

NHS VIRTUAL WARDS CONFERENCE

NHS Implementation
and best practice



9th July 2024 | Radisson Blu Hotel, Manchester Airport

Agenda for today:





NHS VIRTUAL WARDS CONFERENCE

NHS Implementation
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Welcome to the 6th NHS Virtual Wards
Conference!



9th July 2024
9am – 5:30pm
Radisson Blu Hotel, Manchester
Airport



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Chair Opening Address



Douglas Hamandishe

Chief Digital Officer/Broadcaster and Presenter -
Context Health and Centric Health Media



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Speaking Now...



Jen Tomkinson

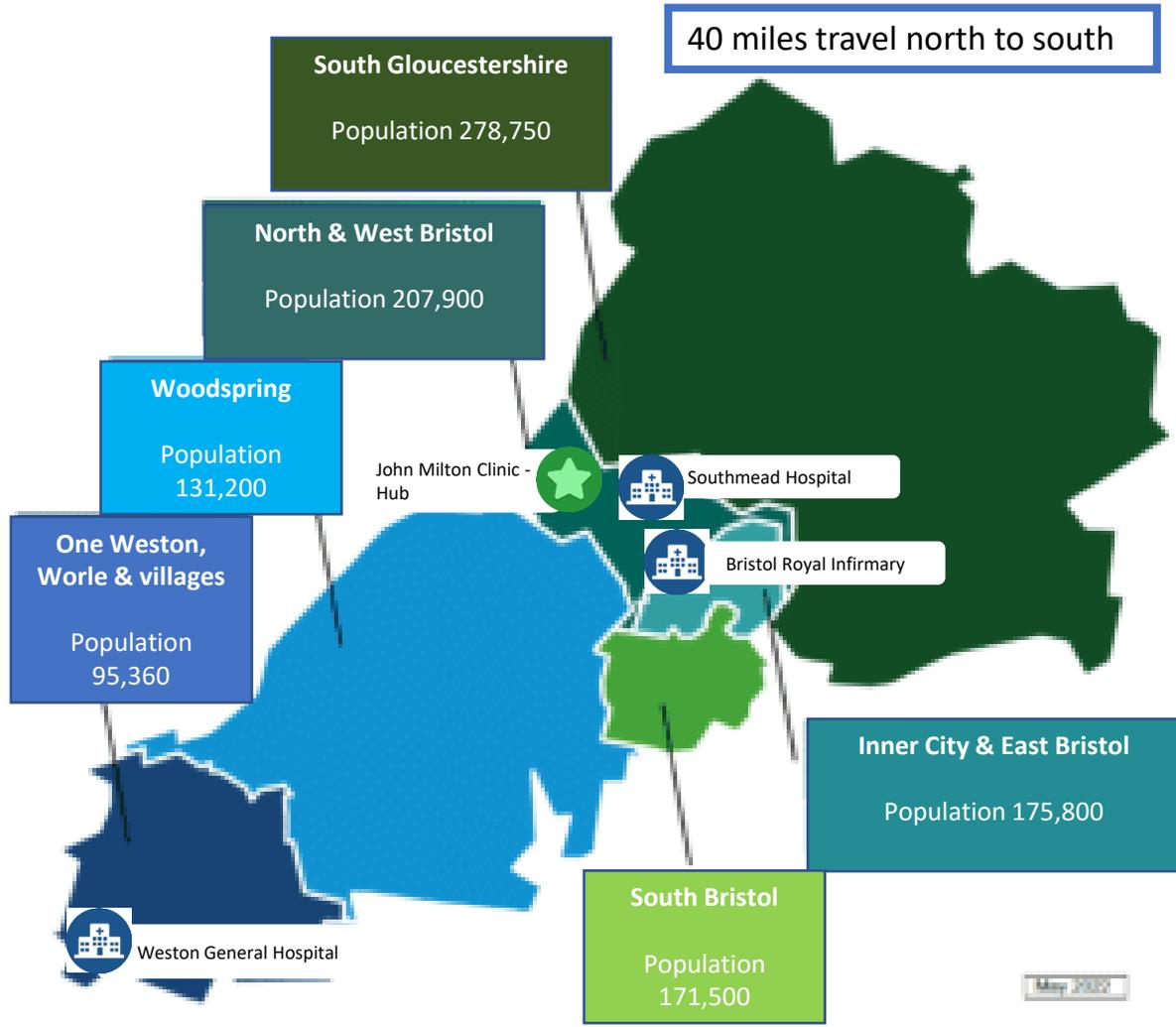
Associate Director NHS@home
Sirona care & health

How do we develop the “Virtual ward” workforce? Lessons so far and where are we heading?

