



**USAID** | HEALTH SYSTEM  
FROM THE AMERICAN PEOPLE | STRENGTHENING PROJECT



MINISTRY OF LABOUR  
HEALTH AND  
SOCIAL AFFAIRS

# **Health Management Information System (HMIS) Georgia**

**USAID Health System Strengthening Project (HSSP)**

**January**

**2013**

**Implemented by Abt Associates, Inc. in collaboration with MD Informatics**

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## **HEALTH MANAGEMENT INFORMATION SYSTEM (HMIS)**

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The Georgia Health Management Information System (HMIS) is a comprehensive system that captures and manages information on all aspects of healthcare in Georgia. It provides connection among the key players in the healthcare sector, such as the Ministry of Labor, Health and Social Affairs of Georgia (MoLHSA), insurance and pharmaceutical industries, health service delivery sector, the population and various Governmental entities. The project is being implemented with the support of Abt Associates Inc. and MDI Informatics within the USAID Health System Strengthening Project (HSSP).

Since early 2011 the USAID Health System Strengthening Project (HSSP) has been extensively engaged with the Ministry of Labor, Health and Social Affairs of Georgia (MoLHSA) in the area of the HMIS development. The assistance was triggered by the challenges faced by the MoLHSA over the past years, such as: lack of standards and proper management tools for information collection, exchange and analysis; poor business practices at all industry levels; human and other resource constraints.

The HMIS System enables and will further assist the MoLHSA to make informed decisions in all critical domains, establish standards for reporting and real-time information exchange, ensure high-level of security and confidentiality of sensitive and patient proprietary information; furthermore, improve the administration, execution and monitoring of expenditures and establish productive partnerships with the parties involved. The HMIS System will also create a strong basis for prudent statistical data collection and analysis, improve the quality and responsiveness of services and strengthen the role of the MoLHSA as the regulator in terms of promotion of clinical and organizational excellence and performance management of the system.

The HMIS System incorporates the world experience in terms of international standards and best practices, which ensures global comparability and compatibility with various institutions worldwide. At the same time, the system is customized to respond the unique needs of Georgian citizens and the country's healthcare system.

The fully integrated system provides real-time information exchange at local, regional and international levels. Currently the system is linked to the Civil and Public Registries, insurance and pharmaceutical industries, healthcare providers and the Revenue Service (Customs Department).

Implementation of the HMIS System brings several social benefits in terms of increased knowledge and level of accessibility of citizens to accurate information

through notifications and citizen portals. On a more general level, standardization and streamlining of business processes shall contain and optimize administrative and human resources, hence improve the overall efficiency and performance of the system.

## **THE HMIS SYSTEM COMPONENTS**

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### **1. THE HMIS PORTAL**

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The HMIS Portal is the main Web entry page for accessing the different components of the HMIS System. From this user-friendly page the user can easily navigate to the different modules and components of the HMIS System. The portal is viewable by most Web browsers running on most operating systems.

### **2. REGULATION OF MEDICAL ACTIVITIES**

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This component has several modules, which in combination allow for better governance and regulation of medical facilities, staff and activities.

#### **2.1 *MEDICAL STAFF CERTIFICATION/ACCREDITATION MODULE***

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The module is a central register of certified medical staff (physicians at this time). It provides information on active and passive certificates, medical staff history (including certificates of passing training courses), and in case of suspension/withdrawal of the license, allows automatic notification to relevant healthcare facilities.

Key benefits of the Medical Staff Certification/Accreditation module:

- Improved efficiency and information accuracy through a central register of medical staff, including their academic education, training, certificates, and experience
- Improved patient safety through reliable and timely information about active and passive certificates
- Improved decision support and policy making through accurate reports on medical activities and certified medical personnel

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## 2.2 HEALTHCARE FACILITIES LICENSING/PERMITTING MODULE

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This module is a central register of healthcare facilities, their ownership structure, and their status.

Key benefits of the Facilities Licensing/Permitting module:

- Improved efficiency and information accuracy through a central register of facilities, including legal succession, licenses and permits
- Improved transparency on suspension/revocation of the right to medical activities
- Improved decision support through analysis and tracking of historical data

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## 3. ACCOUNTING AND FINANCIAL MANAGEMENT

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The Accounting and Financial Management is a complex system consisting of the following modules:

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### 3.1 BENEFICIARY REGISTRATION MODULE

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This module captures information on beneficiaries assigned to primary health care centers for which the government provides some level of funding. The module covers General Outpatient Care, Rural Doctors Program and Dialysis and Psychiatric Care Programs. Other outpatient programs can be added easily. The data quality is enhanced through online connection with the databases of Civil Registry (CRA), Social Service Agency (SSA), and National Agency of Public Registry (NAPR).

