



Greek eHealth Strategy under public consultation

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Recent relevant Reforms

- Law 3892/2010 Electronic Recording of Prescription and 4328/2014 Network of Primary care
 - Obligation to submit prescription and dispense medications electronically; duties of doctors and pharmacists; access rights including for Patient access to own information;
 - Obligation to provide citizens with electronic medical records ; obligatory inclusion of a minimum PS data set; doctors are responsible for the creation and maintenance of eHRs; access rights including for Patient access to own information
 - Based upon the eHN EU Guidelines on Patient Summary

Competencies for eHealth

- MoH Ministry of Health has the overall responsibility for eHealth (Law 4213/2013)
- IDIKA: competence center under the Ministry of Labour; implements ePrescription BUT has extended to other eHealth priorities
- ELOT is the Greek Standardization Organization, supervised by the Ministry of Development; has established TC 14-1 eHealth, links to the MSP (Multi-stakeholder Platform)
- HL7 Hellas is the Greek Affiliate of HL7 International
- MAREG Ministry of Administrative Reform and eGov - horizontal e services incl eID, Trust and eSignature
- Professional Regulatory Bodies (5 professions) maintain professional registries – currently not on line

Greek Health Policy 2014-2020

Issues

- Ensure universal access to health services by developing a health safety net
- Improve the financial sustainability of the health system
- Monitor the impact of the global economic crisis on the Greek health sector
- Increase efficiency in the allocation of resources
- Reinforce management capacity

Areas of high priority

- Restructuring of primary health care
- Pooling of financial resources
- Introducing new managerial and administrative methods
- Adopting cost-effectiveness and monitoring mechanisms
- Developing policies for better allocation of resources

The 8th Pillar: eHealth

Pillars of health system reform

- Efficiency in the use of resources
 - ✓ Hospital Management
 - ✓ Diagnosis Related Groups (DRG)
 - ✓ Pricing & Reimbursement of Pharmaceuticals
 - ✓ EOPYY - PEDY
- Health and social care services
 - ✓ Primary Health Care, health promotion
 - ✓ Health Tourism and cross-border healthcare
 - ✓ Human Resources: skills, motivation and assessment
- Overarching functions and services by MOH
 - ✓ Public Health
 - ✓ 'Horizontal Actions' to ensure systemic embedding of pillars of reform