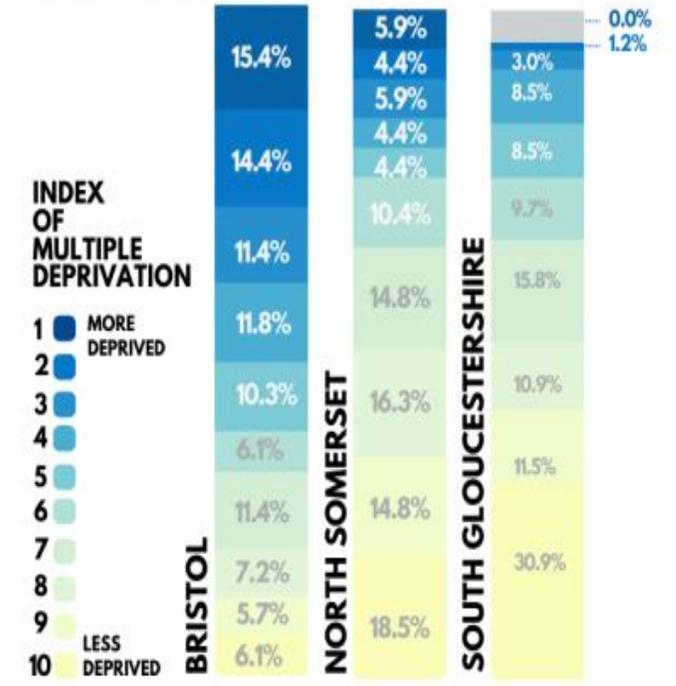
Jen Tomkinson

Associate Director NHS@Home

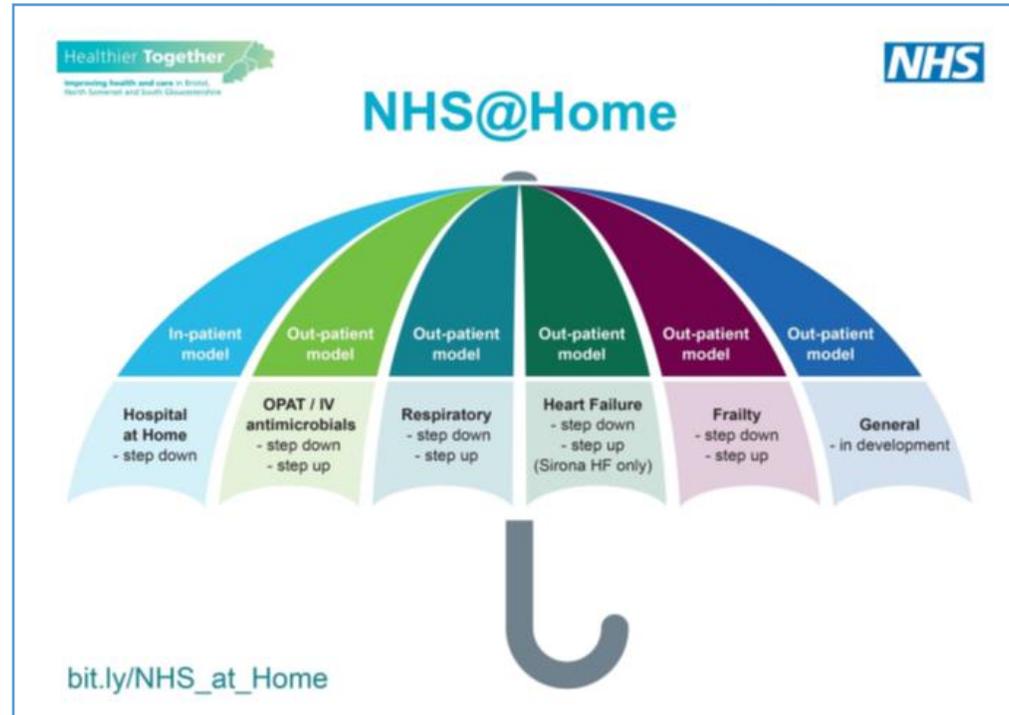
Bristol, North Somerset & South Gloucestershire



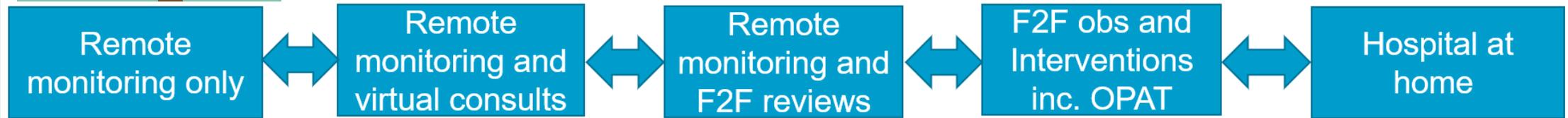
THERE ARE WIDE VARIATIONS IN DEPRIVATION



"Our vision is to develop **integrated, technology-enabled**, virtual wards, through **collaboration, trust, and shared values**. 'Admission' will be based on **clinical need**, with **equity of access**, benefiting **patients, staff, and the wider community**.

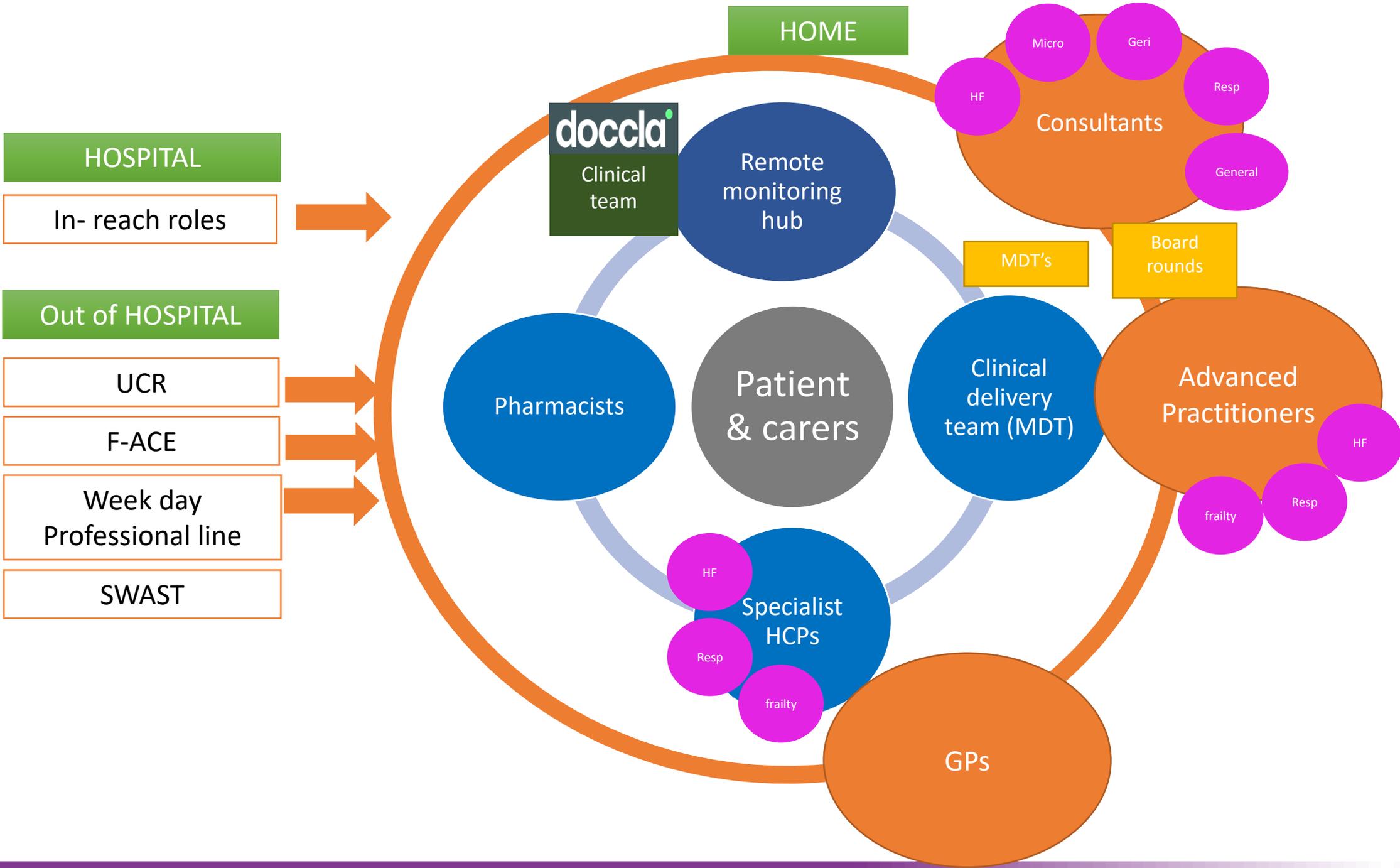


Team of teams



Access to point of care testing and diagnostics

"A spectrum to ensure people have the support they need..."



