NHS & British Red Cross:

An exploration of the barriers & exclusion to Acute Respiratory Infection Virtual Wards

A project between NHS Cheshire & Merseyside ICB & British Red Cross Innovation Hub:
Findings concluded in June 2023

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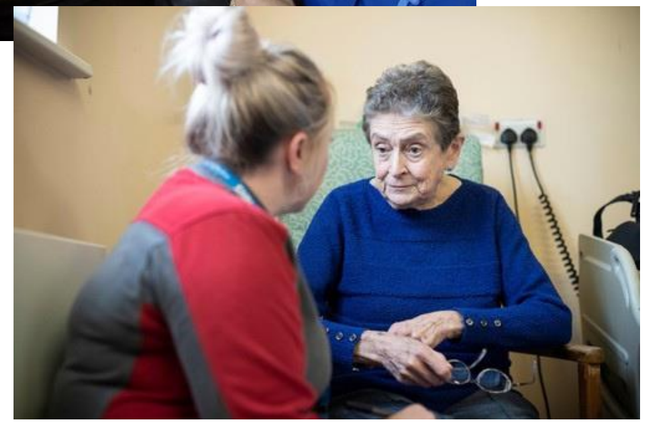
Project overview

Discovery into improving access and engagement in virtual wards

The BRC Innovation hub began working with NHS England and NHS Improvement North West in 2023, to explore the question: “**How Might We improve access and engagement to Virtual Wards for those who are currently excluded?”**

Working with NHS Cheshire & Merseyside ICB, interviews & observations with NHS staff and patients were conducted to explore what **barriers** existed for patients; where patients were being **excluded;** & what support could convert these patients from 'excluded' to 'included'.

Throughout the discovery, we also tested the hypothesis that a **BRC Digital Buddy service** could improve access to virtual wards for these patients.



With thanks to NHS Cheshire & Merseyside, Mersey Care, Telehealth & the SWISS nurses at Whiston hospital for their time, support & shadowing opportunities.

Disclaimer for further use of findings:
Gaining access to staff and patients in a time of immense NHS pressure was difficult, so these findings have been generated from speaking to a mixture of NHS staff, patients, BRC staff & volunteers, BRC service users and members of a COPD patient support group. The first step in future work should be to gather further evidence to validate whether these findings hold true within the cohort of patients you are looking to support.

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Exec Summary

Virtual wards allow patients to receive hospital-level care from their own home, allowing patients to remain at home whilst freeing up hospital beds for those that need them most.

Virtual wards require patients to have the capability, opportunity and motivation to engage, and our discovery project identified that there is inequality in who is being offered, and supported to benefit from this mode of healthcare.

Our findings:

- Digital exclusion was one barrier to virtual wards, however this was reduced where family and friends were available to support the patient at home & was not considered the main barrier to access and engagement
- Patients who were most excluded were those that had no at-home support & those perceived as not being able to engage due to deprivation or other health & mobility issues. Crucially, these barriers were often ‘perceived’ and there was no formal social-criteria assessment to identify and address barriers to virtual wards
- Clinical staff were often conducting non-clinical virtual ward tasks, however referrals are often low and unpredictable so a standalone digital-buddy service may not be viable
- To increase access to virtual wards & reduce inequality, a wraparound virtual ward support service needs to identify and address the holistic needs of the patient and the barriers they face, both digital and otherwise

Continuing to roll out virtual wards without a focus on identifying and reducing barriers to inclusion risks exacerbating health inequalities & significantly reduces the number of patients that could otherwise benefit. The voluntary and social sector can play an important role in the design and provision of these wraparound services.

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Virtual wards context & key findings

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Virtual Wards context

"...it must be recognised that there is a severe workforce and skills shortage in the NHS which is impacting on systems' ability to fully develop, deliver and scale the full ambition of virtual wards..."

Virtual wards patients are able to benefit from **hospital-level care at home,** safely and in familiar surroundings, while **freeing up hospital bed capacity** for patients that need them most.

The NHS has set a significant target for the system level rollout of virtual wards, with the aim of **40-50 beds per 100,000 by December 2023.** As of January 2024, this figure stood at **23 virtual beds per 100,000.**

