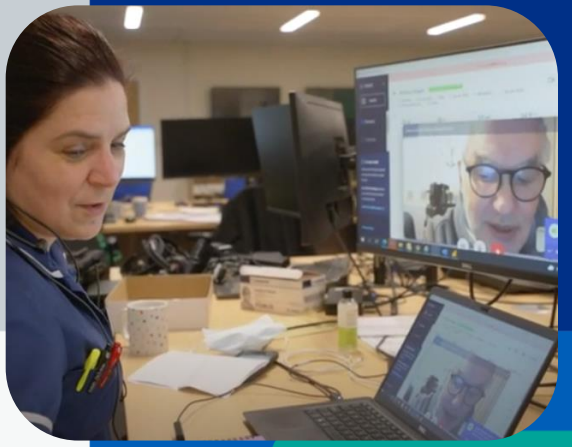
Hospital at Home (also known as virtual wards) evidence and evaluation



Charlotte Lynch, Programme Lead, Hospital at Home

What is a Hospital at Home (also known as virtual wards)?

A substitute for acute inpatient hospital care for patients of all ages.

An acute clinical service with staff, equipment, technologies, medication, and skills usually provided in hospitals delivered to selected people in their usual place of residence, including care homes.

Suitable for a range of acute conditions, including but not limited to respiratory problems, heart failure or exacerbations of a frailty-related condition for adults, and acute respiratory illness, gastroenteritis and neonatal jaundice for CYP.

The acuity of the patient's condition differentiates hospital at home from other community services and should be high enough to warrant consultant physician/consultant practitioner/GP oversight, with clear lines of clinical governance and accountability in place.

The case mix may include those who mainly require daily monitoring virtually or by phone and reviews to those who require multiple home visits within a day from the member of the MDT. The length of stay can be different for each person but is expected to be short (up to 14 days).

Hospital at home is not a standalone OPAT, standalone remote monitoring services, etc. Although in practice some of the functions/services may be delivered by the same staff as hospital at home, or may overlap with the provision of hospital at home care for some, these services on their own are not full hospital at home.

Core service components of hospital at home

We have published an operational framework which lays out the core components for providers delivering hospital at home

- Effective governance and clinical leadership, with consultant physician/ consultant practitioner/GP oversight
- Clear admission criteria and assessment processes
- Daily board rounds including a senior clinical decision-maker, medical input & MDT
- Hospital-level interventions/ treatment, including home visits
- Pharmacy, medicine reconciliation and optimisation
- Minimum operating hours of 8am-8pm, 7 days a week and out-of-hour provision
- Personalised care and support planning and shared decision-making
- Hospital-level diagnostics
- Technology-enabled care, inc. remote monitoring
- Clear discharge processes, including monitoring of length of stay

Background and history of the national programme

Jan 2021

Guidance for the immediate roll-out of Covid virtual wards published by NHSE

Autumn 2021

Covid virtual wards established in 96% of trusts. Case for change for expanding virtual ward pathways produced and models for ARI and frailty developed

Winter 2021/22

Guidance for implementing ARI and frailty virtual wards published and virtual wards included in Operational Planning Guidance 22/3, with £200 million funding for 22/23

Spring/ summer 2022

ICSs supported to develop plans to deliver virtual wards and funding allocated.

Winter 2022/23

Virtual wards within Operational Planning Guidance and further funding of £250 million for 23/24, as part of UEC

Autumn 2023

Guidance for developing clinical pathways for heart failure published.

Summer 2024

National Operational framework for virtual wards published, based on evidence and learning to date

Now

Over 12,700 virtual ward beds available with occupancy and capacity continuing to grow. Virtual wards highlighted as a key component of Neighbourhood Health Guidelines

What next? Ambition for hospital at home

Hospital at home has been included in the 2025/26 Priorities and Operational Planning Guidance as a key solution to alleviate A&E waiting times and ambulance response times. They are one the six core elements of the Neighbourhood Health Services Model, sitting under the 'urgent neighbourhood services' component.

2025/26 Priorities and Operational Planning Guidance

One of the national priorities is to **improve A&E waiting times and ambulance response times** compared to 2024/25, with a minimum of 78% of patients seen within 4 hours in March 2026 and a cat 2 ambulance average response time of no more than 30 minutes across 2025/26.

