

# Supporting Physicians in Taking Decisions in Clinical Guidelines: the GLARE “What if” Facility

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## ABSTRACT

*GLARE (GuideLine Acquisition, Representation and Execution) is a domain-independent system for the acquisition, representation and execution of clinical guidelines. GLARE is unique in its approach to supporting the decision-making process of users/physicians faced with various alternatives in the guidelines. In many cases, the best alternative cannot be determined on the basis of “local information” alone (i.e., by considering just the selection criteria associated with the decision at hand), but must also take into account information stemming from relevant alternative pathways. Exploitation of “global information” available in the various pathways is made possible by GLARE through the “what if” facility, a form of hypothetical reasoning which allows users to gather relevant decision parameters (e.g., costs, resources, times) from selected parts of the guideline in a semi-automatic fashion. In particular, the extremely complex task of coping with temporal information involves the extension and adaptation of various techniques developed by the Artificial Intelligence (AI) community.*