 eHealth
Sharing information and Knowledge

Existing Infrastructures and Constraints

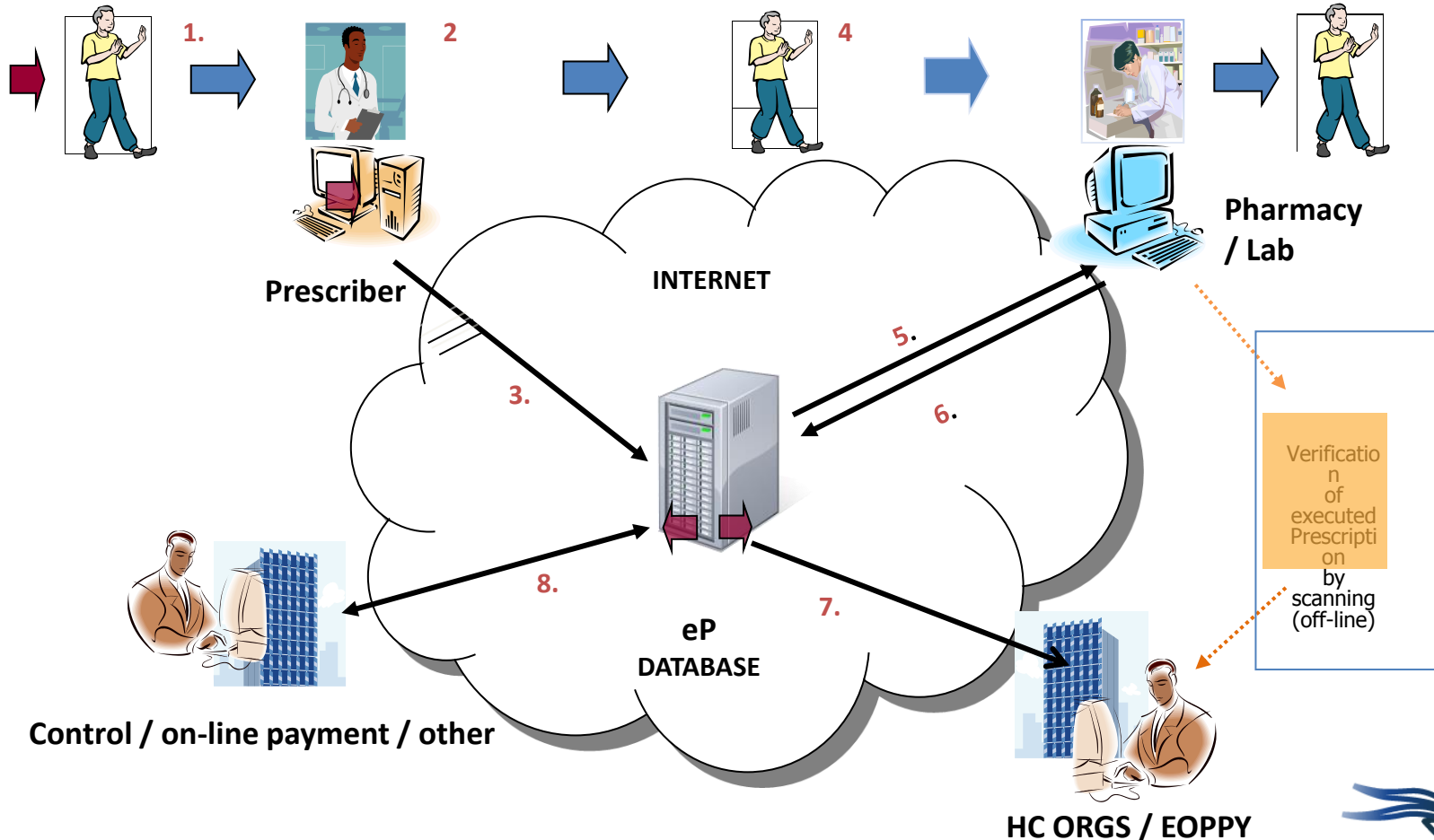
National e-Prescription

- >98% National coverage
 - 6 M e-prescriptions per month (98,5%),
 - 1.5 M e-referrals per month (92%)
- e-Dispensation services, Health Voucher ...
- standards based and interoperable e.g. pharmacies ICT systems based upon epSOS compatible HL7 CDA

National Architecture

Investments in Regional Healthcare Information Systems done the last 10 years

The National e-Prescription system



ePrescription Main Characteristics

- A stable – nationwide ePrescription system accessible from authorized users only (physicians and pharmacists)
 - High level of coverage and penetration of e prescription only in 2 years operation
 - Doctors generate prescriptions, that contain all necessary info, e.g.:
 - ✓ patient's social security number
 - ✓ diagnosis (encoded by ICD-10)
 - ✓ medicines (quantity, dosage)
 - ✓ patient's participation share of payment of each drug, etc.
 - One of the biggest national applications (users/transactions)
- Help: Help prevent medical errors
- know: which doctor prescribed... to which patient... for what reason... which drug (cost, box no, pharmacy)
- Provide: Provide a tool for planning / effective control & rationalization of expenses / transparency

Operational Characteristics

- ❑ The system interconnects with pharmacies information systems through an interoperability framework (CDA based RESTful API), in order to automatically dispense electronic and hand written prescriptions through the local pharmacy information systems .
The interoperability framework is to be expanded to e-prescriptions via third party medical software (DIS, HIS, etc)
- ❑ The system has integrated prescription rules (i.e prescribing according to active substance, ICD-10, prescription guidelines).
- ❑ A unique e prescription system is currently fully operational including medicines prescriptions and medical act referrals.

The Greek ePrescription interoperability framework

- Based on new architecture paradigms (RESTful API)
- Simple to implement
- >9000 pharmacies are connected to the central eP system via this interoperability framework
- 8 different Pharmacy Information Systems
- ~250.000 prescriptions dispensed every day
- Drug List updates online via the API
- Medication authenticity validated online via the API
- Prescription protocols information transferred via the API
- It Can process epSOS friendly prescriptions for cross border healthcare
- It is based on international standards (HL7 CDA)
- It has enhanced security features (IHE ATNA, RFC 2104)
- It is designed to operate with multiple repositories of data.
- It is expandable to other e-health scenarios (patient summary, e-prescription, e-referral, etc)

Compulsory Prescription Guidelines

- 4 groups of Prescription Guidelines including 20 therapeutic protocols in total have been incorporated to e prescription system:
 1. MDC 10 - Dislipidaimia (1THPS) Diabetes (4 THPS)
 2. MDC 08 - Osteoporosis (5 THPS)
 3. MDC 01 - Neurological (9 THPS)
 4. MDC 05 - Arterial Hypertension (THPS 1)

- Protocol Process in Short
 - Prescriptions that are related to the above-mentioned protocols are automatically routed via the patient treatment protocol tool
 - A five step mechanism is applied to fulfill medication selection
 - Treatment protocol (clinical guideline) selection
 - ICD 10 selection (preselected list from the guideline)
 - Select therapy step
 - Select therapy step conditions
 - Select medication active ingredient component
 - Finalize prescription, save and print.