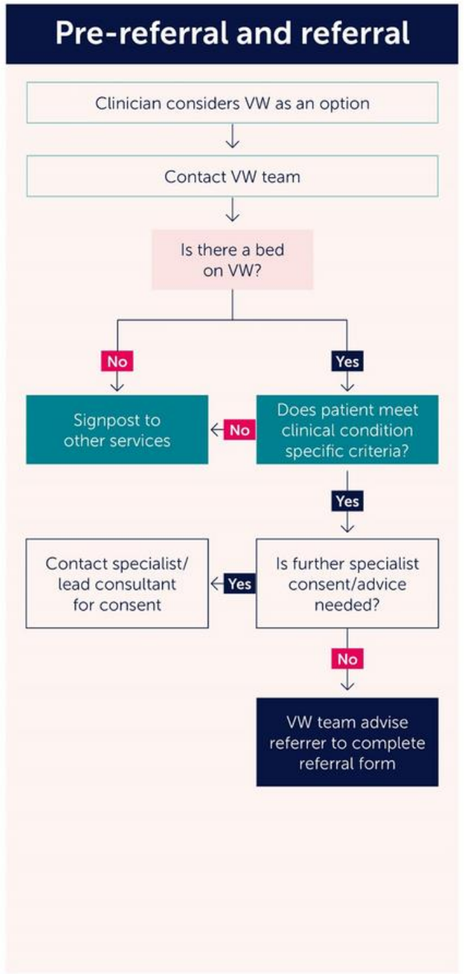
The roll-out & adoption of virtual wards is facing **challenges with staffing, culture change & knowledge and awareness** of who is suitable. Even though the majority of clinical staff see benefits to the Virtual Ward, there is **high risk-aversion** to use this as a means of early discharge.

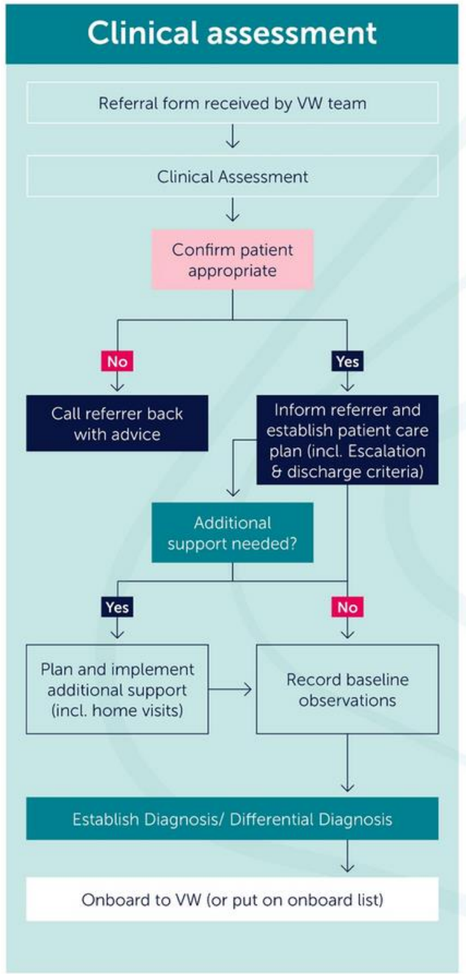
Virtual wards have the potential to improve outcomes for both patients and the NHS, but this potential is undermined by a lack of standardised data & bias in who is offered and supported to engage in virtual wards.

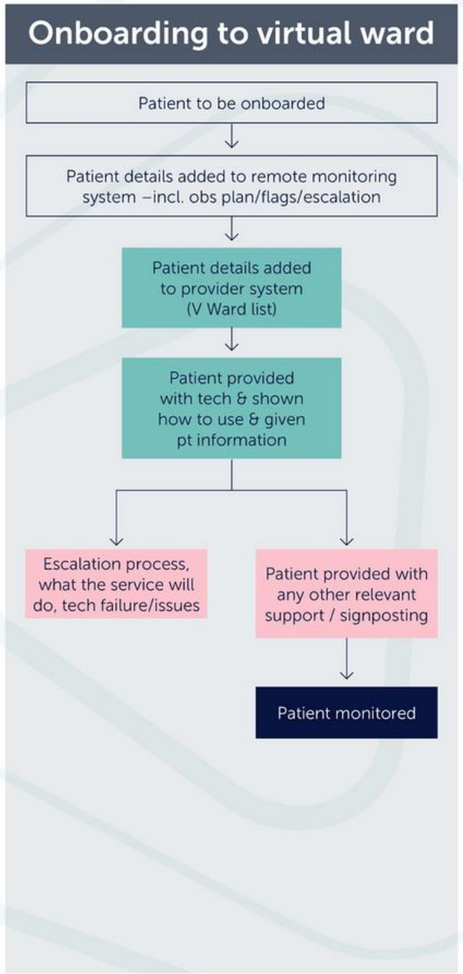
Decisions involved in the virtual ward journey

Key findings:

- There are many people & teams involved in a patient's virtual ward journey
- We have found that the virtual ward journey is not standardised and therefore leaves room for bias
- There are multiple places where eligible patients are falling through the gaps, from clinician identification through to virtual ward discharge
- Referral numbers are low & unpredictable due to low awareness amongst clinical staff
- Technical challenges are not the main consideration for nurses in determining VW access - staff typically expect family support to address these







