Bed Blocking in Health Care
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Our healthcare system faces numerous challenges. There is a consistent increase in the demand for health services, while at the same time there is a decrease in available personnel, which puts a tremendous strain on the already-overloaded system. In this context, an additional challenge is the presence of the phenomenon of bed blocking, also known as wrong-bed-days. Bed-blocking occurs in situations where a patient has completed his/her service but cannot be transferred to a follow-up care facility because of a lack of bed capacity. Consequently, the patient keeps a bed occupied, which leads to a loss in effective capacity, a decrease in the throughput of the system and unnecessary waiting, with all the consequences for the patient.

Motivated by this, in this talk we develop models and heuristic approximation methods to properly estimate the capacity drop due to bed blocking, and the effect that it has on the throughput and waiting times in the acute elderly care system. Moreover, we use process mining techniques to gain insight into the flow of patients through the acute elderly care system, using CBS-data.