Moving towards a Patient Summary Initiative

- SOHealth (Smart Open Internet Services for Health) project is an initiative **co-funded by the Greek Secretariat of Research and Technology and the European Union**, which is a national extension of established European innovation projects and networks (epSOS, Calliope, Antilope)
- SOHealth focuses on proposing **innovative eHealth interoperability services** and tools enabling cross platform, cross border and inter-regional healthcare scenarios based upon the reuse of international standards (HL7, IHE, etc)
- SOHealth evolves the concept of **re-usable Basic Common Components** for eHealth
- SOHealth is interested in **partnerships** with other project in the e-prescription / patient summary domain based on the **reuse of CDA documents**.
- More information at <http://www.sohealth.gr/>

Moving towards a Patient Summary Initiative

- Implementing **new e-tools over the ePrescription system**
 - **Reusing National Common components (SSN registry, etc)**
 - **Merging Greek epSOS NCP to the National NCP**
 - National connector NCP-A for e-Prescription
 - **Building a Patient Summary Reference Implementation**
 - Visit the Hellenic Ministry of Health – Booth 2
 - Incorporating Medication Related Overview - MRO
 - Healthcare Encounter Report – HCER
 - Expanding Greek ePrescription Interoperability Framework
 - **Creating the national connector for cross border healthcare PS NCP-A**
 - **Proposing a patient consent framework**
 - **Proposing a Patient Access and Patient engagement scenarios (epSOS PAC enhancements)**

SOHealth Consortium



- SOHealth engages
 - The Informatics Laboratory of the Aristotle University of Thessaloniki (**Infolab**) with extensive knowledge in the data security domain (Coordinator)
 - **Gnomon Informatics SA**, one of the leading participants in the development of epSOS related tools and a member of the epSOS industry team,
 - The Greek ePrescription Operational Body (**IDIKA SA**)
 - The National standardization Body (**ELOT SA**)
 - **Pharmaxis**, a leader pharmacy association as an end user partner.