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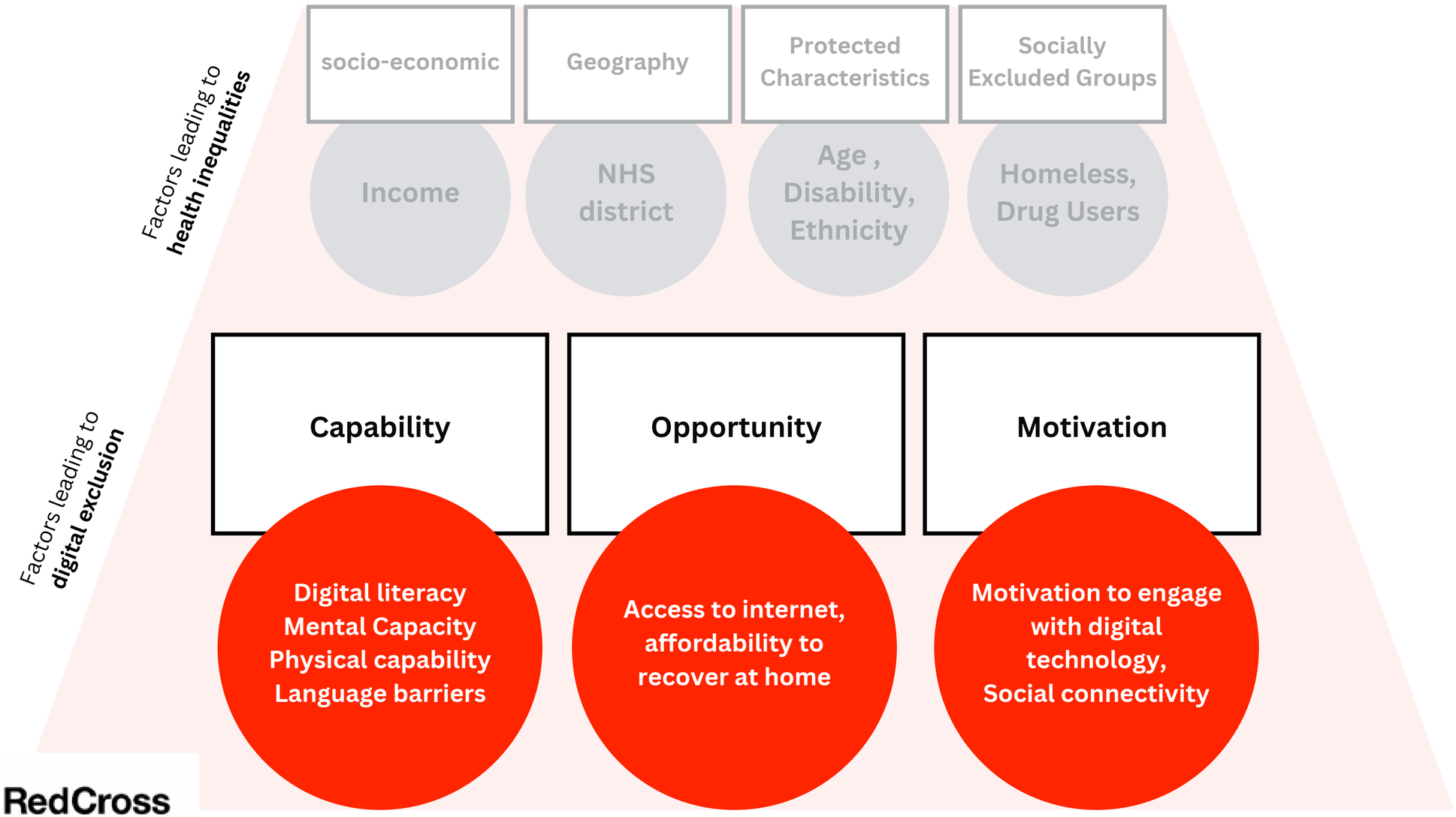
How do virtual wards impact health inequalities and digital exclusion?

Barriers to access engagement with digital care

Factors leading to health inequalities and digital exclusion



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Are virtual wards increasing inequalities?

Government ambition is to provide 20% of acute beds at home. Despite the implications for patients with multiple co-morbidities (over represented in poorer areas), & the heavy reliance on digital connectivity, much of the research on virtual wards makes little or no mention of inequalities in the context of virtual wards.

What has our research found?

- Our research identifies a significant gap in acknowledging inequalities within the context of virtual wards

- Clinical criteria is essential in decision making. Social criteria is not always considered as part of the assessment process, but bias around perceived social barriers can lead to to exclusion of certain individuals

- Although there is a widespread passion for reducing digital exclusion, clinicians and nurses often lack the necessary time and resources to support individuals who are not already enabled for virtual wards (e.g., lacking digital skills or financial means)

- Virtual ward exclusions may be based on factors such as age, digital ability, socio-economic status, mobility concerns, & even the physical appearance of the patient

There is a significant challenge in implementing virtual wards **without exacerbating existing inequalities.**

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*List not exhaustive, based on research with NHS staff

Included & Excluded patients

Who is currently included & excluded from ARI virtual wards?