Developing a workforce model – who, how many?

Demand & capacity modelling

Impact of digital

Pathway development

Personalisation of care

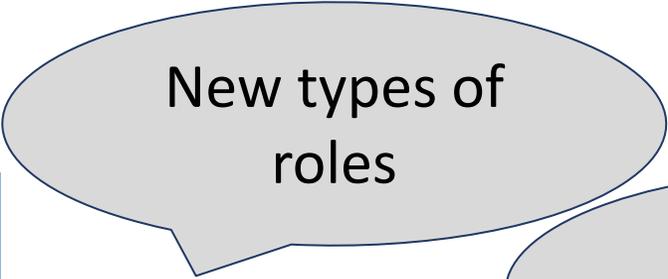
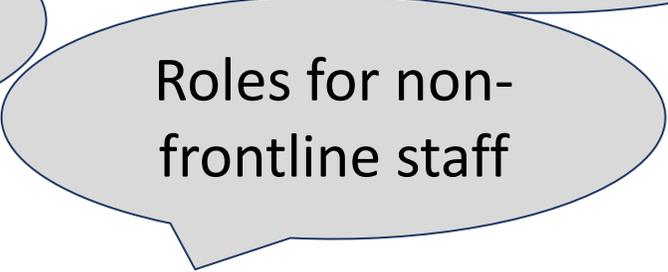
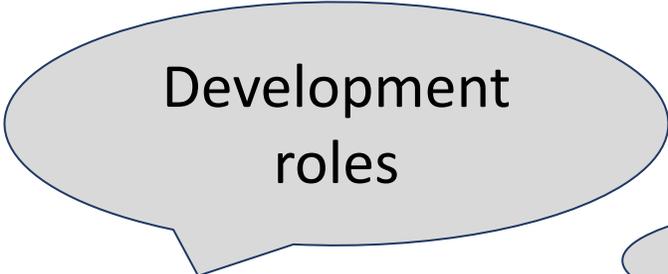
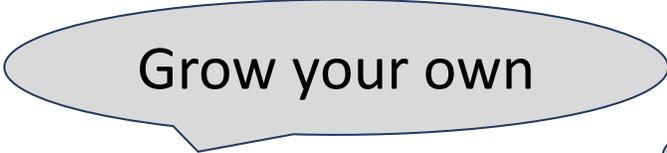
Retention and wellbeing

Change management

Challenging the status quo

Leadership in practice

Trust

A blue rectangular box containing the word 'Recruitment' in white, bold, sans-serif font. To the left of the page, there is a vertical bar with four colored segments: purple, yellow, green, and blue.A grey speech bubble containing the text 'New types of roles' in black, sans-serif font.A grey speech bubble containing the text 'Use of bank / agency' in black, sans-serif font.A grey speech bubble containing the text 'Collaborative recruitment' in black, sans-serif font.A grey speech bubble containing the text 'Roles for non-frontline staff' in black, sans-serif font.A blue rectangular box containing the word 'Pipeline' in white, bold, sans-serif font.A grey speech bubble containing the text 'Development roles' in black, sans-serif font.A grey speech bubble containing the text 'Apprenticeships' in black, sans-serif font.A grey speech bubble containing the text 'Grow your own' in black, sans-serif font.A grey speech bubble containing the text 'Time impact' in black, sans-serif font.

Process

Development of Digital skills

Alignment of Clinical SOPs

EPR

HR

Memorandum of Understanding

Terms & conditions

Data visibility

Up to date workforce data

Drive Quality Improvement

Thank you for listening



Jenny.tomkinson@nhs.net



@jen_tomkinson



<https://www.linkedin.com/in/jen-tomkinson-442535b0>



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Speaking Now...



Francesca Markland
Senior Programme
Manager, Remote
Monitoring & Virtual
Wards - NHSE London
Region Digital
Transformation Team



Santosh Kumar
Lead Data Scientist
The Health Economics
Unit, NHS (MLCSU)



Dr Reggie Sangha
Medical Director at
Content Guru - &
Doctor NHS



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Speaking Now...



Martin Taylor
Deputy CEO and Co-Founder
Content Guru



Scaling Virtual Wards
A Two-Pronged Approach

Martin Taylor, Deputy CEO and Co-Founder
Content Guru

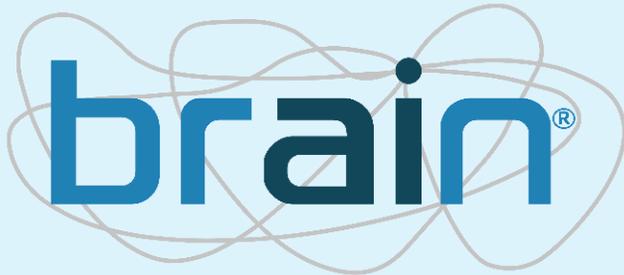
What We Do and Where We Are



Content Guru provides
Contact Centre solutions
through the cloud



CCaaS services run on
the **storm**® cloud
platform



AI applications run
using the **brain**®
service layer

Physical Locations:

- **Europe** – Bulgaria, England, Germany, Ireland, Italy, Netherlands, Portugal, Scotland
- **USA** – San Jose, Washington DC
- **Asia Pac** – Japan, New Zealand

Virtual Locations:

- Europe – Ireland, Italy
- Asia Pac – Australia, Singapore

CCaaS services available in over 100 countries

Public Sector Clients & Partners



Your Success is Our Success



Agenda



The Current Landscape



A Solution to Scaling Virtual Wards



Examples of Successful Scaling

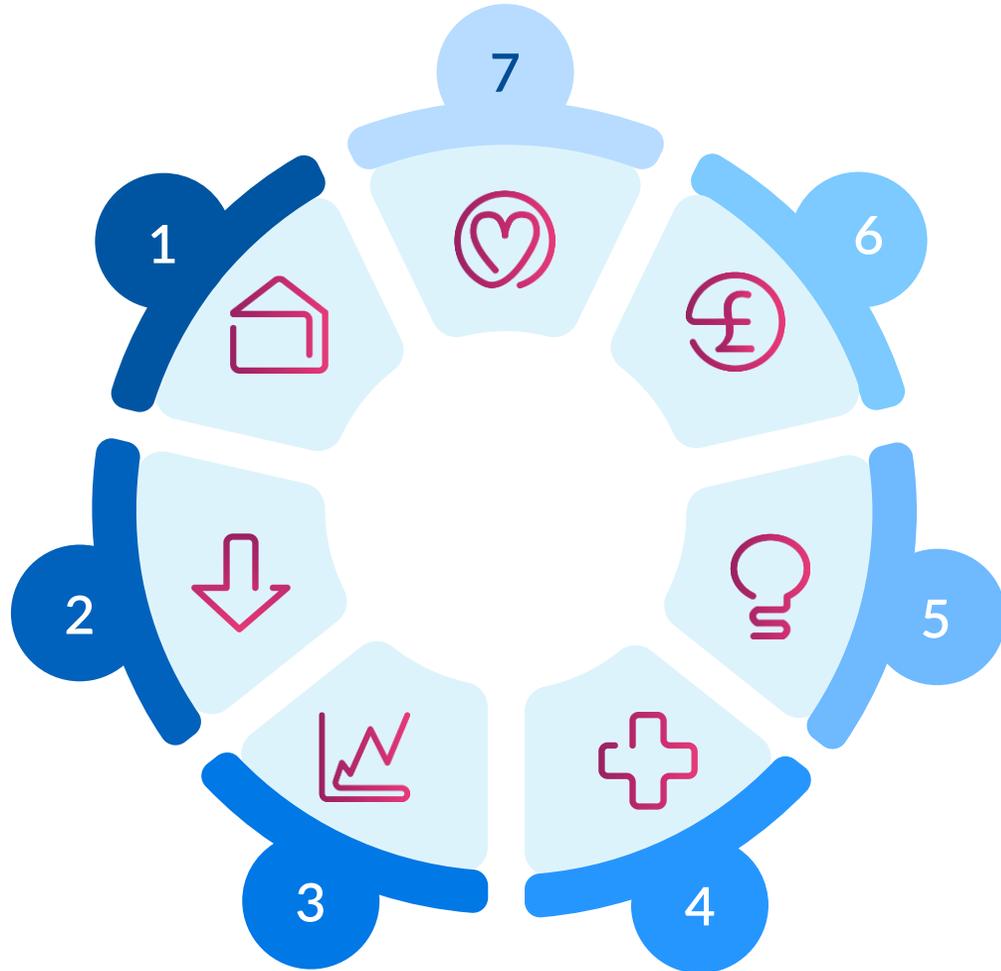


The Current Landscape

Successes So Far

With the NHS long-term plan this is expected to grow to 50 Virtual Wards beds per 100,000 people.

Successes So Far



1. Fewer Admissions

Over 9000 admissions avoided in a year [BMJ]

2. Reduced Readmission

Reduced readmission and mortality rates in VW patients with heart failure [NIHR]

3. Scalability

With the necessary systems in place, VWs can be scaled more quickly and at a lower cost than traditional hospitals

4. Better Recovery

25% of beds are currently taken by patients in frailty, EOL or dementia care; these patients do better at home

5. Innovation

Thanks to remote monitoring devices the list of conditions that VWs can support is growing [NHS]

6. Cost Savings

A new bed can be added to a VW for £60-118, while it costs £281 per bed per day in acute wards [HSJ]

7. Patient Satisfaction

80% of VW patients reported an increase in confidence managing their conditions at home [NHS Confederation]

Ongoing Challenges to Scaling Virtual Wards



Limited oversight due to lack of integration between Virtual Wards and ICS command centres that manage data and resources.



Workforce pressures: slow clinical adoption, post-COVID attrition, staff turnover, time constraints, and the end of ring-fenced VW funding.



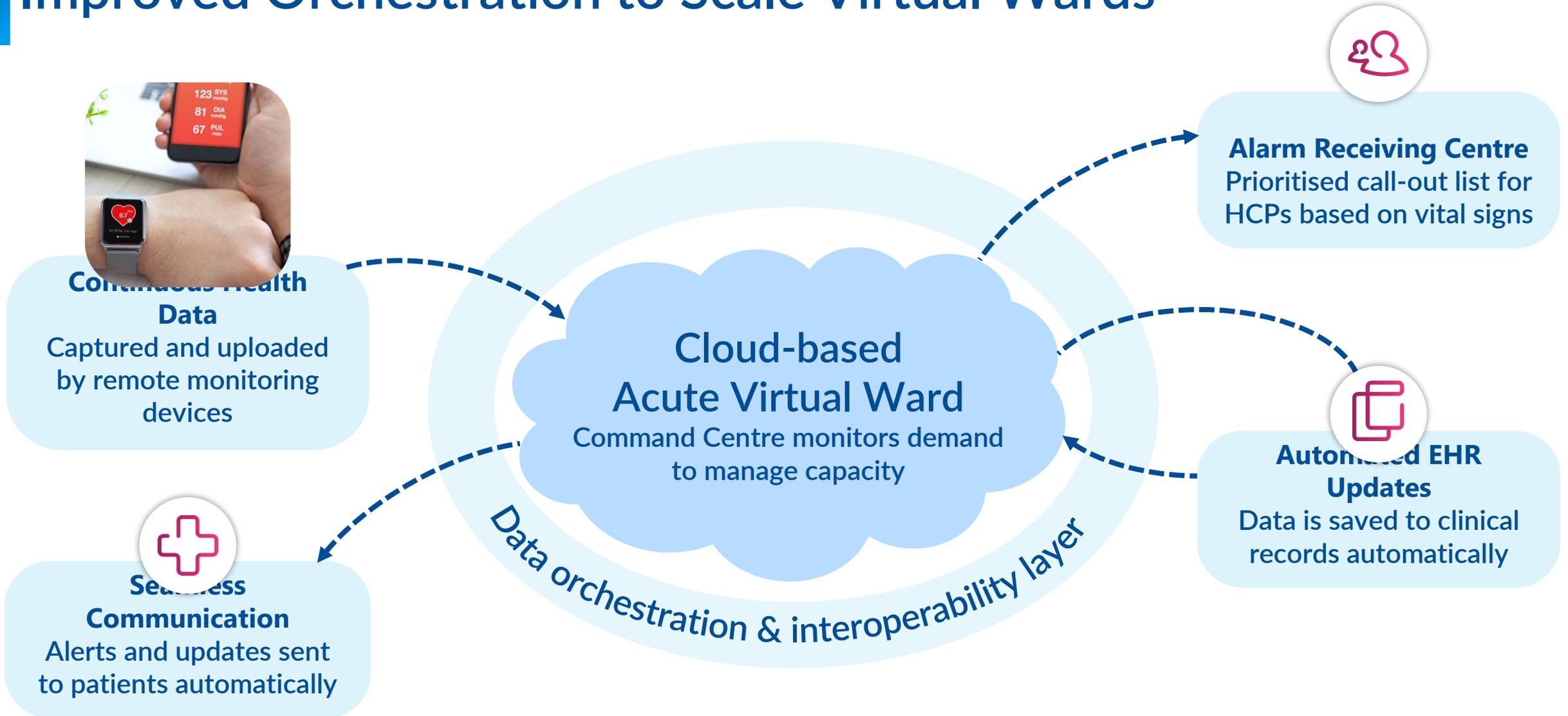
Logistical challenges: procurement, patient environment assessment, equipment management, etc.



