

Critical Intelligence Unit

Evidence brief

Hospital in the home

18 June 2024

Evidence check question

What is the evidence for length of stay and cost-effectiveness of the hospital in the home (HITH) models as compared to inpatient care for acute conditions?

Summary

- There is wide variability in how the hospital in the home (HITH or HIH) model is defined and operationalised (i.e., patient eligibility, governance, referral process and staffing) in the literature and across jurisdictions.¹ The terms hospital at home (HAT or H@H), home hospitalisation, and virtual ward are often used interchangeably with HITH, referring to care models where healthcare is delivered in patients' own homes as an alternative to inpatient care for acute or sub-acute conditions.
- HITH models distinguish themselves from other community-based services in that they are often led or managed by hospitals and deliver a level of care that is time limited and comparable to those provided in hospitals, including but not limited to clinical review diagnostics, and monitoring. Virtual care modalities are often incorporated into HITH models, alongside in-person visits.
- The definition and measurement of the length of stay in models involving HITH varies across studies, with some reporting on the length of stay while occupying a hospital bed while others reporting on the length of stay or treatment for both the hospital and HITH stays. Overall, the evidence suggests that HITH reduces the number of hospital bed days. However, the evidence on the total number of days patients receive care/treatment is mixed and some studies reported it increased with HITH compared to inpatient care only.²⁻⁶
- In Australia between 2011-2017, 3.7% of all admission to 19 principal referral hospitals included HITH care. The median length of stay for admissions with an HITH component was 7.3 days, which was longer than those who received inpatient care only (2.7 days).² For HITH admissions, there was a larger proportion of patients aged 50-80 years and patients with conditions coded as complex. The longer overall length of stay could be due to patients being selected for HITH when a prolonged stay is anticipated.²
- Two main types of HITH models are:
 - **Admission avoidance (step-up model)** where patients are diverted from ED or other referral routes to avoid inpatient admissions. This model was associated with lower cost, lower mortality rates and comparable or lower readmissions to inpatient care.⁷⁻⁹
 - In May 2024, the evaluation report for the England South East Region involving 22,000 virtual ward admissions across 29 virtual wards was released. This report was focused on admission avoidance pathways and found virtual wards to be associated with

reduced non-elective admissions and net financial benefit. However, virtual wards were also associated with widened inequalities in access to services.¹⁰

- **Early supported discharge (step-down model)** where patients are discharged early from hospitals to continue care at home instead of inpatient wards.^{6, 7} This model was associated with comparable mortality, readmission and a shorter hospital length of stay to inpatient care. The findings on costs were mixed and likely due to differences in patient characteristics, interventions, cost components and cost measures, with some reporting reduced costs while others reporting increased overall costs.^{7, 11, 12}
 - Canada's Drug Agency horizon scan report (2024) on virtual medicine wards and hospital-at-home programs which focused on supported early discharge found that those services have the potential to free up hospital beds more quickly and have similar or lower mortality and hospital admission outcomes as inpatient care.¹³
- In 2023, the UK National Institute for Health and Care Excellence economic evidence review concluded that according to the majority of the studies reviewed (13 out of 15), virtual wards and hospitals at home are associated with cost savings, with the key drivers being reduced hospital bed days and lower per diem cost.³
- In Australia, the existing and potential conditions for HITH were analysed in detail in a scoping review of the literature to support the review of the South Australian My Home Hospital services.¹⁴

Methods

PubMed search terms

"hospital in the home"[tiab] OR "hospital at home"[tiab] OR "hospital care at home"[tiab] OR "virtual ward"[tiab]

498 hits on 5th Feb 2024

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