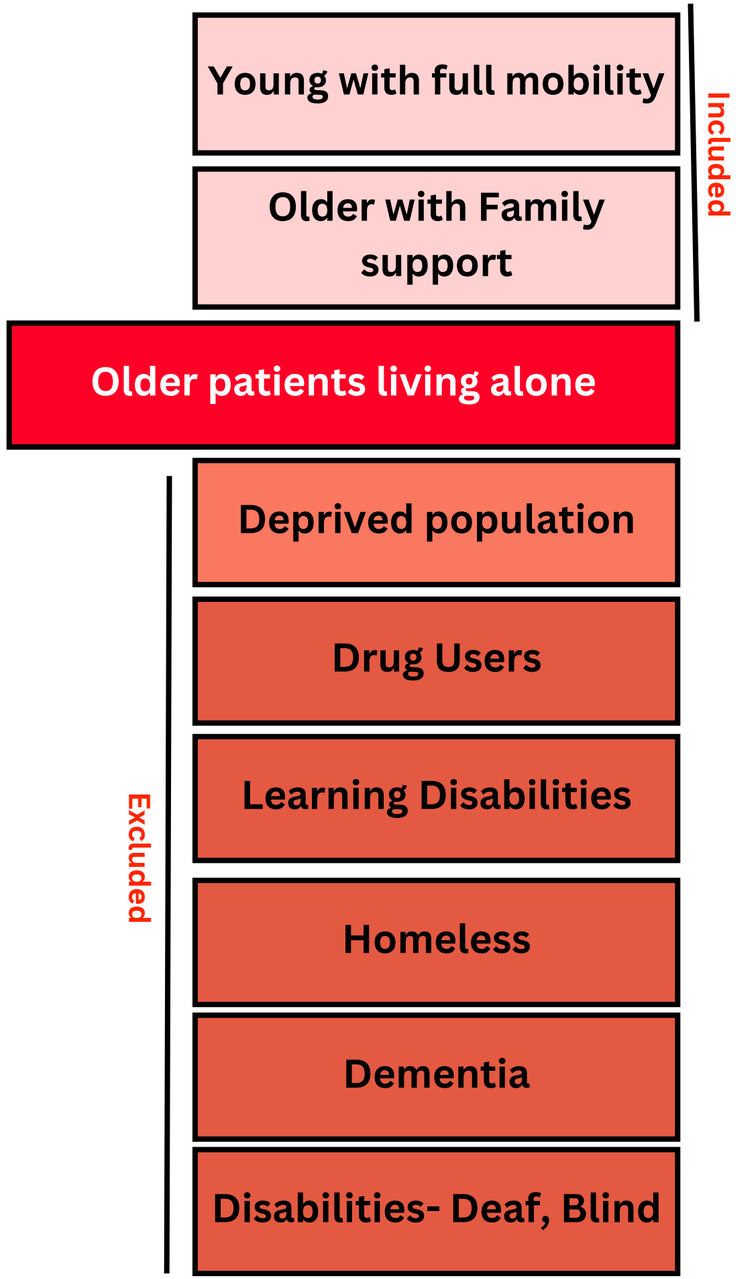
Younger COPD patients (50+) are perceived to have higher tech capability & would be offered VW. Only elderly patients with family support would be considered, relying heavily on family members to engage with Virtual wards.

Elderly COPD patients living by themselves/or with limited support, and who have basic to no use of technology are currently excluded from virtual wards due to perceived challenges at managing at home while on the virtual wards.

NHS staff indicated a desire to refer these patients to a virtual ward, if additional support was available.

Patients experiencing digital health exclusion due to deprivation are excluded from VWs, sometimes even down to their physical appearance. Exclusion for this group is complex and would not be resolved by a digital buddy alone.

Vulnerable patients whose records indicate drug use history, homelessness or conditions like dementia will likely not be considered for VW, due to hesitations about self-managing at home.



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Inclusion in virtual wards is multifaceted

Inclusion is further complicated by the level of digital exclusion experienced by the patient.

There are many patients who are being excluded from virtual wards, who **could be included if additional support was available.**

Digital health inclusion is complex and requires patients to have the **capability** (skills), **opportunity** (access) & **motivation** (belief).

We have used UK Government's digital inclusion scale, in combination with our research, to illustrate **three user groups** of virtual wards (see next section).

Careful consideration is needed about the needs of the patient and the type of support we choose to provide, to ensure we **do not further exclude** patients who currently are unable to engage.

Click here for more information

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Patient Personas

We used our research + the digital inclusion scale to create three patient personas. Personas help us to understand who we are designing for and what their needs are.

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Connected Homesters

Reliant on others for health management, Online

For these patients, barriers to virtual wards are limited as they have family support & will likely say they are confident on the VW kit even if they are not.

