Smart e-Consent Management for Supporting Information Sharing within a Regional Continuum while Protecting Patient Privacy

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QuadraMed®
Participants will learn about:

- The **business** and **technical requirements** for sharing patient records in regional continuum of care

- The **access control models** and existing most **used approaches and technologies**

- The main **characteristics** of our **e-consent** mgmt. solution and **EHR Condo system**

- The **critical components** and the **integration considerations**
Agenda

- Introduction

- Cross facilities sharing data view project
  - Goals
  - Problem definition

- Characteristics of the e-Consent mgmt. solution

- Conclusion
Opportunity

Integration of e-Consent management functionality in QCPR
Introduction
Health Care Organizations Network in Eastern-Townships Region in Quebec
Health Care Organizations Network in Eastern-Townships Region in Quebec

Need to share information?

Two sites, 677 beds
Per year:
~28,000 surgeries
~89,000 ER visits
~31,500 admissions

ONE EHR Condo System for EIGHT distinct EHRs
Regional EHR implemented throughout the Sherbrooke region

QCPR from QuadraMed:

– Deployment started in 1990 and extended to all institutions in the region

– Totally integrated - Laboratory, Radiology, Pharmacy, Order Management, Clinical Documentation— all integrated in one single database

– Supports the patient-centric vision within the regional Continuum of Care

– Automates documentation of care while supporting clinical decision and best practices

– Flexible architecture to support Privacy Laws - including Quebec Healthcare Services Laws
  • « Facility-Specific Patient Model »

– Will integrate e-Consent management functionality for providing cross condo sharing data view
Cross facilities sharing data view project
Provide the ability to **dynamically restrict or share** access and viewing of EHR **across facilities** while

**Protecting patient privacy in compliance with patient preferences, laws and regulations**
Problem Definition: Questions and Concerns

- Consent model to use & Legal requirements?
- Process lifecycle of consent directive? & Clinical Workflow?
- Ease of data clinical access & Privacy protection?
- Granularity levels & Data?
- Patient trust, expectations and education?
- Policy decision enforcement within EHR system?
Problem Definition: **Business** and technical considerations

- Sharing information cross facilities for providing higher quality services
- Supporting multiple roles and access permission profiles of the same individual
- Using explicit patient consent with multiple directives types, in multi-facility environment
- Controlling information access with compliance of patient preferences, laws and regulations
Problem Definition: Business and **technical** considerations

- Managing high data volume while preserving EHR system processing performance
- Ease of use for capturing and managing consent directives
- Flexibility of enabling fine and coarse granularity levels
- Automated process for ensuring no conflicts between policy directives
Problem Definition:

1-Multiple directives and **conflicts**?

- **Directive 1:** Only the care provider who **ordered** specific lab tests and the health professionals who are **identified** to be copied on the results, are **allowed to access** the test results

- **Directive 2:** Patient chooses to **restrict access** to one or many of health professionals who are **identified** to be copied
Problem Definition:
2-Granularity of care providers and grouping?

- **Directive 1**: Patient chooses to block access and view to his/her records except all care providers of cardiology service
- **Directive 2**: Patient allow full access to one specific named cardiologist working in the same cardiology service
- **Directive 3**: Patient allow limited access to all the other care providers working in the same service

1- Organisational structure of a specific service
2- Functional role of a specific individual
3- Organisational structure of a specific group of individuals working in a specific service
Problem Definition:

How to deal with multiple directives evaluation and conflict?
e-Consent Management Solution and Integration
E-Consent Mgmt. solution characteristics...

✓ Any consent model: Opt-in and Opt-out
✓ Automated process for multiple directives and ensuring no conflict
✓ Fine and coarse granularity levels
  – Care providers
  – EHR data elements
✓ Capabilities of applying conditions with in directives
E-Consent Mgmt. solution characteristics

✓ Ensuring reliability by
  ✓ Using mathematical notations for consent engine design
  ✓ Enabling visual capabilities for validating directives

✓ Ease of use to handle the process life cycle of consent with granular control

✓ Capability to customize the hierarchy structure of care providers and EHR data elements
E-Consent Mgmt.: Conceptual tiers and services

User interfaces

GUI

Application interfaces

System interfaces

Application Services

Engine

Data

Data Base
Cross Facility Data Sharing View: Consent management & data view

Cross facilities sharing data view in real time

Workflow/Change impact & Patient education

Patient Unique Identification Services
Cross Facility Data Sharing View: Consent management & data view

List of All Available Patient Records

Will provide Break-the-Glass processing for any selected record(s) for which a permitted consent is not available for the current user.
List of All Available Patient Records

