

VORTRAG

“Scheduling patients at the UZ Leuven”

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Abstract:

In many hospitals there are patients who receive surgery later than what is medically advised. In one of Europe's largest hospitals, the UZ Leuven, this is the case for approximately every third patient. Serving patients late is a problem as they might consequently be exposed to an increased health risk. In order to improve the current situation, the lateness of patients had to be quantified and the responsible mechanism, the patient scheduling process, better understood. Drawing from this understanding, we implemented and tested different patient scheduling methods using a discrete event simulation model. In order to get a realistic test environment, we tried to avoid making any assumptions. Instead we investigated and modeled all the mechanisms that we found to have an important impact on the way patients are scheduled and served at the hospital in reality. We found that it is important to model the non-elective to OR allocation mechanisms in place and, additionally, also to include elective rescheduling. Modeling rescheduling ensures that OR related performance metrics, such as overtime, will only loosely depend on the chosen patient scheduling method. We also found that capacity considerations should guide both patient scheduling and replanning related decision making. This is the case as those scheduling strategies that ensure that OR capacity is efficiently used will also result in a high number of patients served within their medically advised time limit. An efficient use of OR capacity can be achieved, for instance, by serving patients first come, first served. As applying first come, first serve might not always be possible in a real setting, it is important to allow for patient replanning.