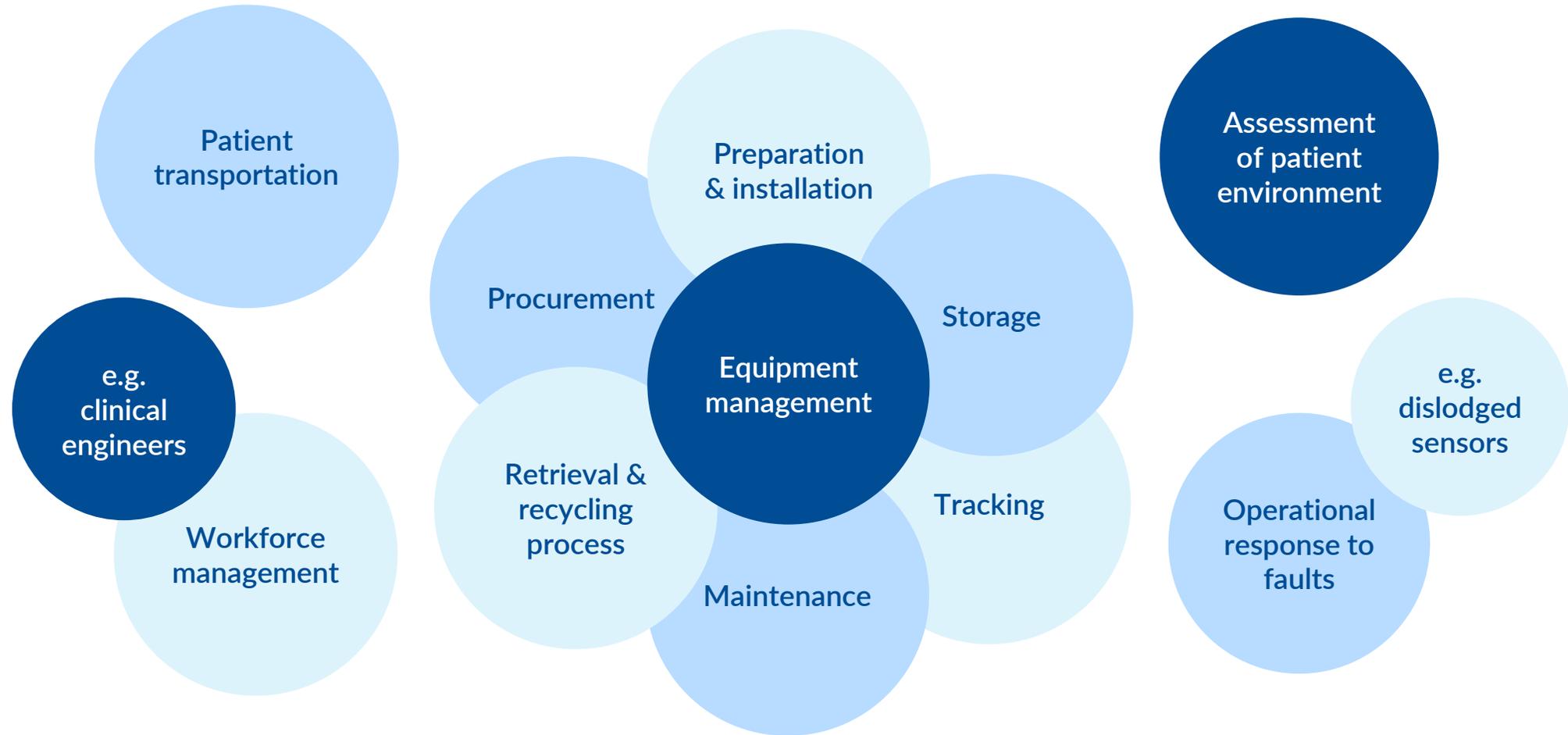


A Solution to Scaling Virtual Wards

Improved Orchestration to Scale Virtual Wards



Examples of the Logistics Required for Scaling





Examples of Successful Scaling

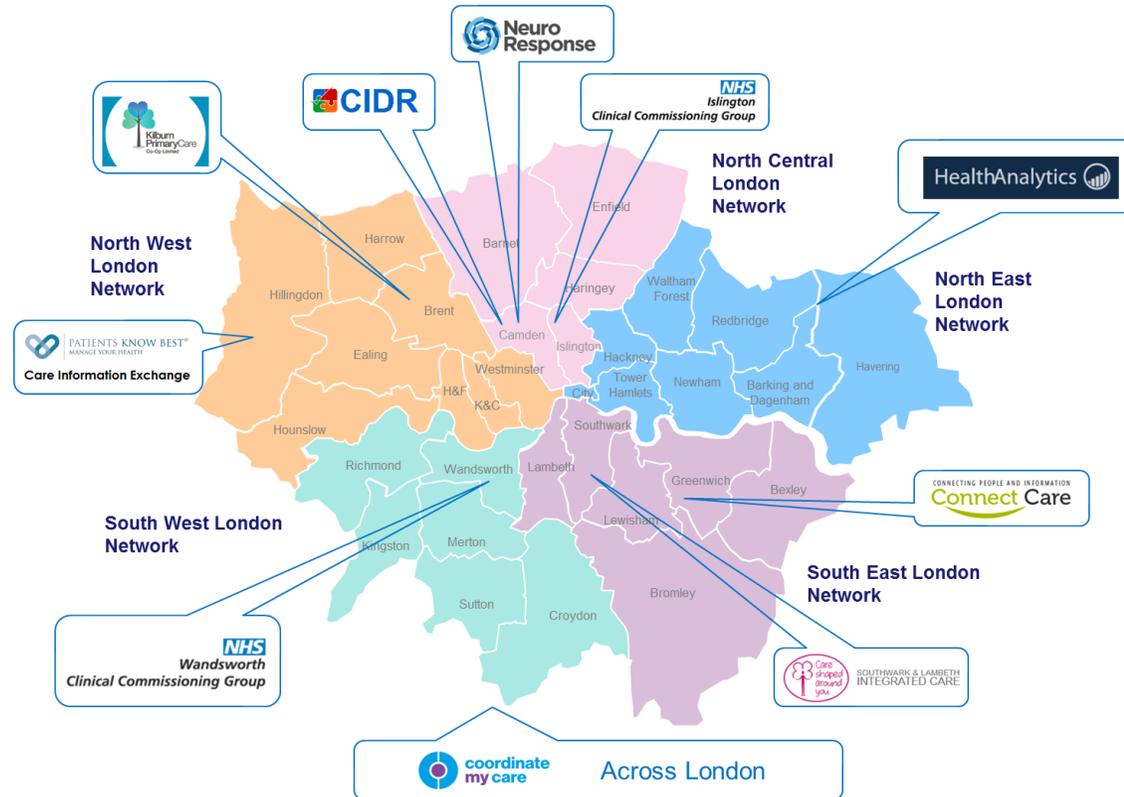
The Patient Relationship Management System

The Need

To manage innovation in patient pathways for 111 calls across London, efficiently handling demand spikes for faster access to care

The Solution

The Patient Relationship Management System



Healthy London Partnership



The Impact

Intelligent call routing directs patients to the most appropriate service first time, improving specialist services access

Electronic records integration enhances care plan visibility for complex medical cases

Automated reporting analyses symptom frequencies and peak call volumes using real-time and historical dashboards