Health Management

- People who hate being in a hospital and would want to go on virtual wards as a means to avoid the admission/leave hospital early
- They won't ask questions in hospital and will say they understand without fully taking it in
- They would be reluctant to call for help if their readings/symptoms are deteriorating as they don't want to be in a hospital
- They would rely on family/carers to input readings, as they don't see the need themselves

Technology

- They can often use a phone, but they don't want to engage with the care portal or take their own readings
- They may range from being fully comfortable with digital technology or may never have used it

Social

- They often have family or friends to support & the infrastructure to support being online

Impact of Digital buddy on VW Access: Low
Impact of Digital buddy on VW Engagement: Medium

These patients are likely already able to access virtual wards due to family support & digital access. A digital buddy is unlikely to increase access for this group, it is more likely to bolster engagement when on the virtual ward & at home support during deterioration

"I got sent home and told to come back if the pain returned... I coughed up blood, had pain but let them know online. No way was I going back into the hospital"

Solo Beginners

Elderly 75-90 | Live Alone/Limited support at home

For these patients, barriers to virtual wards go further than technical capability and often include concerns about managing at home, especially with the frequent delay in care packages.

Health Management

- Understand their COPD condition & manages condition at home
- Health anxious for the future, they would engage with VW kit whether they feel well or not
- They see virtual wards as an opportunity for closer monitoring and 1-1 phone support
- Often have significant mobility issues & breathlessness, need some sort of support in their daily life
- They would rather stay at home than in hospital

Technology

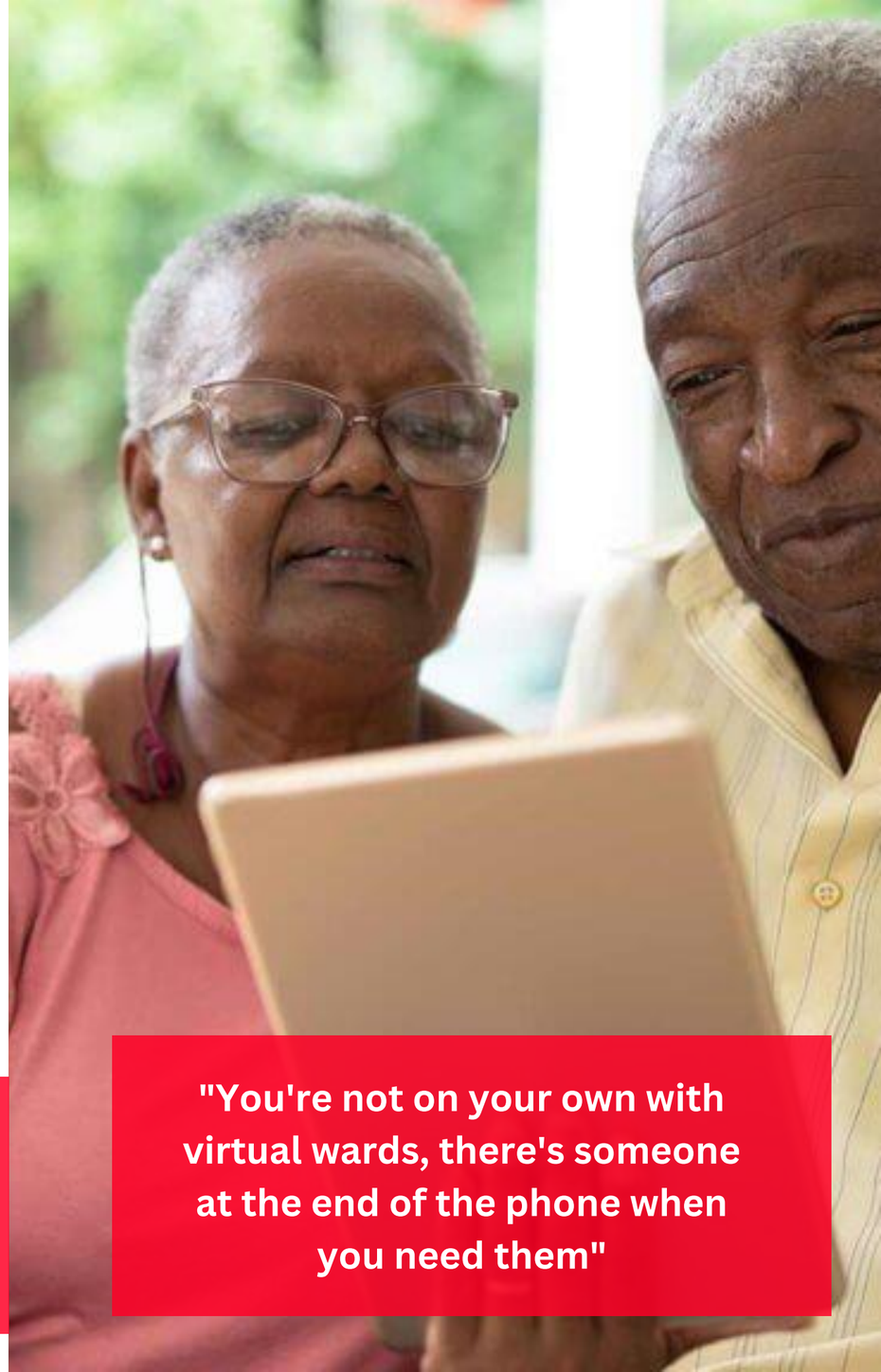
- They usually have limited use of technology but may use smartphones to keep connected
- Will engage with the portal if explained well, would want reassurance to know if they are doing it right

Social

- Loneliness is a key issue due to lack of mobility caused by their condition and age
- They would feel alone & worried after discharge from virtual wards, would desire long-term monitoring

Impact of a digital buddy on VW Access: Low
Impact of a digital buddy on VW Engagement: Medium

Digital support alone would likely not increase access for these patients. VW implementation would need to be combined with additional day-to-day support at home to increase confidence of both patients and clinicians.



