Automated regulatory constraints and data governance in healthcare.
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Background
Current regulations and data sharing agreements between institutions put limitations on data sharing process. Access control method in EHRs are not sufficient to implement regulatory constraints.

- No mechanism to engage in the reasoning process as to which policy to comply to and which policy to override depending on who requests access to what data.

Research Questions
1. What are the key concepts and patterns for modeling consent, data sharing agreements, relevant regulations for an effective and compliant processing of data in healthcare?
2. What are the infrastructure and organizational requirements necessary to develop and maintain a legally-aware data sharing infrastructure in healthcare?

Approach
Develop a framework that aims at integrating a novel access control model with normative reasoning by enabling the automatization of regulatory constraints in a heterogenous data sharing infrastructure.

- Derive requirements from regulatory constraints
- Reason when policies need to be conformed to and when they need to be violated.
- Design a user interface to generate queries and visualize policies.

Expected Outcome
A scalable data sharing framework that capture legislation, contractual agreement and patient preferences into the data sharing process.

Consent Aware authorization for sharing and accessing patient data

Map ontologies of regulatory constraints to automated normative reasoning for data access.

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