NHS 111 London

The NHS logo, consisting of the letters 'NHS' in white on a blue rectangular background, is enclosed within a light blue circular border.

5 ICSs, 32 local authorities, up to **100,000 calls** handled per week

8 years using **storm**® to deliver NHS 111 London Calls

Developed the Patient Relationship Management solution to route interactions in two months to MVP



Patient Relationship Management (PRM)

Automated routing of patients to HCPs

Clinical advisors receive patient information

Real-time view of London healthcare

Repeat callers routed to the same call handler

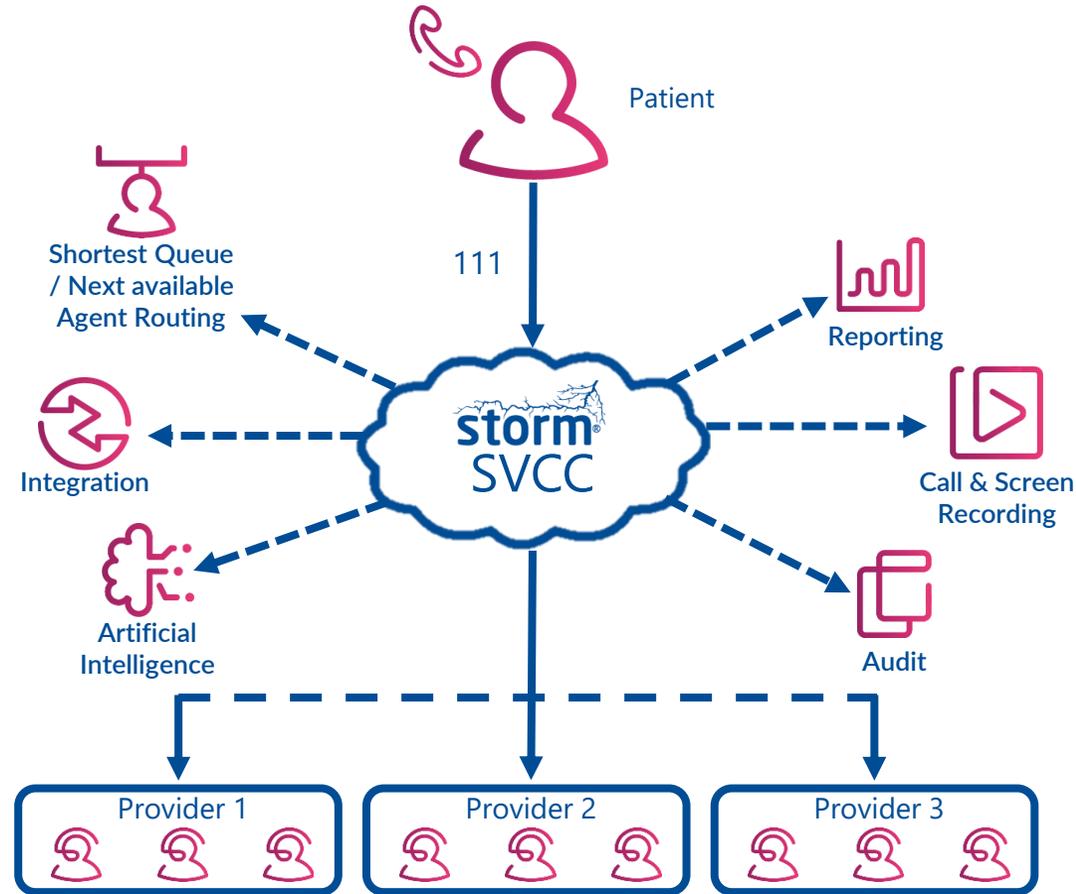
The National Single Virtual Contact Centre

The Need

To manage both expected and unexpected demand peaks through automated load balancing of all 111 calls across all providers in England

