Azerbaijan’s Electronic Health Card System

A thriving economy in the heart of the Caspian region

With a population of 9.1 million, the Republic of Azerbaijan has enjoyed steady economic performance in recent years. A rise in oil exports accounted for its strong growth from 2006 to 2008. During this time, non-export sectors experienced double-digit growth spurred by development in construction, banking and real estate. In 2009, as the rest of the world grappled with the economic crisis, overall growth remained above 9%. The following year, Azerbaijan registered growth of 3.7%, which is expected to reach 3.8% in 2011.

Turning around a legacy of declining healthcare

Following restoration of Azerbaijan’s independence in 1991, the country’s publicly funded healthcare system faced a crisis. Increasingly serious budgetary challenges, outdated equipment and inflexible policies inherited from the Soviet system made it ineffective in delivering quality services with equal access for all segments of the population.

The declining quality of healthcare prompted the government to institute significant reforms in 2005. Devised to optimize primary and hospital care, the reform effort’s master plan featured introduction of Electronic Health Records (EHR) to improve the flow of health-related information.

The Electronic Health Card System (EHCS) provides an efficient platform to manage the population’s healthcare through workflow automation and streamlining. At the heart of the solution is a smart card system that stores, processes and transmits data on patient medical history, administrative records, diagnoses, treatment, prescriptions and vaccinations.

EHCS forms part of the “Electronic Azerbaijan” government plan for developing communication and information technologies. Rollout of EHCS marks the country’s first large-scale eGovernment project.

Adoption begins with the youngest Azerbaijanis

Because migrating adult healthcare records is far more complex, a decision was made to start EHCS implementation with newborns and select adult populations, including disabled persons and sufferers of chronic disease.

Primary registration of newborns is carried out by maternity and pediatric wards, which send data to the children’s polyclinic where the infant is to be registered. If delivery occurs outside the maternity ward, EHCS registration is carried out by the children’s polyclinic. Cards are then personalized and delivered to the infant’s legal guardian.

Although cards will not be issued to them at this stage, the records of children already on file have been migrated to EHCS as well. This will enable pediatricians and other physicians to access their medical history with the same ease. To ensure data synchronization, parents are required to present their child’s EHCS card at each appointment.
The solution

In April 2007, Gemalto and local partner Bestcomp were selected to provide a digital security solution for EHCS. Bestcomp, a leading Azerbaijani IT company, is acting as integrator for the project, while Gemalto is delivering its Sealys microprocessor cards and middleware.

The solution connects 338 children’s medical facilities to a centralized database through a local network, enabling rapid data transmission and automated processing of patient medical records. EHCS records can be read and updated by polyclinics, hospitals and laboratories. In the near future, the EHCS network will be expanded to include pharmacies and ambulances. Broader implementation of social assistance will also be made possible, with EHCS cards serving as proof of entitlement for eligible citizens to receive subsidized prescriptions and care.

A strict security protocol and regular backups ensure full protection of data. Only individuals authorized by medical facility management may access the system to view or update card information. Updates are registered automatically in the security log, with regular backups to hard drives and tapes.

To better inform and guide citizens, a redesigned version of the country’s eHealthcare portal was launched simultaneously with the EHCS card. Originally launched in 2008, the updated site now enables EHCS cardholders to register for services and familiarize themselves with administrative procedures remotely, before actually scheduling a consultation.

Benefits

Until the launch of EHCS, medical records in Azerbaijan were paper-based and managed in fragmented fashion. Today, the Ministry of Health’s new eHealth system consolidates all patient healthcare records, delivering wide-ranging benefits that include:

Ease of use for patients
> Enhanced identification security in a handy card format

Improved quality of care
> Qualitative data for faster patient examination and treatment
> Reliable decision-making tools for more accurate diagnoses
> Significant cost reduction through streamlined process management

Improved record keeping and mobility
> Comprehensive views of patient health incorporating records from all branches of medicine
> Immediate, secure access to patient medical records from any EHCS-equipped terminal
> Centralized long-term storage of records for the most complete patient medical history

Promotion of evidence-based best practices
> Improved statistical and epidemiological visibility

As of 2011, the Ministry of Health has issued over 500,000 EHCS cards. More than 10,000 electronic cards are personalized monthly.
About Gemalto

Gemalto is the leader in digital security with pro forma 2010 annual revenue of over €1.9 billion, operations in some 87 countries and a workforce of more than 10,000.

Gemalto provides end-to-end digital security solutions, from the development of software applications to design and production of secure personal devices such as smart cards, SIM cards, eHealthcare cards, ePassports and eID, as well as deployment of managed services for customers.

More than 1 billion people worldwide use the company’s products and services.

In the public sector, Gemalto contributes to more than 60 national programs. The company has a long history in secure printing as well as in the smart card industry. Gemalto has produced identity cards, passports and ePassports, driver’s licenses and eHealthcare cards for many years. It also has extensive experience in the delivery of issuance, enrollment and eGovernment solutions—especially turnkey solutions—and has run services for national passport, ID and healthcare systems.

Gemalto is currently active in 15 national eID initiatives and nine major eHealthcare programs around the world. In 2005, Gemalto began producing ePassports for Sweden, Norway and Denmark. As of today, Gemalto has contributed to more than 25 national ePassport programs, including those of Côte d’Ivoire, Estonia, France, India (diplomatic), Italy, Korea, Morocco, Portugal, Qatar, Singapore, Slovenia, Turkey and the United States.