"You're not on your own with virtual wards, there's someone at the end of the phone when you need them"

Excluded Resisters

Elderly & Tech Averse

Excluded Resisters hate technology as a mode of care and consider VW to be an imposition. They are anxious about their health (usually high frailty levels) and would frequently get admitted to the hospital and refuse to leave until they feel well enough to go home.

Health Management

- Reliant on NHS to manage their health and do as prescribed without asking many questions
- They don't really understand the point of remote monitoring & think virtual wards is an imposition on them
- Breathlessness causes severe anxiety & causes them to call an ambulance regularly, they want constant contact & reassurance with medical practitioners
- They stick to their routine and don't want to introduce new ways of doing things

Technology

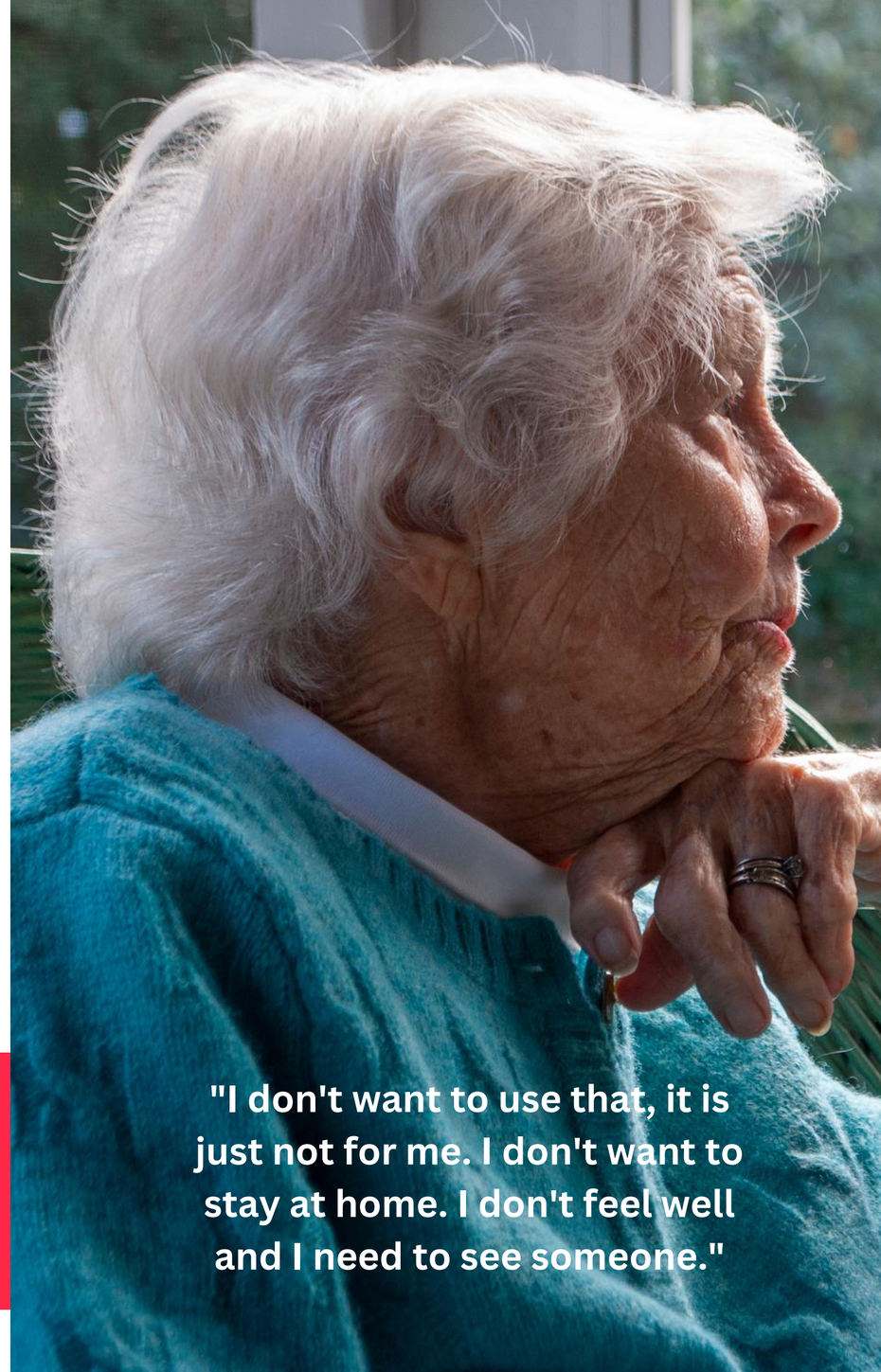
- Very hesitant when shown the care portal
- Often have no prior experience with technology, some having no internet at home
- Even if they don't live alone, they may live with partner with similar characteristics re technology

