An Approach to Guideline Implementation with GEM

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Abstract

Implementation of practice guidelines refers to the creation of strategies and systems to operationalize the knowledge and recommendations set forth by guideline developers. We describe an approach to guideline implementation that makes direct use of the guideline document as a knowledge base. The Guideline Elements Model (GEM) provides an XML-based guideline document model that facilitates implementation of guidelines. Knowledge extraction using GEM requires document markup rather than programming and can promote authenticity and consistent knowledge encoding. Knowledge customization for the local enterprise requires addition of meta-information to pertinent components of the GEM hierarchy in a design database. GEM provides an audit trail to track local adaptation. Knowledge integration with patient data can be promoted using information management services. A design goal is to devise a system that can be applied by local clinical domain experts, quality assurance experts, and information systems programmers without requiring trained informaticians and knowledge engineers to serve as intermediaries

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