Key benefits of the Beneficiary Registration module:

- Registration of individuals with healthcare facilities prevents duplications
- Simplified administration and optimization of funds and resources
- More accurate reports including lists of beneficiaries by provider for different outpatient programs to support decision making
- Accurate calculation of payments to providers for making budgeting easier and more timely

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### 3.2 CASE REGISTRATION MODULE

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The Case Registration Module enables online monitoring of government-funded inpatient and most outpatient cases (especially dangerous and contagious

conditions). It captures information about patients, their service providers, insurance coverage, diagnosis and outcome. The module is currently implemented for Government healthcare plans and can be expanded to other plans as well. The data quality is enhanced through online connection with the databases of Civil Registry (CRA), Social Service Agency (SSA), and National Agency of Public Registry (NAPR).

Key benefits of the Case Registration module:

- Real-time registration of cases based on common standards and immediate provision of this information to the involved parties
- Prevention of simultaneous registration of individuals at different healthcare facilities, hence prevention of duplications and fraud
- Flexible tool for medical case inspection and analysis

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### 3.3 HEALTHCARE PROGRAM FINANCING MODULE

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This module helps optimize state funds and state-funded programs by monitoring budgets, administering changes, automating submission of service data and generating corresponding treasury bills/payments. The system can be used by the SSA, the National Center for Disease Control (NCDC), the Ministry of Health and Social Affairs of the Autonomous Republic of Adjara, Tbilisi Municipality, among others.

Key benefits of the Healthcare Programs Financing module:

- Improved contract efficiency through electronic registration of contracts concluded with healthcare facilities for different programs and their terms and conditions
- Improved control and analysis of estimations submitted by healthcare facilities
- More accurate payments to healthcare facilities
- Improved decision making and policy making through analysis of financial resource flow for different healthcare programs

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### 3.4 E- REPORTING MODULE

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The e-Reporting module receives financial and statistical information about medical services rendered under state-funded health insurance programs and provides detailed reports to insurance companies and healthcare facilities.



Key benefits of the e-Reporting module:

- Reduction of errors through automation, common standards for data registration and exchange and data validation using registries of internal and external agencies
- Improved transparency of financial information, prevention of fraud and reduction of administrative waste
- Improved decision making by providing multi-level analysis of information provided

## 4. MEDICAL CLASSIFICATIONS MODULE

This module is a flexible tool to provide facilities and stakeholders with accurate and comprehensive information about international and local medical classifications (ICD10, ICPC2, NCSP and Laboratory Classification) approved in Georgia and their interrelations.

Key benefits of the Medical Classification module:

- Improved data quality through a complete database of medical classifications approved in Georgia (ICD10, NCSP, ICPC2, laboratory classification), constantly updated
- More efficient management of classifications from a central location
- Improved inter-operability and information exchange through the use of common standards

## 5. PHARMACEUTICAL COMPONENT

The Pharmaceutical Component consists of the following modules that provide pharmaceutical information tracking and reporting:

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### 5.1 PHARMACY MODULE

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The Pharmacy Module captures information on pharmacies, their licensed activities, and their owners. The information is validated online with the National Agency of Public Registry (NAPR) and is connected centrally to other modules in the HMIS system.

Key benefits of the Pharmacy Module:

- Improved governance through registration of all pharmacies and their licensed activities

- Improved inspection tracking for pharmacies and pharmaceuticals
- Better reports for decision making due to data standardization and prevention of duplication

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## 5.2 PHARMACEUTICAL PRODUCTS MODULE

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The module centrally tracks all pharmaceutical products registered in the country, including the product ID, history of changes, and responsible parties. It acts as the sole most accurate source of this type of information. A unique identifier is assigned to each product – the National Drug Code (NDC) – that facilitates drug tracking and recalls. The module also captures information on product imports through online connection with the Revenue Service (Customs Department).

Additional information can be added later, including clinical warnings, pharmacovigilance data, and annotations.

