

POSTER ABSTRACT

Avoiding Hospital Admissions and Delayed Transfers of Care by Improved Access to Intermediate Care: A Simulation Study

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Objective: The current waiting times for intermediate care in the Netherlands prohibit timely access, leading to unwanted and costly hospital admissions. For the city of Amsterdam, we propose alternative policies for improvement of intermediate care and estimate the effects on the waiting times, hospitalization, and the number of patient replacements.

Design: Discrete Event Simulation (DES) study.

Participants: Data was used of older adults that received intermediate care in Amsterdam, The Netherlands, in 2019. For this target group, in- and outflows and patient characteristics of the intermediate care were identified.

Methods: A process map of the main pathways into and out of the intermediate care was. Non-public microdata of Statistics Netherlands was used to quantify the process map, after which a DES was performed.

Results: By means of a sensitivity analysis with the DES, we show that the waiting times are not a result of a lack in bed capacity, but are due to an inefficient triage and application process. Older adults have to wait a median of 1.8 days for admission, leading to hospitalization. If the application process becomes more efficient and evening and weekend admissions are allowed, we estimate that the number of unwanted hospital admissions can be reduced from ca. 51% to 3%.

Conclusion: This study shows that the bottleneck in a care system is not always solved by increasing bed capacity. A data-driven approach is essential to identify problems' true causes and appropriate solutions, which results in strongly increased cost-effectiveness and patient satisfaction.