathogens since 1992; NCDC with integrated epidemiological units from SES since 1996; Integration of Center of Medical Statistics with the NCDC in 2003; Integration of the functions of MoH Public Health Department to the NCDC in 2007.



The NCDC has been designated as a central agency for public health. As part of the decentralization process, the Centers of Public Health (CPH) were established by local/municipal governments. They implement surveillance, routine disease control measures, immunization programs, and coordinate other prevention



activities. Health care facilities are now stand-alone, independent, legal entities.

NCDC is Legal Entity under Public Law, reports to MoH, and now employs 440 personnel - 65% are specialists with a university education and 35 of them have advanced scientific degrees. The main responsibilities of the NCDC include:

- Surveillance on communicable and non-communicable diseases;
- Control and prevention of public health diseases;
- Outbreak investigations;
- IHR National Focal Point;
- National Immunization Programme;
- National Referral Laboratories;
- National Repository of EDP's;
- Medical statistics;
- Health promotion;
- Training and continuing education;
- Ensuring biosecurity and biosafety.



Communicable diseases surveillance guidelines are developed and implemented based on the WHO recommendations (USAID funded project). They cover VPDs, diarrheal diseases, viral hepatitis, meningitis, and rabies and include: standard case definitions; case registration, notification, reporting requirements; data analysis; case/outbreak investigation and response; feedback and supervision of surveillance activities; protocols for sample collection, storage, and transportation for laboratory investigation.

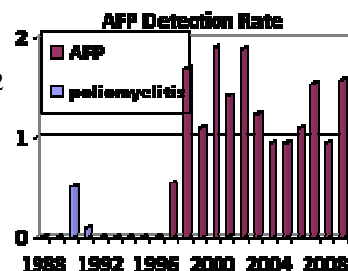
Most of Laboratories are supplied with new laboratory equipment to meet modern requirements. The BSL2+ Lab Space is 452 sq.m, BSL2 Lab Space – 170 sq.m.

National Polio Laboratory :

Accredited by the WHO since 2001;

Isolated last wild poliovirus in Europe (imported from India) in 2002 before the certification of the Region as a polio-free;

Providing support to Armenia in laboratory investigation of AFP cases and their contacts.



National Influenza Center (NIC), recognition of by the WHO—2007;

Sentinel surveillance stations throughout the country;

Diagnostic capacities at NIC:

Real Time RT-PCR for Influenza A (Matrix, H1p,H1, H3, H5) and B;
further sub-typing by HIA;
IFA – Influenza A and B, Adenoviruses, Parainfluenza viruses, RSV;

Virus isolation on MDCK cells and

Measles and rubella laboratory – accredited by WHO since 2004.

Diphtheria and other respiratory infections laboratory – part of DIPNET and is starting to participate in meningococcal WHO network.

Cholera and other intestinal infections laboratory – part of Global Salmonella Surveillance.

NCDC is designated National Focal Point under the International Health Regulation responsible within its respective jurisdiction for the implementation of health measures under the IHR.

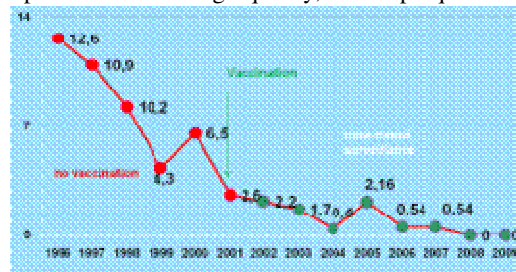
Management mechanism for Pandemic Influenza A(H1N1): Cooperation between IHR National Focal Point (NCDC), MoH, MoF (Customs) and MIA (border control) resulted timely detection and mitigation of influenza cases: First imported case – 17 July 2009; First imported cluster (14 cases) – 30 July 2009; In-country transmission of A(H1N1) – November 2009.



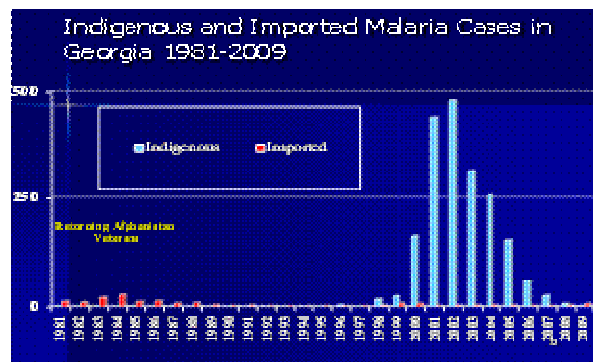
Immunization is a high priority for Georgian Government – procurement of high-quality, WHO-prequalified vaccines, accessibility for all population, implementation of new vaccines in the National Immunization Programme.



Georgia, along with other malaria-affected countries of the WHO European Region, is currently in the malaria elimination phase. It takes us closer to the day when the national goal may be



achieved, and elimination of malaria will be officially proclaimed on the whole territory of Georgia. The successful achievements in malaria control and elimination and the role that the WHO Regional Office for Europe plays in this process were presented to and noted with satisfaction by the Medical Committee of the Parliament of Georgia, which was held on 26 April 2010.



With these great achievements in the field of malaria, unfortunately, our country still faces problems related to Visceral Leishmaniasis (VL): during the last three years 522 cases of this disease (of which 5 were fatal) were recorded in Georgia. More than 90% of those affected are children under 5 years of age, and some of the adults are co-infected with HIV.



