

The Royal Wolverhampton NHS Trust - Digital Care @ Home

1. Background:

In winter 2020, during the height of Covid, there was a national ask to primary care to support people who were Covid positive (C+) being cared for at home using oximetry@home. This measures someone's oxygen saturation and is a key clinical indicator of their medical stability; therefore providing an early warning if they deteriorate.

In order to ensure an equitable and consistent city-wide offer The Royal Wolverhampton NHS Trust (RWT) worked with primary care to deliver a community-services led offer, which was rolled out in December 2020.

Initially developed as a more traditional 'paper-based approach' the oximetry@home service quickly developed into a digital model using remote monitoring. The service has since expanded and advanced its capabilities, both clinically and digitally, delivering what is now referred to as the Virtual Ward (VW).

The VW service offers support for people to be cared for at home for a range of pathways including:

- Respiratory
- Frailty
- Palliative care
- Renal
- General Medicine
- Paediatrics

The service sits within the wider community offer that includes District Nursing, wound care clinics and therapy at home, and has been developed with investment into new staffing for community services.

2. Delivery model

The current model is a 7/7 nurse-led community service, with medical support from acute physicians in the form of virtual multi-disciplinary team reviews (MDTs). In addition, pharmacists support medication reviews and prescribing; while patients can receive domiciliary care to support their personal needs. If a patient becomes unwell, escalation can be made via the 24/7 care co-ordination center into the wider range of community services, as well as 'hot advice' from a specialty consultant.

Individuals who reside in a care home also have access to the virtual ward, with a dedicated technology solution procured by the Integrated Care Board enabling either the individual or the care staff to monitor key health metrics and escalate concerns.

On receipt of referral, a nurse contacts the patient to organise a time to visit and undertake the 'onboarding' and consent process. At the first visit, which is always face-to-face, the nurse assesses the patient and takes baseline observations. These are used to co-develop a care plan with the patient. The nurse also provides training on how to use the digital technology, e.g., downloading the app, demonstrating how to use the monitoring equipment.

In line with the agreed care plan, patients will be asked to submit their recordings, with regular feedback and contact from the clinical team. Patients are reviewed as part of the virtual MDT, when changes to the care plan can be made to meet patient need.

Once patients have achieved the outcomes in their care plan e.g., successfully weaned off oxygen and maintained oxygen saturation levels, patients can be stepped down into the wider digital care at home offer that includes more longitudinal remote monitoring; or they can be discharged back to their GP. All patients who have had an admission to the VW can self-refer back into community services without the need to go via their GP or hospital.

3. Benefits and challenges of the virtual ward offer

Virtual wards have benefits for patients, staff, and the health & care system more widely. Promoted nationally by the NHS, they are seen as a key enabler of supporting more people to be cared for at home (*NHS 2022/23 Priorities and operational planning guidance v3 22 February 2022*).

From a patient perspective there are known risks of extended admissions to hospitals including deconditioning and hospital acquired infection. Enabling patients to receive their care at home, rather than in a hospital environment, not only reduces these risks but can also support wider wellbeing by bringing people back to their families and communities, allowing them to eat their own food and drink their own drink, as well as be in the privacy and comfort of wherever they call home.

The virtual ward model also empowers patients to not just be more involved in their healthcare but to take more control over the management of their condition(s). The remote monitoring technology allows the individual, as well as the health staff, to measure and visualise their observations with easy-to-read information showing them when their measures are 'normal for me', improving or deteriorating. When a patient is deteriorating health staff are automatically alerted by the technology; if a patient has concerns, they have direct access to a team of healthcare staff.

For staff, the virtual ward offers a new and innovative way of working providing variety and flexibility that supports workforce recruitment and retention. For example, a staff member could have a role that includes direct patient care in the home alongside remote working in the digital hub. We have developed hybrid roles for staff to work in the acute and in the virtual ward, for example being part of the acute respiratory team that identifies patients for virtual ward and then following said patients out to provide their care in the community.

For the wider health and care system the virtual wards support improved flow by reducing admissions and/or length of stay in hospital. The flexibility of the model allows it to be scaled up more quickly than physical estate in response to bed pressures e.g., during winter. The digital solutions enable the sharing of resources and expertise across teams thereby reducing duplication and hand-offs.

It is important to recognise that the virtual wards are not a panacea to every challenge facing the NHS. The benefits outlined above are only possible with investment in highly skilled staff and the tools they need to support care. Even with this support, which is in place in Wolverhampton, there are challenges to setting up, maintaining, and growing the model.

Working in the virtual ward model challenges traditional approaches for both staff and patients, which can create anxiety about the unfamiliar. It is important that time is given to take everyone on the journey so people are not excluded or intimidated by the change. This requires investment in communications, training and engagement.

There is a range of digital capability, access, and connectivity across the city. This can limit people's ability to use the digital elements of virtual ward. It is therefore important that non-digital options are always included to ensure no-one is disadvantaged by their ability to use digital technology, as well as having the ability to offer devices to people where the lack of device is the barrier as opposed to ability to use a device.

The final challenge to highlight is ensuring that virtual wards integrate with other services, and are not a 'bolt-on' creating a different set of care plans, patient data and handover between teams.

4. Next steps for digital care @ home

Wolverhampton is recognised regionally and nationally as having one of the most developed virtual ward models in the country. We believe that it forms an important part of our wider community offer enabling more people to be cared for at home. Working in collaboration with our health and care partners, and listening to feedback from our patients, we plan to grow the range of pathways offered on the virtual ward.

We are developing our workforce model to include advanced nursing skills, dedicated medical provision and a clear training approach that gives students and trainees the opportunity to rotate into virtual ward as they would any other speciality on the hospital.

In the long term it is our aspiration to integrate the model with wider services, including digital care @ home, providing the residents of Wolverhampton with the tools to manage their own health, access timely advice and support outside of a traditional hospital model and therefore work towards reducing health inequalities.

Author: Sian Thomas, Deputy Chief Operating Officer – RWT

Note: this paper is accompanied by slides that outline key deliverables and performance metrics