

## Adherence and bottleneck identification in the execution of a sepsis clinical pathway in the emergency department

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**Objective:** To identify the adherence and bottlenecks of a sepsis clinical pathway executed in an adult emergency department of a big private hospital.

**Methods:** We applied process mining techniques (conformance and performance checking) using 2,348 sepsis hospitalizations extracted from a hospital information system (period of 2 years).

**Results:** The hospital has performed the process very close to the one defined in its sepsis' clinical pathway (fitness: 0.94). We identified 56 deviations in the process execution (activities not performed, different order of activities, activities performed by a different role, time target violation). The main bottlenecks were: patients waiting in the reception before triage (mean of 19 minutes), and the prescription of medicines and request of exams (mean of 7 minutes). The research results will be validated by the hospital staff.

**Conclusion:** The use of process mining is very promising for the adherence and bottlenecks analysis in clinical pathways. Reducing the non-compliance and waiting times identified with process mining techniques is especially valuable for treatment of time critical conditions such as sepsis.

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