The Solution

The National Single Virtual Contact Centre



when it's less urgent than 999

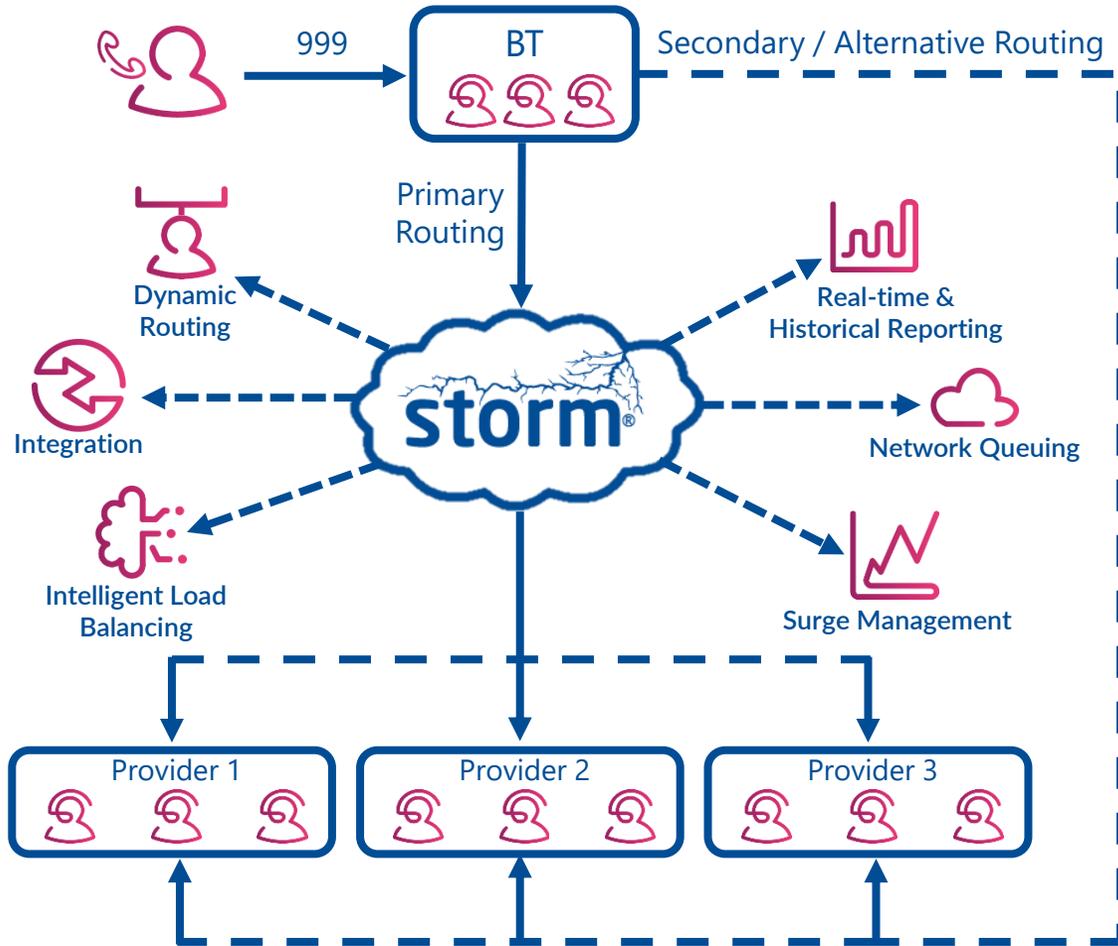
The Impact

National load balancing for equitable wait times, enhancing efficiency in NHS 111 service

Improved winter pressure and pandemic management through proactive outbreak identification and provider support

Intelligent reporting analyses symptom frequencies and peak call volumes using real-time and historical dashboards

999 Emergency Calls: Intelligent Routing Platform



Key Takeaways

Virtual Wards Success To Date



Improving recovery &
patient satisfaction



Reducing admission &
readmission rates

Considerations for Scaling Virtual Wards

1

Management of logistical challenge

2

Data orchestration to allocate
resources & update patients
automatically

Proven Methods

Cloud technology &
process refinement has
amply demonstrated

- NHS 111
- SVCC
- 999 IRP

Thank you for listening Come talk to us!

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Engagement Made Easy®



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Refreshments & Networking



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Chair Opening Address



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Case Study...

docclaⁱ



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Overview of Oldham's Hospital & Care @ Home and 2hr UCR

Stephanie Walker (Clinical Lead H&C@H) & Stacey Debio (Lead Nurse UCR)

The Start of the NCA Journey

- Opportunity presented to community services to monitor virtual vital signs readings.
- Urgent care community services wanted to be a part of the pilot. Funding request submitted.
- 2 services reviewed and Doccla offer was preferred.
- April 2022 Doccla commenced working with the 2hr UCR team Oldham.
- Integration work commenced with clinical teams – Doccla integration visits
- Once UCR were successfully onboarding patients comfortably Doccla OPAT pathway developed.

Challenges at the time

- Clinicians worried about not seeing patients
- Elderly patients struggling to use kit
- Co-ordinators concerned the demand on them watching the screen and triaging referrals.
- Medical oversight limited.

Hospital and care at home service (Virtual ward)

- Integrated respiratory service set up covid-19 virtual ward during the pandemic.
- Hospital and care at home service commenced May-23
- GM funding
- Early supported discharges and Admission avoidance
- Virtual monitoring, Telephone calls and home visits.
- Established Respiratory pathway
- Frailty Pathway commenced October 2024

Frailty Pathway

- Initially started with early supported discharges.
- Patients identified by frailty team- Mainly on AMU.
- Service provides- Virtual monitoring via DOCCLA, telephone calls, home visits, bloods, on-going referrals.
- Daily board round with consultant geriatrician, discuss any on going concerns, review bloods results.

Expanding offer

- Frailty and Respiratory pathway offered to UCR.
- UCR to join daily board to discuss any potential patients.
- If accepted patient would be stepped up to H&C@H (Virtual ward service)
- When discharged can be followed up in hot clinic.
- FSDEC recently established

Daily Frailty virtual board round

- UCR, Virtual ward, Frailty team and consultant Geriatrician.
- UCR can present patients for discussion.
- If not accepted on virtual ward can be given a plan of care.
- Virtual ward can discuss patients with UCR.

