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Reduced Hospital-Associated Harms in Older Adults Treated with IV Antibiotics via Hospital at Home: A Retrospective Cohort Study

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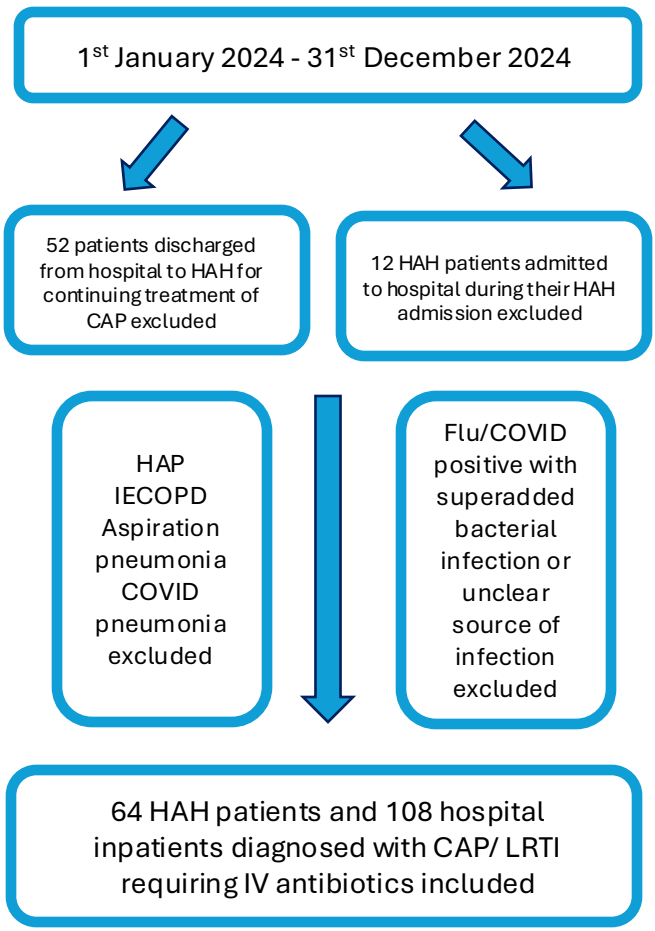
Introduction

Older adults are vulnerable to hospital-associated harms such as delirium and acute kidney injury (AKI). Acute illnesses, such as infection, can be treated at home with intravenous (IV) antibiotics under Hospital at Home (HAH) services.

Methodology

We reviewed data from patients in the community under HAH and in hospital on an acute frailty ward. During a one-year period, we identified older adults diagnosed with community-acquired pneumonia requiring IV antibiotics. HAH patients received once daily IV ceftriaxone and hospital inpatients were prescribed IV antibiotics as per hospital guidelines. We compared length of stay, development of delirium and AKI between the two groups.



Results

Baseline Characteristics	Hospital at Home (n=64)	Hospital (n=108)
Mean Age (years)	85	85
Mean Clinical Frailty Score	7	5
Mean NEWS on admission	4	3

Outcomes	Hospital at Home (n=64)	Hospital (n=108)
Length of Stay (days)	4	14
Length of IV antibiotics course (days)	4	5.5
% AKI	17	25
% Delirium	9	37
% palliative	33	12
% 12-month patient mortality	59	34

Conclusion

HAH offers an effective alternative to inpatient care for older adults with CAP, with shorter treatment duration, fewer complications, and reduced hospital stay. Higher mortality likely reflects greater frailty and palliative focus in the HAH cohort, as opposed to reduced care quality.