Implementing a Patient Information System in Public Hospitals in Kosovo

Adriana Sejfia
Senior Capstone Project
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Supervisor: Dr. Brian Bowen
Technical Advisor: Edmond Muhaxheri
Introduction

• A very inefficient and disorganized patient management system
  • Effects negatively the treatment of the patients
• Computerized version of a patient management system
  • Functionalities
  • Specifications
  • Evaluation of Kosovo’s current Health Information Strategy
Literature Review

- Increased usage of computer technology in medicine
- The involved stakeholders benefit from PIS
  - Fewer waiting lines
  - Increased interactivity between users
  - Less mistakes in diagnosis and treatment
  - Better allocation of resources
- Downside:
  - Slow input of existing data
  - Difficult to be used by elderly and other technology-illiterate groups
Literature Review (cont’d)

• Kosovo’s Medical System
  • Few doctors to cover the whole population
  • No coordination between departments and/or hospitals
  • Inefficient use of resources

• Health Information Strategy
• Luxembourg Development Agency fund
Methodology

- Surveys of the stakeholders
  - Doctors and nurses
  - Patients
- Interviewing a representative from the Ministry of Health (MoH)
- Evaluating the Patient Information Systems (PIS) in other countries
  - Macedonia, Serbia, Norway and Palestine
- Evaluating Kosovo’s current Health Information Strategy
Surveys of Medical Staff

- 190 doctors and nurses across different cities of Kosovo

Figure 1: Summary of the ratings of functionalities
Surveys of Medical Staff (cont’d)

- Prioritizing the three most important functionalities

Figure 2: Prioritized Functionalities
Surveys of Patients

- 230 patients from cities across Kosovo

Figure 3: Functionalities Prioritized by the Patients

![Patients’ Survey Results](chart.png)
Interview with the MoH Representative

• Interested in statistical tools

<table>
<thead>
<tr>
<th>Statistics about hospitals</th>
<th>Statistics about doctors and nurses</th>
<th>Statistics about treatments</th>
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</thead>
<tbody>
<tr>
<td>• Number of patients each month</td>
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<tr>
<td>• Facilities and technology</td>
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<td>• Number of patients each month</td>
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<td>• Success rates</td>
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<td>• Success rates</td>
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## Kosovo’s Health Information Strategy

<table>
<thead>
<tr>
<th>Category</th>
<th>Function</th>
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<tbody>
<tr>
<td>Patient Care</td>
<td>Admission, Discharge and Transfer</td>
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<td>Patient Relationship Management</td>
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<td></td>
<td>Inpatient, Outpatient and Emergency Care</td>
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<td>Order Management</td>
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<td>Electronic Health Record</td>
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<tr>
<td>Registers</td>
<td>Register of Health Care Professionals</td>
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<td>Register of Health Care Institutions</td>
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<td>Register of Patients</td>
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<td>Register of Pharmaceuticals</td>
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<td>Catalogue of Diagnosis</td>
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<thead>
<tr>
<th>Category</th>
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<tbody>
<tr>
<td>Registers</td>
<td>Catalogue of Procedures and Laboratory Tests</td>
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<tr>
<td>Security</td>
<td>Consent Management</td>
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<td>Identity and Access Management</td>
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<td>Enterprise Resource Planning</td>
<td>Billing support</td>
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<td>Capacity Management</td>
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<td>Staff Planning and Scheduling</td>
</tr>
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<td>Health Statistics and Reporting</td>
</tr>
</tbody>
</table>
PISs in Other Countries

- Macedonia: department based approach
- Serbia: treatment based approach
- Norway: PIS a platform for advanced scientific research
- Palestine: Datasel (mentioned in Kosovo’s Health Information strategy) evaluation and review
Overview of the Results

• Simple rather than advanced functionalities chosen
• Serbian and Macedonian approaches preferred
• Lack of data in regards to Datasel
• Lack of patient-related functionalities in the Health Information Strategy
Conclusions and Recommendations

- Technical composure of the PIS
  - Medical Record and Analysis’ Results.
  - Administrative Functions
  - Aggregated Data Tool
- Approached towards growing the PIS
  - Combined approach of Serbia and Macedonia
  - Start planning advancing the PIS and turning it into a scientific tool
Conclusions and Recommendations (cont’d)
Conclusions and
Recommendations (cont’d)

• Adaptations of Kosovo’s Health Information Strategy
  • Add more patient related functionalities
  • Postpone the addition of billing and transactions functionality

• Future research
  • Billing and Transaction Functionality
  • The incorporation of other health institutions
  • Incorporation of the PIS in the Health Information System