As part of this, systems and providers have been asked to:

- ✓ **Reduce avoidable ambulance dispatches and conveyances, and reduce handover delays by improving access to urgent care services at home** or in the community including UCR and hospital at home services
- ✓ Reduce **length of stay in hospital** and ensure that **patients are cared for in the most appropriate setting**
- ✓ **Set the foundations of the neighbourhood health model** by continuing to **embed, standardise and scale core components** of existing practice – such as hospital at home

Neighbourhood Health Services Model

Systems are asked in 25/26 to **standardise and scale urgent neighbourhood services** for people with an escalating or acute health need by:

- ✓ **Ensuring UCR and hospital at home services are aligned to local demand** and work together to deliver a coordinated service (with **access increasingly through a single point of access)**
- ✓ **Aligning UCR and hospital at home services with services at the front door of the hospital** such as urgent treatment centres and same day emergency care
- ✓ **Ensuring both step-up and step-down pathways** into these services **use resources efficiently and effectively**

Additionally, hospital at home services are one of the core components for people of all ages as outlined in the Standardising community health services – Phase 1 codifying core community health services.

What does the evidence tell us?

Patient outcomes and experience

Patient outcomes

- A randomised control trial of hospital at home services with comprehensive geriatric assessment for over 65s found patients had comparable outcomes to those treated in hospital. **Patients were also less likely to require new long-term residential care than those receiving inpatient care** (1)
- An evaluation of Cheshire and Merseyside heart failure VW found **rehospitalisation** and **mortality were significantly lower for patients treated on the VW compared to those receiving inpatient care.** VW patients also saw a reduction in hospital acquired infections, adverse drug reactions, and falls (2)
- An evaluation of hospital at home services across Buckinghamshire, Oxfordshire, and Berkshire West found that hospital at home significantly reduced the need for emergency services. Healthcare utilisation for patients in the 28 days before admission was compared to healthcare utilisation 28 days post-discharge. **Emergency admission rates fell by 73%, ambulance conveyances by 69% and calls to 111 by 58%** (3)
- International evaluations of hospital at home in the USA, Israel, Italy, and Canada have shown similar findings, with **patients less likely to experience adverse incidents, including delirium, pressure injuries, and hospital acquired infections**. They are also **less likely to decondition or require long-term care.**

Patient and unpaid carer experience

- Local evaluations of hospital at home services show **consistently high patient satisfaction**
- A nationally commissioned qualitative evaluation of patients, carers, and family members has found that patients value being able to receive personalised care in the comfort of their own home and tend to **prefer hospital at home to inpatient care**. Carers valued the convenience of supporting their loved ones at home, but didn't always feel involved in decision-making and found their needs were sometimes overlooked.
- An evaluation of unpaid carer's experiences of West Suffolk Hospital at Home found that **most carers were positive about hospital at home and felt that it supported improved recovery** (4)
- A systematic review of UK hospital at home evaluations for patients aged 65 and over found that patients prefer hospital at home to inpatient care. Patients highlighted that **hospital at home was better for recovery due to better social support, sleep, food, and being able to be with family** (4)

System impact and cost-effectiveness

System impact

- An evaluation of Liverpool heart failure virtual ward compared healthcare utilisation within 30 days for patients receiving care on the virtual ward to a control group receiving inpatient care. The **service supported a 36% absolute reduction in A&E activity and an 11% absolute reduction in NHS 111** (1)
- West Hertfordshire virtual ward has conducted a large-scale evaluation, analysing data from 2,966 virtual ward admissions. Patients entering the virtual ward through early supported discharge have **inpatient admissions which on average are 2.8 days shorter than comparable control groups**. Patients admitted to the virtual ward also have **more days without hospital care** in the 90 days from their initial presentation than matched controls.
- An evaluation of 29 virtual ward pathways across South East England, encompassing 22,000 virtual ward admissions, found that admission avoidance virtual wards are associated with a positive impact on avoided non-elective hospital activity. On average one non-elective admission 'avoided' was shown to be correlated with 2.5 virtual ward admissions, with some mature virtual wards achieving a 1:1 association between the 'avoided' non-elective admissions and virtual ward activity (2)

