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Supporting information

Virtual ward including Hospital at Home

25 January 2022

Equality and Health inequalities statement

Promoting equality and addressing health inequalities are at the heart of our values. Throughout the development of the policies and processes cited in this document, we have:

- Given due regard to the need to eliminate discrimination, harassment and victimisation, to advance equality of opportunity, and to foster good relations between people who share a relevant protected characteristic (as cited under the Equality Act 2010) and those who do not share it.
- Given regard to the need to reduce inequalities between patients in access to, and outcomes from healthcare services and to ensure services are provided in an integrated way where this might reduce health inequalities.

Introduction

Virtual wards allow patients to receive the care they need at home, including in care homes, safely and conveniently rather than in hospital. They also provide systems with a significant opportunity to narrow the gap between demand and capacity for secondary care beds, by providing an alternative to admission and/or early discharge.

This supporting guidance helps systems to achieve these ambitions and provides blueprint guidance notes for two virtual ward pathways: acute respiratory infection virtual wards and frailty virtual wards otherwise known as Hospital at Home.

This is the first national publication that supports virtual ward implementation and will be expanded as evidence and good practice develops in this rapidly evolving area. We continue to seek and encourage input from clinicians on how we can further support implementation.

For the purpose of this guidance, a virtual ward supports a person who would otherwise be in a secondary care bed.

Case for change

Virtual wards are supported by a growing evidence base[1] that demonstrates patient, system and public benefits, and has broad clinical support:

- Feedback from patients is positive[2] and suggests that virtual wards support increased patient choice and personalised care, allowing patients to be treated in a more comfortable home environment.
- Virtual ward models have reduced emergency department (ED) presentations and hospital admissions[3] through the provision of timely multidisciplinary care.
- Virtual wards already exist in many areas of the UK. Feedback from local systems suggests that 86% of integrated care systems (ICSs) have either implemented technology-enabled virtual wards or are planning to do so. There are also a significant number of virtual wards across the country that do not use remote monitoring but provide valuable additional capacity.
- Learning from COVID-19 suggests that virtual wards may be implemented quickly and safely.[4] There was rapid stepping up of COVID-19 virtual wards across the UK during the pandemic.[5]
- NHS England and NHS Improvement analysis of hospital admission data suggests that a virtual ward of 50 beds could deliver the equivalent of 31 additional secondary care beds through more effective utilisation of staff. Critically, the benefits depend on the management of admission to and discharge from the virtual ward against clear criteria. Admission avoidance models have the potential to release greater benefit in terms of bed days saved than models that focus on early supported discharge.

[1] Vindrola-Padros C, Singh KE, Sidhu MS, Georghiou T, Sherlaw-Johnson C, Tomini SM, et al (2021). Remote home monitoring (virtual wards) for confirmed or suspected COVID-19 patients: a rapid systematic review. *EClinicalMedicine* 37: 100965. Epub 2021 Jun 23. PMID: 34179736; PMCID: PMC8219406.
[2] Khalil R, Li W, Walden A (2020). Triage into the community for COVID-19 (TICC-19), patients pathway – Service evaluation of the virtual monitoring of patients with COVID pneumonia. *Acute Med* 19(4): 183–191. PMID: 33215171.
[3] Lewis C, Moore Z, Doyle F, Martin A, Patton D, Nugent L (2017). A community virtual ward model to support older persons with complex health care and social care needs. *Clin Interv Aging* 12: 985–993; Jones J, Carroll A (2014). Hospital admission avoidance through the introduction of a virtual ward. *Br J Community Nurs* 19(7): 330–334. doi: 10.12968/bjcn.2014.19.7.330.
[4] Schultz K, Vickery H, Campbell K, Wheeldon M, Barrett-Beck L, Rushbrook E (2021). Implementation of a virtual ward as a response to the COVID-19 pandemic. *Aust Health Rev* 45(4): 433–441. doi: 10.1071/AH20240. PMID: 33840420; Ferry OR, Moloney EC, Spratt OT, Whiting GFM, Bennett CJ (2021). A virtual ward model of care for patients with COVID-19: Retrospective single-center clinical study. *J Med Internet Res* 23(2): e25518. doi: 10.2196/25518. PMID: 33529157; PMCID: PMC7879714.
[5] Thornton J (2020). The "virtual wards" supporting patients with covid-19 in the community. *BMJ* 369; m2119 https://doi.org/10.1136/bmj.m2119

- Virtual wards improve staff experience[6] and can allow for better and more flexible use of the existing workforce. They create opportunities for staff to undertake flexible working and blended roles, ie a mixture of in-person clinical care and provision of virtual clinical care. Additionally, they benefit staff who cannot undertake patient-facing activities.

