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Implementation of Nationwide Electronic Health Record in Albania: a case study

Paulin Kodra

Director of National Center of Bio-Medical Engineering, Telemedicine and eHealth, Albania



HISTORY

- Government of the Republic of Albania made a strategic decision **to adopt industry standards** for the emerging domain of eHealth in the country.
- In accordance with the **bilateral technical cooperation agreement** between the Albanian MOH and the Austrian Ministry of Transport, Innovation and Technology, the project “e-Health Albania – Nationwide EHR” has been identified as a top priority.
- At the end of 2014, MOH of Albania launched a **nationwide Electronic Health Record** implementation project, which would facilitate computerization of 79 healthcare facilities throughout the country.



ORGANIZATION OF PUBLIC HEALTH SYSTEM IN ALBANIA & ICT SITUATION UNTIL 2014

Public health care use the referral system and is provided by:

413 Primary HC, 39 Policlinics, 25 District & 11 Regional Hospitals, 5 University Hospitals

ICT situation in Albania until 2014:

- Fragmented or non existing LANs
- Limited use of workstations in administration offices and in few receptions in big hospitals
- Partial implementation of HIS and clinical IS

Issues related:

- Data manually collected
- No history information about patient at the point of care
- No exchange of health information between health care institutions

Where to start?

- National EHR based on industry standards for public health care institutions.
- Financial agreement between Austrian Government-Albanian Government.
- Timeline: 2014-2016.



HIGHLIGHTS OF THE SOLUTION

- The solution is based on IHE profiles, which have been adopted by the European Union for Medical Data Exchange and are implemented or under implementation in many EU countries.
- To rely on hybrid architecture, which merges the benefits of federated and central architectures.
- To establish the core e-health infrastructure components and interoperability standards before the implementation of HIS systems in the hospitals.

PROJECT SCOPE

- **Nationwide EHR solution:**

Network infrastructure, hardware, software solution for integrated electronic health records, licenses, support, training and maintenance.

- **Deployed in:**

- 4 university hospitals
- 11 regional hospitals
- 25 district hospitals
- 39 specialist out-patient clinics

- **Federated EHR solution**

- **Healthcare providers portal**

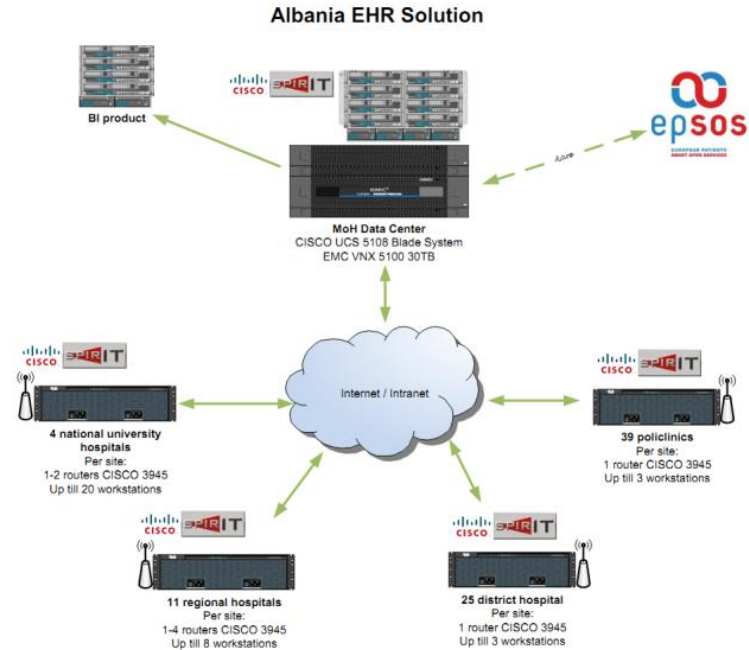
- **Statistical subsystem**



PROJECT SCOPE - TECHNICAL

- EHR backbone based on IHE:
 - Master Patient Index
 - Documents Registry
 - Documents Repository
 - ATNA Auditing
 - Patient consent module
 - HPO directory
 - IHE based interface with w/s layer
 - Integration with e-gov platform
- Healthcare providers portal
- Statistical subsystem
- Hardware and networking
 - Central Data center
 - Local server nodes and networking equipment for 79 facilities – national, regional, district hospitals and specialists outpatient clinics;
 - Thin clients, printers, barcode readers, etc.

SOLUTION ARCHITECTURE



DELIVERABLES AND RESULTS

- EHR solution is deployed in 79 public HPO in Albania: 4 university hospitals, 11 regional hospitals, 25 district hospitals and 39 specialist out-patient clinics.
- All facilities are equipped with network infrastructure, a local EHR node and computerized workstations. In total, 2.300 ICT hardware items have been deployed.
- 2740 end-users have been trained and have been provided with the access to the system according to their roles: 1200 receptionists, 1500 nurses and doctors, 40 administrators.

RESULTS – SYSTEM USAGE

- There are a total of 255.000 patient encounters registered in the national EHR (*April 2017 data*). The latest monthly statistics averaged around 7.000 in-patient, 15.000 out-patient, and 7.000 emergency encounters.
- The overall system take-up trend is stable and slightly growing.
- The quicker take-up growth is currently limited due to the needed additional ICT hardware, which is planned to be procured in the nearest future.

FUTURE WORK

- The e-gov portal will allow Albanian citizens to access their medical documents stored in the EHR system. It will provide an auditing report and will allow the submission of patient consent for data exchange between health care institutions.
- It is planned that all implemented national e-Health systems to be connected to the EHR backbone.
- Further informatization of public hospitals. Preparatory work has been started for HIS implementation in regional hospitals.

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Email: Paulin.Kodra@biomedical.gov.at

Thank you!