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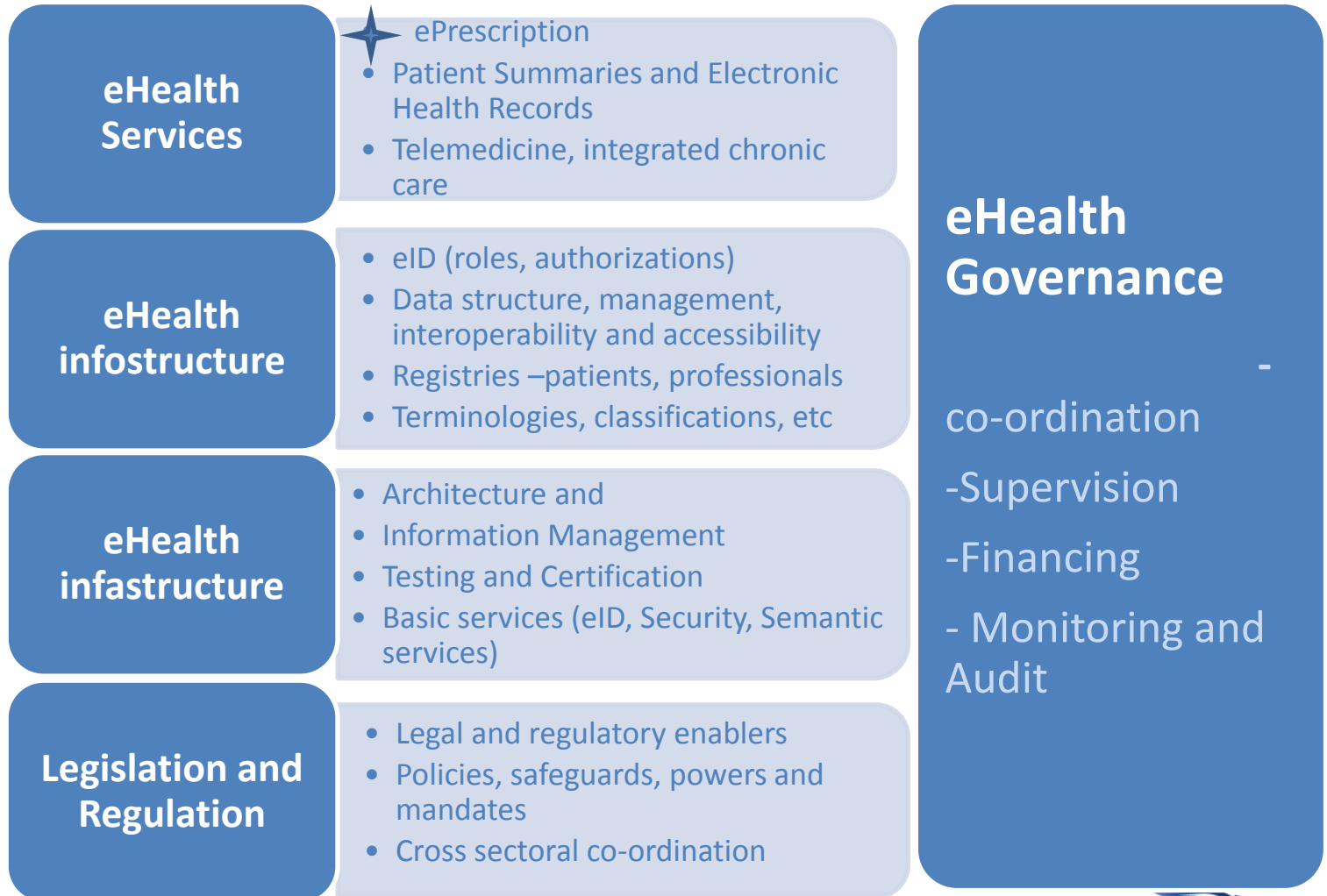
Driving Principles

- eHealth as an enabler of Change
- Enabling eHealth – Interoperability and coordination
- Adoption and market development
 - For IT industry and for health service providers
 - procurement and implementation culture
 - Providing incentives
- Co-operation

Challenges

- Legal and Organizational Framework to support health care innovation through eHealth
- National Interoperability Framework –semantic and technical Interoperability
- Procurement and financing policies for eHealth enabled care
- eHealth Governance
 - co-ordination, consultation and engagement of stakeholders

Working Model



National Health Information System

- Consists of
 - all data structures
 - codifications
 - terminologies and ontologies
 - data interoperability and accessibility standards
 - stored information and data in national registries
 - rules and agreements for data collection and management and exploitation
- will develop gradually around specific use cases
- Requires framework of collaborative governance

National e-Healthcare Interoperability Framework (NeHIF)

- is a set of integration profiles that can be tested and their conformity can be certified and accredited.
- NeHIF is the cornerstone of creating a viable eHealth Marketplace that will create viable systems and solutions in favor of all involved stakeholders.

National eHealth Board (NeHB)

- Law 4213/2013, Article 13: The Ministry of Health is the national Authority for issues concerning eHealth.
 - “The National eHealth Governance Council” as an advisory mechanism..
 - “eHealth services Network”
- NeHB is established within the organizational structure of the Ministry of Health.
 - responsible for the overall functioning, financing and monitoring of eHealth projects
 - oversees and monitors the implementation of policies including the security, privacy and quality policies

Permanent co-ordination mechanisms

- 4 standing coordination groups
- Set up by the NeHB
 - The **Legal SCG (LSCG)** will address the legal and organizational challenges
 - The **Infrastructure SCG (ISCG)** will address the technical and semantic interoperability challenges
 - the **technical Interoperability (TIWG)** and
 - the **semantic Interoperability (SIWG)** work groups
 - The **Services SCG (SSCG)** will address the service innovation challenges

eHealth ecosystem

Law 4213/2013, Article 13

The Ministry of Health through its competence services is the national Authority responsible for eHealth and has the overall responsibility for the co-ordination of actions for the implementation of national eHealth Strategy, in co-operation with other competent authorities as appropriate.

The “**National eHealth Governance Council**” is an advisory mechanism in what concerns the national **Interoperability Framework, the eHealth Strategy and Roadmap of Action** composed of experts with proven competence and experience and **stakeholder representatives...**”

The eHealth ecosystem will evolve into a governed national eHealth Stakeholder Platform

Thank you!