What are virtual wards?

Virtual wards support patients, who would otherwise be in hospital, to receive the acute care, remote monitoring and treatment they need in their own home or usual place of residence.

Virtual wards provide acute clinical care at home for a short duration (up to 14 days) as an alternative to care in hospital. Patients admitted to a virtual ward have their care reviewed daily by a consultant practitioner (including a nurse or allied health professional (AHP) consultant) or suitably trained GP, via a digital platform that allows for the remote monitoring of a patient's condition and escalation to a multidisciplinary team.

Depending on patient need and the pathway to be supported, a virtual ward may also require in-person care, eg to deliver a care assessment or acute level interventions such as IV therapy. For example, a virtual ward set up to support people living with frailty may have a higher reliance on in-person care delivery than one focused on COVID-19. This is because the intensity of acute support needed differs by condition. The model that blends in-person care at home with remote oversight and monitoring is often referred to as a Hospital at Home and is well established. As patient needs become more complex, the service model to meet them becomes more intensive.

Virtual wards are suitable for a range of conditions that can be safely and effectively managed and monitored at home, or at a person's usual place of residence. Many local areas have developed or are developing virtual wards for a range of conditions, including for people with respiratory problems and COVID-19, heart failure or acute exacerbations of a frailty-related condition.

[6] Schultz K, Vickery H, Campbell K, Wheeldon M, Barrett-Beck L, Rushbrook E (2021). Implementation of a virtual ward as a response to the COVID-19 pandemic. *Aust Health Rev* 45(4): 433–441. doi: 10.1071/AH20240. PMID: 33840420.

Virtual ward pathways for two key patient cohorts have been co-produced by clinicians and wider stakeholders: acute respiratory infection (ARI; including COVID-19) and acute exacerbation of a frailty-related condition. While systems do not need to limit support to these pathways, these two groups account for up to 50% of patients who may be clinically suitable to benefit from a virtual ward and offer a significant opportunity to scale.

Virtual wards should be fully technology-enabled (the management of patients via a digital platform) to optimise care of patients, support communication and enable the effective management of a patient's condition. Where relevant, patients may measure agreed vital signs[7] and enter data into an app or website. In some cases, they wear a device that continuously monitors and reports vital signs. Clinical teams can see individual measurements for the patients they are responsible for via a dashboard. The platforms ensure that the team is alerted when any patient moves outside agreed parameters, allowing them to take appropriate action.

Technical guidance to support the implementation of digital platforms is available on the NHSX website.

Principles of virtual wards

Virtual wards should:

1. Provide acute clinical care delivered by a multidisciplinary team (MDT) if clinically appropriate, led by a named consultant practitioner (including a nurse or AHP consultant) or suitably trained GP with relevant experience and training, with clear lines of clinical responsibility and governance.
2. Have clearly defined criteria to admit and reside, supported by daily clinical review, by an MDT if clinically appropriate, to provide a safe and robust service.
3. Ensure that patients are given clear information[8] on who to contact if their symptoms worsen, including out of hours. There should be clear pathways to support early recognition of deterioration and appropriate escalation processes in place to maintain patient safety. Training on escalation processes should also be provided to carers, staff, the MDT, etc as necessary.

[7] https://www.england.nhs.uk/nhs-at-home/faqs-for-for-covid-virtual-wards-and-covid-oximetry-home/
[8] Information should adhere to the Accessible Information Standard.

4. Provide patients (and/or their carers) with adequate information to allow informed consent and understanding of their care, and to support the use of equipment or digital technology such as mobile phones, apps, web-based tools or wearables.
5. Have access to specialty advice and guidance/diagnostics equivalent to acute hospital access as appropriate to enable timely clinical decision-making.
6. Deliver time-limited interventions and monitoring based on clinical need for a secondary care bed.
7. Be fully aligned or integrated with other service development programmes, including urgent crisis response (UCR), same day emergency care (SDEC) and unscheduled care across their systems.
8. Be developed for a range of conditions/symptoms/settings and should track specific metrics that measure appropriate outcomes to demonstrate patient safety and sustainability
9. Consider the risk of excluding patients from virtual wards through the exclusive use of digital tools, and offer alternatives should patients lack the ability to fully use the technology.[9]

Implementation

Systems should review and make plans to expand virtual ward capacity as fast as practicable, taking account of local circumstances and building on the existing footprint of services. Place-based partnerships continue to enable the integration and delivery of health and care services based around population needs. Building on the work outlined in the Local Government Association and NHS jointly published Thriving Places, virtual wards allow systems to build on a culture of innovation, enabling sharing of best practice and promoting adoption of proven innovation.