In addition to rapid detection and response to outbreaks NCDC carry out molecular-epidemiological investigation and characterization of especially dangerous and other newly isolated pathogens compared them with stored in the Live Culture Museum. Various molecular diagnostic and typing techniques are used like PCR, Real-Time PCR, Nested



PCR, RAPD; IS-fingerprinting, PFGE, MLVA, RFLP, SNP, Sequencing.

International Collaboration:

WHO- Sentinel Surveillance of Rotavirus Gastroenteritis; Sentinel Surveillance of Meningitis; Laboratory Surveillance for Measles-Rubella; Laboratory Surveillance for Polio

CDC - Surveillance and Response of Avian and Pandemic Influenza

GFATM - Consolidation of achievements: Prevent Malaria Epidemic

GAVI - Implement of Pentavalent vaccines, Enhancing the System

VRF - Hepatitis B prevalence in Pregnant and Medical Workers

BP - Monitoring of Pipeline Rout Epidemiological Situation

NAMRU 3, DOD/DTRA - Laboratory Research of Fever Diseases

DSTL, UK - Cell mediated-Immunity of Brucellosis

EU/UNDP -Tobacco, Alcohol and Other Drugs Use in Georgian Students; pilot study rigorously following criteria of ESPAD

UNFPA, UNICEF, USAID, CDC- Reproductive Health Survey (2000, 2005, 2010)

USAID/Save the Children-US, Georgia Field Office - Nutritional Status of Children Under Five Years of Age in Six Regions of Georgia 2000-2001

UNICEF -Georgia National Nutrition Survey 2009

DHHS, CDC - Southern Caucasus Field Epidemiology and Laboratory Training Program

UNIVERSITY of PATRAS, Greece – Iodine Deficiency survey

EU TACIS - PRIMARY HEALTH CARE REFORM SUPPORT PROJECT



Development of the Health Promotion Strategy and Implementation plan;

Implementing standardized population behaviour risk-factor survey using WHO's STEPS instrument/methodology and analysis framework ;

Strengthening regional Public Health structures and Support development of NCDC public laboratory system - construction of NCDC 5 Regional Laboratory and rehabilitation of Kutaisi and Batumi branch offices of NCDC.

Georgian translation of WHO's 10th edition of the 3rd volume of ICD-10.

DTRA /CTR - Establish an Integrated, Secure and Sustainable Disease Surveillance System— construction of CRL, three ZDLs and four Regional Laboratories.

Completed and ongoing joint research projects at the NCDC:

International Training and Research in Emerging Infectious Diseases – Fogarthy Center, NIH; University of Maryland , Baltimore, SUNY, Albany, NY

Enhanced Epidemiologic and Laboratory Diagnostic Capacity for the Control of Botulinum Intoxication. Collaborator: CDC, Atlanta, GA.

Prevention of Amebiasis and Creation of Diagnostic Test-Systems for *E. histolytica* Strains Isolated in Georgia. Collaborator: University of Virginia Health System, Charlottesville, VA.

Molecular Epidemiology and Antibiotic-Resistance of Bacterial Infections. Collaborator: University of Maryland , Baltimore, MD.

Clinical and Molecular Epidemiology of Drug-Resistant Tuberculosis in Georgia and the Caucasus. Collaborator: Emory University, Atlanta, GA.

Epidemiology, Molecular Characteristics and Clinical Course of HCV Infection. Collaborator: Johns Hopkins University, Baltimore, MD.

Epidemiological, Clinical and Microbiological Studies of *Helicobacter pylori* Infection and Public Health Diagnosis and Treatment to Reduce Burden of Clinical Illness. Collaborator: CDC, Atlanta, GA.

Development of Surveillance System and Control Strategy for Leishmaniasis in Georgia by means of Epidemiological Investigation and Strengthening Laboratory Capacities. Collaborator: NIAID, Bethesda, MD.

Improvement of Hospital Infection Control Practice in Georgia through Fundamental Change in the Medical Role and Economic Structure of Microbiology. Collaborator: Minnesota Department of Health, Minneapolis, MN.

Application of Molecular Fingerprinting to Geographical Characterization and Epidemiological Surveillance of Natural foci of *Yersinia pestis* and *Francisella tularensis* . Collaborator: Lawrence Livermore National Laboratory, Livermore, CA.

Clinical and Molecular Epidemiology of Meningitis Caused by Enteroviruses. Collaborator: CDC, Atlanta, GA.

Salmonella Surveillance in Georgia. Collaborator: CDC, Atlanta, GA.

Ecology, Genetic Clustering, and Virulence of *Yersinia pestis* Strains Isolated from Natural Foci of Plague. Collaborators: U.S. Army Soldier and Biological Chemical Command, Edgewood Chemical Biological Center; University of Maryland School of Medicine, Baltimore, MD.



Ecology, genetic clustering, and virulence of major bacterial and viral pathogens in Georgia. Collaborators: Armed Forces Institute of Pathology; Albany Medical College; Naval Medical Research Center; University of Florida; University of Maryland.

Diagnostics, Laboratory and Epidemiological Assessment of Brucellosis in Georgia. Collaborators: U.S. Army Medical Institute of Infectious Diseases, Walter Reed Army Institute, Louisiana State University.

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