Cost-effectiveness

- An economic evidence review of virtual wards by NICE found that **most virtual wards are reported as cost-saving**, although methodologies vary between studies and some have limitations (3)
- An NIHR randomised control trial of admission avoidance hospital at home services with comprehensive geriatric assessment found that **hospital at home is a cost-effective alternative for selected older people**. The evaluation looked at costs over 6 months from the patient receiving treatment and found a mean difference of -£2547 for hospital at home patients, due to lower admissions to hospital and reduced need for residential care (4)
- An evaluation of Cheshire and Merseyside heart failure virtual ward identified a **substantial net cost benefit of £1,135 per patient per episode**, driven by reduced hospital stays, fewer ED visits, and lower readmission rates (5)
- West Hertfordshire virtual ward evaluation has identified significant cost savings. The virtual ward costs around £118.49 per bed day, compared to £569 for inpatient care. As such **savings are estimated at £486 per early supported discharge patient and £3,652 per admission avoidance patient**.
- An evaluation of Wrightington, Wigan, and Leigh virtual ward found that virtual wards were more expensive than inpatient care within the first year. However, **as staff became used to new ways of working and capacity and occupancy increased, the cost decreased to become in line with inpatient care.**

Upcoming research and evaluations

National quantitative evaluation of hospital at home

Health Integration Partners and City St George's University have been commissioned to deliver a national evaluation of mature adult hospital at home services, which are operating in line with the national operational framework. This is a two-year evaluation, with findings due in 2027.

Scope

Mature Hospital at Home
(Ref: NHSE VWs Operational Framework)

- Step-Up beds → Admission Avoidance
- Step-Down beds → Inpatient Length of stay reduction

Hospital at Home vs inpatient care

Key Lines of Enquiries

1. Hospital at home patient profile and demographic vs acute inpatient care including protected characteristics or health inequalities.
2. Hospital at home patients' outcomes and activity, including but not limited to:
    I. Length of stay
    II. Mortality
    III. Readmission rates
    IV. Any other (harm events, prolonged independence)
    V. Variation in the above per patient cohort and clinical pathways (such as frailty, respiratory, cardiology, general medicine)
3. Hospital at home impact on hospital and system demand and capacity:
    I. Emergency department attendances
    II. Non-elective hospital admissions
    III. Inpatient length of stay
    IV. Any other
4. Cost effectiveness - cost to the health and wider social care system

Key Considerations

1. Comparators, control groups, ,atched cohorts - *(age, case mix, acuity of patients)* – beyond pre/post designs.
2. Sensitivity analysis with control for confounding factors
3. Availability and maturity of enablers including remote monitoring and point of care testing. *How differences across hospital at home services drive differences in impact (delivery model, use of workforce).*

Find out more about the evaluation- [Latest Insights — Health Integration Partners]

NIHR funding opportunity

The NIHR have opened a funding opportunity for hospital at home evaluations
The scope is broad, with proposals related to the following welcome:

- Demographics and health inequalities
- Service organisation, workforce and pathways
- Impact on social care and healthcare

Health and Social Care Delivery Research

Hospital at home/virtual wards: service delivery, integration, evaluating impact on health and social care

← Back to all funding opportunities

Overview

Research specification

Application guidance

Application process

Contact Details

Overview

Opportunity status:	Open
Type:	Programme
Opening date:	6 May 2025 at 1:00 pm
Closing date:	5 August 2025 at 1:00 pm

Find out more about the research opportunity- [Hospital at home/virtual wards: service delivery, integration, evaluating impact on health and social care | NIHR]

Areas for further exploration

Some challenges to consider

Variation
There remains significant variation in hospital at home models across the country. Evidence from one provider cannot be applied to all services. Services which aren't operating in line with the core components of the operational framework are unlikely to demonstrate impact.

Data collection
Data is currently being collected through a fortnightly Sitrep and there isn't a national patient level data set. Evaluations are often dependent on local provider data, which can be difficult to collect, cleanse, and link. The transition towards a minimum dataset will help to improve evaluations.

Maturity of services
Hospital at home is still a relatively new programme and has only been delivered at scale since 2022. We need to acknowledge that services take time to embed and cannot expect immediate results.

Some challenges to consider when designing evaluations

The evidence base for hospital at home is growing all the time but there are common challenges researchers face in this space, which should be considered when designing and delivering evaluations.

