

# Factors Associated With Length of Stay and Readmission Rates for Older Hospital in the Home Patients: A Systematic Review

Kerry de Vent, MD<sup>1</sup> , Joanne E. Porter, PhD<sup>1</sup>, and Jo-ann Larkins, MD<sup>1</sup>

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## Abstract

**Objective:** The aim of this study is to conduct a systematic review of published literature to examine factors associated with Length of Stay (LOS) and Readmission Rates for older Hospital in the Home (HITH) patients. **Method:** In accordance with PRISMA guidelines, seven databases were searched for peer-reviewed articles relating to HITH, older patients, LOS and readmissions. **Results:** Twenty-nine studies met the inclusion criteria. Risk factors associated with increased readmissions and LOS were age, prior hospitalisations, illness severity, geriatric-related complications, and cognitive impairment. Most studies found that patients participating in HITH had a shorter initial acute hospitalisation LOS than patients transferred to a subacute hospital or rehabilitation ward. However, LOS and readmissions, comparing HITH to traditional in-hospital care, were inconsistent. **Conclusions:** Overall, LOS and readmission rates (comparing home-based care to hospital care) were inconsistent but appear related to patient demographics and disease profile and require further study.

## Keywords

HITH, hospital in the home, older adults, geriatric, home-based care

## Introduction

Ageing populations in developed societies represents a challenge for health service providers (Closa et al., 2017) with elderly patients more likely to present with complex clinical presentations and chronic conditions requiring multidisciplinary interventions (De Stampa et al., 2023). This is due to increased frailty, disability and comorbidities associated with advanced age (Mas et al., 2017). In the process of treating elderly patients, care delivered in an acute hospital setting can have adverse effects, particularly iatrogenic illnesses, functional decline, delirium, and other adverse outcomes. Hospital care can also be expensive and disruptive not only to patients, but carers and families alike (Leff et al., 1999; Mader et al., 2008). Long episodes of acute hospital stay may also impact a patient's ability to adjust to life at home following discharge (Mas et al., 2017).

To address these issues, a promising alternative to acute-based hospital care is Hospital in the Home (HITH), also referred to as Hospital at Home (HAH) or home hospital (HH) which is a model of care which enables patients to receive acute care at home. HITH can entirely replace an in-hospital stay or enable patients to receive post-hospitalisation care at home (De Stampa et al., 2023). HITH enables the provision of hospital-equivalent care at home (Cai et al., 2018) and has

shown to be effective, with a high degree of patient and caregiver satisfaction (De Stampa et al., 2023). There are different modes of HITH, namely admission avoidance and early assisted discharge. Admission avoidance is where patients are treated in their own home instead of an acute hospital setting, offering a true alternative to standard hospitalisation (Crisci, 2023) whereas early assisted discharge is when a patient is initially treated in hospital and then continues their treatment at home.

HITH may have implications for both Length of Stay (LOS) in hospital and readmissions to hospital after discharge. These can be used as indicators of hospital performance and are closely related. This systematic review aims to describe factors relating to LOS and readmissions for older patients receiving home-based treatment such as HITH. This systematic review is necessary as HITH-programs are increasingly being used for older patients worldwide, however,

<sup>1</sup>Collaborative Evaluation and Research Centre (CERC), Federation University Australia, Churchill, VIC, Australia

### Corresponding Author:

Kerry de Vent, Collaborative Evaluation and Research Centre (CERC), Federation University Australia, Gippsland Mail Centre, Churchill, VIC 3841, Australia.

Email: [k.devent@federation.edu.au](mailto:k.devent@federation.edu.au)