Social

- Their circle might involve people similar to them (more evidence needed)

Impact of Digital Buddy on VW Access: Low
Impact of Digital Buddy on VW Engagement: Low

Have the potential to be converted to join virtual wards but would likely need a more holistic support offer, spanning financial, social and digital support.



The Patient Journey

Where are these patients falling through the gaps on the journey?

Barriers to access | **Barriers to engagement**

	Health deterioration and Assessment	Admission to Physical Ward	Triaging and offer for Virtual Wards	Training	Discharge to virtual ward	Day 1	Day 3	Day 7	Discharge
Connected homesters	Dislike hospital so they will be reluctant to be admitted to physical ward		When offered will not disclose any concerns or fully understand the role of virtual wards			Will likely forget how to use kit and disengage	Engagement will reduce significantly if they feel better/family gets occupied. Also, If they have health concerns they won't call to share until severe.		
Solo Beginners			Mobility issues & lack of family support prevents VW referrals		Lengthy discharge time and need to organise support for the duration of VW.	VW engagement may fall off if health deteriorates, or if problems with kit/remembering how to use it			Anxious to offboard and may want further support after the VW is over.
Excluded resisters			Lack of access to resources or capability will prevent referrals	For those that are referred, will likely see kit and decline referral. Anxiety to return home might extend stay					

Barriers to Access

Barriers toEngagement

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The Patient Journey

What if we flipped these fall-off points to opportunities?

Barriers to access | **Barriers to engagement**

	Health deterioration and Assessment	Admission to Physical Ward	Triaging and offer for Virtual Wards	Training	Discharge to virtual ward	Day 1	Day 3	Day 7	Discharge
Connected Homesters	Adjust message of VWs as a means to avoid re-admission through closer monitoring			Assess their ability to use the kit after training and their understanding of their care package			Supporting patient/ family when engagement dwindles	Prompting patients to engage by explaining why the readings are needed even after they improve	
Solo beginners			Identify physical/mobility/ social barriers and engage partners to support		Assisted discharge with practical support at home with day-to day/personal tasks	Support with day 1 visit to do a safety and welfare check, set up kit and complete first readings together. Support with VW whilst supporting with other practical tasks			Support with transitioning to Long Term monitoring and support where applicable
Excluded resisters			Identify social barriers and provide support or signposting to help enable access	Spend additional time with these patients, likely require more support for reassurance	Identify other social or community organisations who may be interacting with patient who can support with engagement. Identify best communication methods for this group before discharge from hospital				Potential to get buy-in from patient for broader digital inclusion offers

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Implications and recommendations for future action

Digital buddies: Implications for virtual ward support

Is there a need for a digital buddy & how likely is it to lead to a reduction in digital health exclusion?

Virtual wards are relatively new and in many areas there is unnecessary clinical time spent on training & onboarding of kit. There is a strong desire for support in this area, evidenced by ICBs submitting proposals for digital buddy support.

Staffing challenges are, however, **leading to low & unpredictable referrals** across ICBs, reducing the confidence of the demand required for a standalone digital buddy service.

For one of the groups identified, a digital buddy would not increase **access** because they already have such support. For the other two groups identified, **a digital buddy would not greatly increase inclusion** due to other barriers such as systemic needs or non-digital support needs.

For two of the groups, a digital buddy is likely to only improve **engagement** with the virtual wards to a moderate amount. For the most excluded groups, there are **more significant opportunities for integrating existing third sector services** with the virtual wards roll-out, to support the holistic needs of a patient, eg. social, financial, health & general practical support needs.

Digital support cannot be an isolated solution, it needs to be part of broader systemic approach. Done badly, and without consideration of the specific cohort needs, **digital buddies for virtual wards risk only benefiting those already 'partially included' & increasing health inequalities**

Group	Access	Engagement
Connected Homesters	Low (other routes to access)	Moderate
Solo Beginners	Low (F2F engagement needed)	Moderate
Excluded Resisters	Low	Low (face-to-face support needed)

