



**Case Study: Suitability Analysis of Health Care
IT Standard for NIST (National
Institute of Standards and
Technology)**



Suitability Analysis of Health Care IT Standard for NIST

Business Need

Even in today's technology world, most health care providers still use medical record systems based on paper. The government has initiated new incentives and programs to catalyze the shift for health care providers across the country to electronic health records. One key driver is the implementation of "Meaningful Use" rule. The National Institute of Standards and Technology (NIST) took up the "The Health IT Standards Analysis" project with the objective to focus resources on specific, national priority standards in the healthcare sector to further clinical information exchange among providers, consumers, public health and other stakeholders. Biovalorem partnered to assist NIST to perform suitability analysis of three specific Health Care IT Standards (Quality Reporting Document Architecture (QRDA), Continuity of Care Document (CCD) and Continuity of Care Records (CCR)).

Innovative Solution

A method was devised to analyze the relevant standards (QRDA, CCD and CCR), by objectively determining the testability and suitability for use, i.e. to assess the level of ambiguities, errors, inconsistencies, omissions, and to the extent possible, how well each standard met the intended rule's requirements. This analysis also aimed to verify the compliance with demands of conformance and interoperability set forth in the meaningful use rule.

1. The initial challenge was to **evaluate** a well-known health care standard against a regulation. The project team performed a detailed literature search of software standards, quality evaluation methods and models, in order to optimize and **identify** the methodology for the QRDA, CCD and CCR standards suitability analysis.
2. As part of the methodology, an assessment tool was designed with selected quality metrics to **evaluate** both the specific relevant attributes of the three standards and provide a general overview of the standard's overall suitability. The team evaluated the specifications by identifying gaps within the document, by considering its compatibility with other specifications, by assessing its implementability, by considering how to test implementations.
3. Finally, for each healthcare standard, a list of specific improvements was documented and prioritized into a complete report. The report **recommends** the path for next steps and how NIST can improve the homogeneity between these standards and the Meaningful Use Rule.

Benefits

NIST benefitted from a well-developed analytical process and evaluation method, which provided clear recommendations and improvements for moving forward. The overall national objective of being in compliance with conformance and interoperability clauses of the Meaningful Use will also be streamlined in the long-term.