Systems should:

- Consider provider collaboratives to deliver virtual wards across community, secondary and primary care.

[9] NHS England » The Equality and Health Inequalities Hub

- Continue to develop partnerships within local health communities, including with the independent sector and local organisations to build capability.
- Work to integrate virtual wards with existing urgent and emergency care services such as SDEC and UCR to support the development of an admission avoidance model. Pathway development work should consider flow from NHS 111, 999 and UCR services with an ambition to support increased referrals into virtual ward services.
- Review out-of-hours service contracts with a view to revising them to better support any additional demands on services as part of the integration of services to ensure comprehensive 24-hour safety netting for patients on a virtual ward.
- Consider the use of point of care (POC) testing to support delivery of virtual care. Where POC testing is not yet readily available, services should ensure they have equitable access rapid urgent diagnostics, to support clinical decision-making, risk management and ongoing care planning.

Full technology enablement – that is, use of digital platforms – is recommended to enable patients to be best supported at home. Further information about and technology enablement support is available via the Innovation Collaborative NHSFutures Platform.

In addition to using digital tools for remote monitoring and improving care delivery, virtual ward services should consider digitising demand and capacity management, workforce allocation and patient communication. Digital patient records should also be considered to ensure access to clinical information at the point of care. Recognising that there is currently variation in technology provision and a lack of consistency in how virtual ward activity is coded, we will work with systems and technology providers to align data standards and improve data flows to support provision of care.

Funding

Details of additional funding are set out in operational planning guidance.

Staffing and oversight

Virtual wards are primarily implemented at system level and delivery is led by one or more acute trusts and/or community health services or primary care with appropriate and timely specialist input.

Virtual wards will build on existing services, recognising that they need to be delivered differently and enabled by technology. Funding should be used to strengthen and build existing teams who are already working to support acutely ill people at home, such as crisis response and district nursing.

Virtual ward models will draw on multidisciplinary staff, including AHPs, advanced nurse practitioners and advanced clinical practitioners, and including staff who may be self-isolating. Access to rapid telephone/digital/video specialist clinical advice and guidance (eg acute medicine, respiratory, microbiology and pharmacy) should be secured and established. Clear pathways for referral and escalation should be developed collaboratively with SDEC, ED, general practice, community health services and UCR.

Legal responsibility, including for ensuring appropriate clinical governance, remains with the relevant provider. Each system should have a named executive lead alongside a named operational lead responsible for the establishment of the service in their area. Clinical, governance and administrative responsibilities across the pathway can be provided by any appropriately trained person and best use of resources should be made.

The virtual ward should be led by a named consultant practitioner (including a nurse or AHP consultant) or suitably trained GP, with access to timely specialist advice and guidance.

To provide a safe and robust virtual ward staffing is required for a minimum of 12 hours a day (8am–8pm), seven days a week, with locally arranged provision for out-of-hours cover, enabling flexibility of service provision as determined by local need.

We are working with systems to provide further support and develop guidance on staffing and case studies.

Monitoring and evaluation

Early evaluation will be critical to assess how well virtual wards are delivering the potential benefits of better patient experience and outcomes, and the impact on health inequalities. Initially, two strands will support this:

- qualitative and quantitative feedback: work through regions with local providers to undertake rapid local evaluation on key questions relating to impact on use of hospital beds, workforce and use of technology

- data collection: establish a data collection (SitRep) across all virtual ward providers to understand the nature of virtual wards in operation and capacity and utilisation of beds, to enable regular reporting for services.

The intention is to have operational management information reporting in place – accessible to regions and systems as well as national policy teams – by spring 2022. The findings from the rapid local service evaluations will be reported in a similar timeframe, demonstrating the impact of virtual wards on bed usage, workforce and, where relevant, technology enablement.

We do not expect virtual ward activity to be coded as it is for inpatient or outpatient activity in the Commissioning Data Set (CDS) as this would affect length of stay and other reporting for providers. The thinking on how activity should be coded across hospital, community and other models regarding data standards, data collection flows and interoperability is being developed and guidance will be published in due course. Learning from the rapid local service evaluation sites will inform the design of data collection systems to ensure that they support clinical care and avoid data burden.

Patient information

Sites setting up virtual wards should develop patient information tailored to their specific service and local population. This should be in line with best practice on writing patient information leaflets and should include clear information on the service, contact details, operating hours, safety netting and escalation processes, informed consent, specific information on how to use any technology or digital equipment, and use of data for monitoring, evaluation and/or research purposes.