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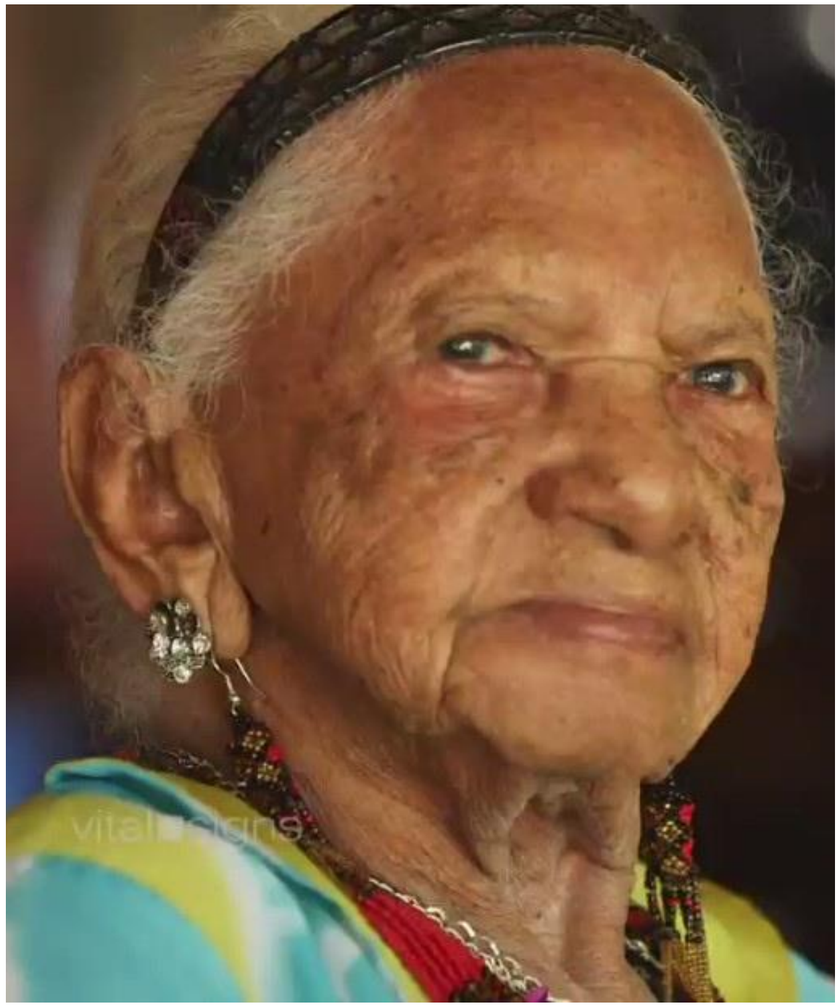
Call to Action: Mind the inequality gap…

Person-centred, holistic support is needed in virtual ward rollouts for people who are currently excluded:

- It is essential to prioritise understanding, identifying and addressing barriers in virtual wards for the population you support
- Incorporating social criteria in the assessment process can help identify individuals who may face barriers to accessing virtual wards, and determine the holistic support needed for that person
- Strategies must be developed to ensure equitable access to virtual wards, particularly for disadvantaged communities
- This will require partnerships with VCS and other organisations

By considering the virtual ward access and engagement requirements for individuals with diverse backgrounds and circumstances, we can develop a more inclusive and effective digital healthcare model & increase the uptake of virtual wards.



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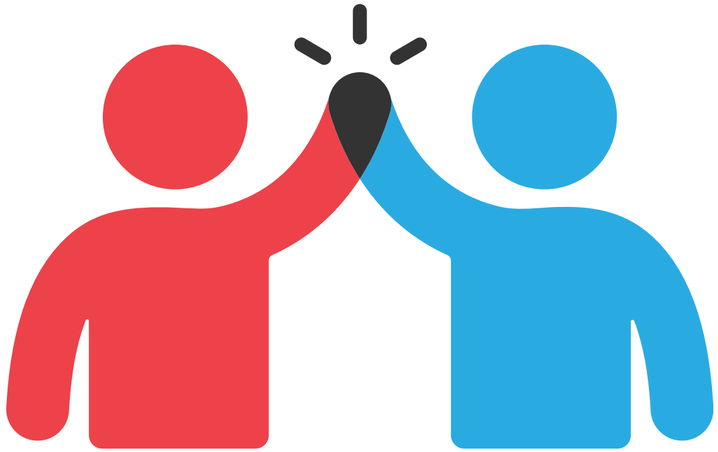
The role of the British Red Cross in reducing inequalities

Virtual wards has the potential to provide immense benefits for patients and for the NHS. However, partnerships are needed to ensure there is equal access for everyone who is clinically able to benefit.

- Voluntary, community and social sector organisations can play a role in supporting the NHS to meet virtual ward targets, by providing holistic, wraparound services designed around patients barriers and needs
- The British Red Cross has extensive experience in supporting the NHS and patients both in hospital and at home, across the UK and devolved nations
- Our Policy, Research and Advocacy team have also been working with NHS England on Health Inequality Policy for virtual wards
- With this range of experience, voluntary, community and social sector organisations are uniquely positioned to work with the NHS on designing holistic, person-centred virtual ward wraparound services, that can help increase access for those most excluded



By working together, we can help realise the potential of virtual wards

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Get in touch

If you would like to discuss how we can help, get in touch with our key contacts below:

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