<table>
<thead>
<tr>
<th>#</th>
<th>Name</th>
<th>Facility</th>
<th>Consent Status</th>
<th>Start Date</th>
<th>End Date</th>
<th>RAMQ</th>
<th>Birthdate</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tom, Mark</td>
<td>CHUS</td>
<td>Not Required</td>
<td>-</td>
<td>-</td>
<td>123456</td>
<td>04 Apr 1944</td>
<td>M</td>
</tr>
<tr>
<td>2</td>
<td>Tom, Mark</td>
<td>MAGOG</td>
<td>Denied</td>
<td>01 May 2014</td>
<td>31 May 2014</td>
<td>123456</td>
<td>04 Apr 1944</td>
<td>M</td>
</tr>
<tr>
<td>3</td>
<td>Tom, Mark</td>
<td>Costco</td>
<td>Permitted</td>
<td>01 Jan 2014</td>
<td>31 Dec 2014</td>
<td>123456</td>
<td>04 Apr 1944</td>
<td>M</td>
</tr>
<tr>
<td>4</td>
<td>Tom, Mark</td>
<td>DesSource</td>
<td>Expired</td>
<td>01 Jan 2013</td>
<td>01 Jan 2013</td>
<td>123456</td>
<td>04 Apr 1944</td>
<td>M</td>
</tr>
<tr>
<td>5</td>
<td>Tom, Mark</td>
<td>VSF</td>
<td>No Consent</td>
<td>-</td>
<td>-</td>
<td>123456</td>
<td>04 Apr 1944</td>
<td>M</td>
</tr>
</tbody>
</table>

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<tr>
<th>#</th>
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<th>Infoway Business Requirements</th>
<th>E-Consent Mgmt.</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Access and authorization to Consent Mgmt Solution (CMS)</td>
<td>CMS must have Identity Mgmt capability either part of solution or through integration to an external IDM solution</td>
<td>√ Provincial NIU</td>
</tr>
<tr>
<td>2</td>
<td>Must support role Based Access (RBA)</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>3</td>
<td>Must enforce individual consent directives and jurisdictional specified rules</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>4</td>
<td>Must provide the ability to create, store, change, remove an access code</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>5</td>
<td>Solution Configuration</td>
<td>Must support in both languages administrative functions for the configuration and management</td>
<td>√</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Must support default rules such as granularity of consent</td>
<td>√</td>
</tr>
<tr>
<td>7</td>
<td>Data capture, storage, retrieval, and enforcement of directives</td>
<td>Must support the capture of an individual’s consent directives</td>
<td>√</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>To capture, update, deactivate consent directives, must include specified structured data elements</td>
<td>√</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>Must allow for configurable fields (combination box, drop down lists, yes/no)</td>
<td>√</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>Must support the administration of data elements to be captured</td>
<td>√</td>
</tr>
</tbody>
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*Business and Architecture Considerations for Interoperable Consent Solutions: A discussion document – Infoway 2014*
## Infoway Business Requirements for Interoperable Consent Solutions

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<td>11</td>
<td></td>
<td>Must have ability to store consent directives within central repository within or external to product</td>
<td>✓</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>Capture and manager multiple consent directives for an individual</td>
<td>✓</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>Support the storage, retrieval and viewing status (active, inactive) for a specific consent directive</td>
<td>✓</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>Ability to view details of consent directive and history</td>
<td>✓</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>Must support retrieval and viewing of who has viewed, accesses, overridden or updated a consent directive</td>
<td>✓</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>Should support the merger and separation of multiple consent directives</td>
<td>✓</td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>Must support unique identification of individuals including proxies and substitute decision makers</td>
<td>✓</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td>Enforcement of consent directives after data is requested and before is transmitted to the requestor</td>
<td>✓ +EHR syst.</td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>Must record, store, retrieve multiple ways of applying consent related business rules</td>
<td>✓</td>
</tr>
<tr>
<td>20</td>
<td>Reporting and Analytics</td>
<td>Ability to produce Reports either soft or hard copies</td>
<td>✓</td>
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<tr>
<td>21</td>
<td>Reporting and Analytics (cont’)</td>
<td>Supports the export of data to analytic solutions</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Maintenance of historical data and archiving</td>
<td>Must support the storage and retrieval of an individual’s historical Consent Directives.</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
<td>Must have the capability to archive either internally or externally to the solution</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Notification and Alerts</td>
<td>Must support the generation of system generated alerts</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Conflict identification /resolution</td>
<td>Must support the identification, notification and resolution of consent rule conflicts between new and existing rules</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Overrides</td>
<td>Must support the override of an individual’s consent Directive</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Logging</td>
<td>Must log all actions related to CMS and Consent Directives</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Viewing of Data</td>
<td>Must allow IT system administrators to access and view consent Directive override data details when necessary</td>
<td></td>
</tr>
</tbody>
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Conclusion

✓ Developing an ease of use e-consent mgmt. solution with an automated process for ensuring no conflict is possible

✓ Patient unique identification is the main and critical factor for sharing the right information of the same patient person

✓ Data quality is also required for
  ✓ having a unique identification and the right data segmentation to build the right:
    ▪ Organisational & functional hierarchy
    ▪ EHR data structure

✓ Alignment of consent process lifecycle with clinical process and their impact should not be underestimated

✓ Solid foundation is required for achieving interoperability between e-consent management functionality and EHR system
Contacts

E-Consent mgmt solution

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THANK YOU!