

Abstract

Patient wait times and care service times are key performance measures for care processes in hospitals. Managing the quality of care delivered by these processes in real-time is challenging. A key challenge is to correlate source medical events to infer the care process states that define patient wait times and care service times. Commercially available complex event processing engines do not have built in support for the concept of care process state. This makes it unnecessarily complex to define and maintain rules for inferring states from source medical events in a care process. In this paper, we introduce a state monitoring engine for inferring and managing states based on an application model for care process monitoring. The research is validated with a case study developed in collaboration with a large community hospital.