Slovene National eHealth Solutions

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Health Informatics

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# Slovene eHealth Solutions

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<td>Security scheme</td>
<td>Data Security Management System (DSMS)</td>
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<td>OpenEHR</td>
<td>Registry of Health Care Providers and Workers</td>
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</table>
• eZdravje (eHealth) is on national level coordinated health information system.
• eHealth solutions were established in the project, run by the Ministry of Health Slovenia, cofinanced by the EU.
• One of the largest projects of public services informatization.
• In dec 2015, NIPH took over the management of 20 solutions.
• All solutions are on the national level.
• Solutions were in different stages of implementation => a lot of challenges in implementation to Slovenian health system.
Slovene Health Insurance Card

- All people living in Slovenia have this card.
- Is an official identity document of person insured under the compulsory health insurance scheme, issued by the Health Insurance Institute of Slovenia (ZZSZ)
- Is an official patient identity for eHealth solutions in Slovenia.
ePrescription Process

- Physician: Creating ePrescription
- Central database
- Pharmacist: Dispensing medication

Patient zVEM
ePrescription users

- Physicians (general practitioner, medical specialists)
  - creating ePrescription
  - access to patient medication history, drug interactions database
- Pharmacists
  - Retrieving ePrescriptions, dispensing medication
  - access to patient medication history, drug interactions database
- Patients via patient portal zVEM
  - access to ePrescriptions, prescribed & dispensed medication (full history)
eAppointment

- eReferrals
- Ordering
- Waiting lists
eAppointments key benefits

• Central waiting list
  – health service providers are obliged to report promptly

• Monitoring patients' appointments

• Up to date information about actual waiting times
  – Waiting times published for most of the available health services (cca 1400 distinct health service types)

• Online ordering via web application for patients
  – Patient online booking possible for cca 190 health service types
Central Registry of Patient (CRPD)

Central Registry of Patient Data (CRPD)

Patient Health Documentation
CRPD scope

- Data and documents to be exchanged between healthcare providers
- Data and documents to be available to patient
- Short-term storage for exchange purpose

- Data and documents submitted by patient
  - patients consent documents; access to personal data
Patient Summary

- Allergies Hypersensitivity
- Vaccination
- Diseases and Conditions
- Devices and Implants
- Surgical procedures
- Disabilities
- Pregnancy
- Recommendations for treatment
- Social history
- Clinical findings
- Medication

• Alergije in ostale preobčutljivosti

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<tr>
<th>Datum</th>
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<td>01.01.2000</td>
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• Bolezni in stanja

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</table>
CRPD content

- Patient Registry: personal data, detailed address, family relations, selected personal physicians
- Pdf documents; discharge letters issued by hospitals, medical specialists
- Patient consent statements and access policies
  - Patient Summary access restriction; patient consent to read docs
- Open EHR structured Patient Summary Records
- eReferrals (via eAppointment System)
- Vacinations (via eRVP)
CRPD Read Access Matrix

- **Access Denied**
- **Access by warning**
- **Access Granted**

Medical Specialisation of Querying User

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<th>101;201</th>
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<tbody>
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<td>napotna listina, privolitev pacienta</td>
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<td>Čeljustna in zobna ortopedija</td>
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Requested from Information Commissioner
Electronic Registry of Vaccinated Persons

eRVP

Surveillance and Monitoring of Vaccinations

Monitoring of Adverse Reactions
eRVP scope

- All vaccinations administered in Slovenia are recorded
- Patient’s vaccinations and adverse reactions history
- Managing vaccination programs (pediatricians)
- Population vaccination data by disease, age group, geographic areas etc.
- Surveillance, monitoring, policy, planning
- Efficient control of infectious diseases
ePrescription:

- 1,150,000 ePrescriptions monthly
- total 34,000,000 ePrescriptions
- issued from 1,165 health service providers
- at least one ePrescription: 1,882,543 patients
**eAppointment**

**eReferrals**

- 350,000 monthly,
- total: more than 5,000,000
- 1994 health service providers issued at least one eReferral

- monthly 450,000 eOrdering
- total more than kot 5,5mio eOrdering

June 2018
Central Registry of Patient (CRPD)

- More than 1,300,000 patients have at least one record in CRPD
- 177 health service providers:
  - 118 Patient Summaries
  - 132 unstructured documents

Electronic Registry of Vaccinated Persons eRVP

- 104 health service providers
- 434,873 records
- 240,000 patients have at least one record
• zVEM 2018 – 17.150 registred users

Model practice
• 770 health service providers included

telokenskap Telestroke
• 12 health service providers (SB in KC)

Teleradiology
• 20 health service providers
Conclusion

- All people in Slovenia have an unique health identifier
- It is not needed to come to the doctor to get the prescription
- Patient can get the medications in any pharmacy in Slovenia.
- Patient can make the order to the medical specialist through the internet and see national waiting lists.
- General practitioner can see the specialist’s results on-line.
- All vaccination data for all patients will be on the same place.
- Patient can see his/her (and also for his/her children) in one place
  - prescribed and dispensed medicines
  - discharge letters and specialist’s results
  - vaccination data
  - health data in patient summary
Questions?

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