### Key benefits of the Pharmaceutical Products module:

- Single source of information on pharmaceutical products permitted in Georgia
- Improved control of drug imports through connection with the Customs Department
- Improved drug safety and surveillance
- Better reports for decision making, due to data standardization and prevention of duplication
- Clinical decision support by providing drug annotations and medical information to clinical staff

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## 5.3 E-PRESCRIBING MODULE

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This module enables electronic prescriptions by providers and dispensing of pharmaceuticals by pharmacies. The system reduces handwriting errors, improves safety and decision support and facilitates communication between doctors and pharmacists.

### Key benefits of the e-Prescribing module:

- Real-time identification of the patient insurance status improves efficiency and reduces fraud.
- Improved patient safety through decision support and reduction of handwriting errors
- Improved efficiency , cost effectiveness and resource management

- Better control of the limit on drug benefits offered by government-funded and private health insurance plans
- Improved patient satisfaction through renewal of chronic disease prescriptions without visiting doctors
- Better reports for decision making, due to data standardization and prevention of duplication

## 6. PHARMACY AND HEALTHCARE FACILITY INFORMATION PORTAL

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The portal is a key component of the HMIS System allowing any citizen or interested party to get current information on health services, service providers, pharmacies and products. Pharmaceutical companies and healthcare providers post information on medications, services and staff in one virtual space (the “Cloud”).

### Key benefits of the Pharmacy and Healthcare Facility Information Portal:

- Flexible tool for viewing pharmacies, products, healthcare providers, their services and staff according to different criteria (price, location, medical profile, etc.)
- Real-time access to free bed capacity in healthcare facilities
- Display of drug stocks, prices and geographic distribution
- Price transparency

## 7. IMMUNOPACK

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The HMIS ImmunoPack is a comprehensive immunization management system. It allows the creation of a “vaccination calendar” as soon as a baby is born, tracks the vaccinations administered to beneficiaries, monitors vaccine stocks and supports inquiries and dispatches of vaccines from central and regional warehouses all the way to health facilities and ultimately to the patient.

This web-based system is compatible with most computers and mobile devices and requires minimal technical skills to run and administer. It allows healthcare providers to focus on what they do best: deliver healthcare!

### Key benefits of ImmunoPack:

- Reliable reports on the target population, their current providers and their immunization records (vaccination calendar)
- Simplified central management of vaccination campaigns, including support for reports submitted in hard copies

- Comprehensive vaccine stock management: vaccine utilization, balances, demand, supplies, losses for various reasons
- Support for reliable statistical and epidemiological analysis, including drop-out rates and their reasons.

## 8. MEDICAL MEDIATION MODULE

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The module is a flexible tool for effective automation and regulation of business processes performed by the Medical Mediation Agency serving as a mediator for parties involved in insurance plans. It enables insurance stakeholders to fulfill commitments and solve problems in a timely manner.

### Key benefits of the Medical Mediation module:

- Improved efficiency and information accuracy through a central register of cases using common standards
- Simplified central management and administration of applications
- More flexible revision system and tracking of statistical data
- Improved decision support and policy making through accurate reports on medical disputes

## 9. ANALYTIC TOOLS

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The module is a comprehensive data visualization tool that assists non-technical decision makers and policy makers in accessing the vast array of information in the Georgia HMIS system. It presents data in a user-friendly graphical format (pie charts, maps, time navigator and sectorial diagrams with indicators) for easy comparison. It supports trends monitoring in both real time and retrospective modes.

### Key benefits of the Analytic Tools:

- Support for policy making through user-friendly graphical access to data
- Support for decision making by allowing comparison, monitoring and analysis of different indicators, data analysis from different angles (time interval, geographic distribution, etc.)

## 10. USER MANAGEMENT MODULE

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This module facilitates the administration of all modules, namely, helps to determine users, their roles, and permission levels and ensures their validation providing a strong and secure mechanism for limiting unauthorized access to the system.

Key benefits of the User Management module:

- Improved efficiency through a central tool for managing users and their permissions/access levels, common list of users for all HMIS system modules
- Easier management through single sign-on authorization
- Improved security and data protection

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Georgia HMIS System Website:

[ehealth.moh.gov.ge](http://ehealth.moh.gov.ge)

*User Manuals and Video Tutorials in English language can be found in Help menu of each module.*