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Data availability

Data is currently being collected through a fortnightly Sitrep and there isn't a national patient level data set. Evaluations are often dependent on local provider data, which can be difficult to collect and cleanse, whilst IG processes are often lengthy. The transition towards a minimum dataset will help to improve evaluations.

Busy providers

Working with providers to access data or recruit interview participants can be challenging. Services are busy and may not prioritise evaluations. Some providers have local IG processes which can be challenging to navigate.

Future research priorities

The national Hospital at Home team has worked closely with stakeholders, including providers, systems, regional leads, academics, and evaluation experts, to identify areas of interest for future research and evaluation. This slide presents potential areas for exploration.

Children and young people

The number of hospital at home services for children and young people is growing, however there is limited evidence exploring the impact of these services, including patient outcomes, system impact and cost-effectiveness.

What works?

We now know that mature hospital at home can have a positive impact on patient experience, outcomes, and the system. We need to understand what features of a virtual ward are associated with this positive impact.

System impact

Evaluations have focused on the impact of hospital at home on UEC, with the national quant evaluation prioritising this element of the care pathway. Further research should explore how hospital at home impact demand across primary and community care, as well as social care.

Enablers

Whilst the evidence base is growing, our understanding of point of care testing and remote monitoring has been drawn largely from long-term condition management. It would be beneficial to understand how to optimise enablers to have the biggest impact.

Health inequalities

Research has been delivered to understand experiences of patients and carers, but engagement has been limited with patients living with health inequalities or protected characteristics. We also do not understand the experiences of those who refuse referrals or who are not referred.

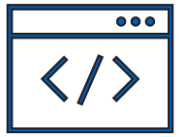
Transitioning towards a new minimum data set

Virtual Ward Minimum Dataset (MDS)

Currently hospital at home providers are required to manually report to a fortnightly SitRep, which provides a limited snapshot of time. We are in the process of transitioning to a new minimum dataset, with data flowing through the Federated Data Platform (FDP). This will provide many benefits, including improved ability to evaluate hospital at home.

Daily

The MDS will be a daily flow of virtual wards data to NHS England.



Automated

Data will be transferred without manual intervention.

Patient-Level

Information is provided at a patient record level.

Operational Insights

The Virtual Ward Reporting Dashboard will sit within the FDP and provide daily operational data and insights to providers and ICBs.

Standardised Data

A standardised data specification will create a consistent national data set.

Enhanced Privacy

Privacy Enhancing Technology will treat patient data to ensure data privacy is upheld.

Federated Data Platform (FDP)

The data will land on the FDP and be made available to stakeholders for analysis, insight and evaluation.

The Dataset

The following data will be collected as part of the minimum dataset.

if	Capacity	MPI Demographics	Referrals	Stay	Activity & Assessment
DEFINITION	Virtual ward details and capacity at 23:59:59 prior to the day of submission.	All patients who appear in tables 3,4,5 in the 24-hour period 00:00:00 to 23:59:59 prior to submission.	All new referrals in the 24-hour period 00:00:00 to 23:59:59 prior to the day of submission.	All virtual ward stays in the 24-hour period 00:00:00 to 23:59:59 prior to the day of submission.	All activities and assessments that took place in a 24-hour period 00:00:00 to 23:59:59 prior to submission.
DATA ITEMS	❑ Name of ward ❑ Ward opening date and closing date if applicable ❑ Maximum capacity ❑ Whether the ward utilises point of care testing ❑ Whether the ward is technology enabled	❑ NHS number ❑ Date of birth ❑ Patient's postcode ❑ Gender ❑ Ethnicity ❑ Patient's GP practice ❑ Date of death if applicable	❑ Requesting service and organisation identifier ❑ Referral request time and date ❑ Source of referral ❑ Primary reason for referral, presenting complaint and primary diagnosis (ICD-10 and SNOMED CT) ❑ Referral rejection date and reason if applicable	❑ Admission source ❑ Stay start time and date ❑ Primary diagnosis ❑ Activity location code ❑ Is the patient receiving remote monitoring? ❑ Discharge time and date ❑ Method of discharge ❑ Discharge destination	❑ Care activity identifier and timestamp ❑ Coded procedure activity and procedure status (OPCS-4 and SNOMED CT) ❑ Coded observation values and measurements ❑ Coded findings (ICD-10 and SNOMED CT) ❑ Coded assessment tool in use ❑ Person score

Thank you for listening