Virtual ward and UCR – Geriatrician perspective

- Facilitates seamless transition between services – vital for complex frail patients, a ‘team of teams’
- Platform for learning and shared experience
- Enhanced links between community and hospital services
- Future aspirations – improve step up from community and links with primary care and ambulance services, advice and guidance for GP providing access to geriatric medicine expertise

Next Steps:

- Service development between services.
- Joint visits with Virtual ward and UCR to identify patients sooner.
- To be located together.
- Care home pilot looking at how better to support this cohort of patients.

Patient Story 1

- Referral received from patient's daughter to UCR – previously known to UCR requiring 3 days blood pressure monitoring
- Concerns regarding fatigue and low blood pressure (L 92/67, R 76/54). 2 hour response
- Male 93 years. PMH- T2DM, CCF, OA, CKD, PVD
- Social - Main carer for Wife, recent diagnosis of dementia, increased dependency.
- Known to DNs & HRFT due to foot ulcers. Currently on antibiotics at request of podiatry.
- Concerns regarding low blood pressure, Impression dehydration following episodes of loose stools the previous day, and infection due to high temperature. Infection screen completed and discussed with vital ward.
- UCR supported patient with falls prevention and equipment provision.
- Stepped up to virtual ward for monitoring of postural hypotension. Furosemide and Bisoprolol stopped. Worsening Infection ruled out.
- Referred to Dementia front runner service to support with his wife
- Interventions by virtual ward- DOCCLA remote monitoring, home visit for L&S BP and face to face discharge.
- On virtual ward service for 7 days
- On discharge referred for out patient Echo, Hot Clinic appointment, GP to monitor BP



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Case Study...

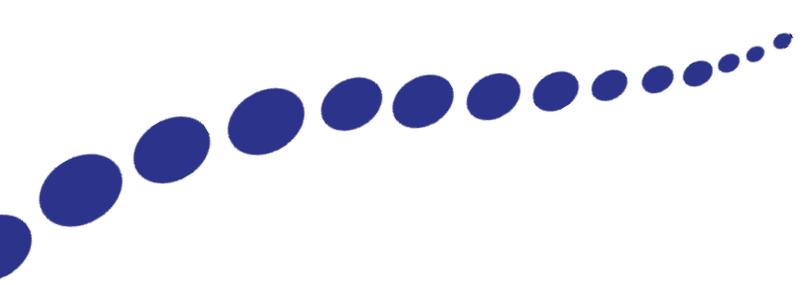




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NHS and Independent Sector: a 4-year Partnership

Continuous review and development.



Who are HomeLink Healthcare?



“Excellent professional service with high-quality outcomes and patient experience.”

Commissioner feedback

- HomeLink Healthcare provides **safe, compassionate high-quality** Hospital at Home services to NHS patients.
- We **improve patient flow** by getting people out of hospital when they are clinically fit and stopping people coming into hospital.
- We are **100% dedicated to Hospital at Home services** and have been since 2016.
- We are a **clinician-led** organisation and are seen by our clients as NHS like.
- Our highly skilled multi-disciplinary nursing and therapeutic teams can support patients in the place they call **home, seven days a week.**
- We work in **partnership** with NHS Organisations and Local Authorities and are all about flexibility.
- **100% commissioner satisfaction** to date.
- Pre-qualified for Discharge to Assess and Virtual Ward support on the NHS SBS Framework.

From modest beginnings to solution partnerships

60

Patients ready for discharge

No

Home provision of IV antibiotics

- Pre-Pandemic Winter project to address bed shortage.
- Through partnership our clinical team gained the confidence and trust of Hospital Clinicians and Doctors.
- Jointly identified opportunity for a Virtual Ward, starting with IV antibiotics at home.

How the James Paget Virtual Ward developed

- HomeLink became delivery arm of James Paget in 2020
- Virtual Ward drive from NHS England
- Remote monitoring was introduced
- IV pathway with up to TDS visits
- Added Negative Pressure Dressing care
- Added Cardiac
- Next - Oncology

Access to trust systems for shared documentation



Patient Story

- Pt 69 years old presented abdominal pain to AE 10/6/2024.
- PMH - Heart failure, previous MI and Asbestosis.
- Presents with radiating pain to R side and loin area and edema in both legs up to his thighs.
- Many tests later fluid overload and CCF confirmed.
- Treatment plan commenced on ward.
- Patient referred to us 17.6.2024.
- Assessed on the ward same day.
- D/C following day.
- 3 days IV furosemide 80-mg slow bolus and blood monitoring.
- Febris monitoring kit sent home with patient.
- Collaboration with VW to monitor at home.



What does the data show?



Improved patient flow & utilisation

- **21,000 bed days saved** at James Paget University Hospital since 2020.
- Typically, Paget at Home patients spend **11 fewer days** in hospital.
- **99% at home occupancy** in 2024 (based on contractual requirement).



Cost-saving

- A Hospital at Home 'bed' is **45% of the equivalent in-patient cost at James Paget.**



Paget at Home patient outcomes (average in 2023)

- **25% improvement in patient-reported clinical outcomes (VAS).**
- **16% improvement in independence (mBarthel).**



Patient and client satisfaction

- 99% Paget at Home patients would **highly recommend** us.
- **100% of NHS commissioners** would recommend us.

Patients and NHS clients are advocates

“

All staff were kind, compassionate and professional. Excellent service, so happy I can be treated in my own home!”

Paget at Home patient feedback

“

As a partner organisation in the care of our patients, it has been both rewarding and exciting to work alongside a team as equally committed to improving patient journeys.”

James Paget client survey feedback

“

The team are professional, flexible and dedicated to providing quality patient care. Excellent engagement with Trust colleagues and escalating concerns.”

James Paget client survey feedback

“

Communication with the team in the hospital has been great!”

Paget at Home patient feedback

There is still more work to be done to improve patient flow

70% NHS England reported Virtual Ward Occupancy, last reported in May 2024.

93% NHS England hospital bed occupancy, last reported in March 2024.

97% HomeLink Healthcare Virtual Ward Occupancy (of commissioned capacity).

5,221 bed days saved by just one HomeLink Virtual Ward service in the last year.

4-12 weeks is the typical length of time it takes to mobilise a HomeLink service.

100% NHS clients would highly recommend us - HomeLink Healthcare satisfaction survey.

HomeLink's partnership working



TRUST

- **National experience** of Hospital at Home delivery
- Feasibility and business case development
- Clinician-led **on-site team** supported, not led by, remote monitoring



CONFIDENCE

- **Agility and passion** for treating patients in the place they call home
- **6 years experience** in NHS hospital at home services
- We bring our own trained clinical **workforce**



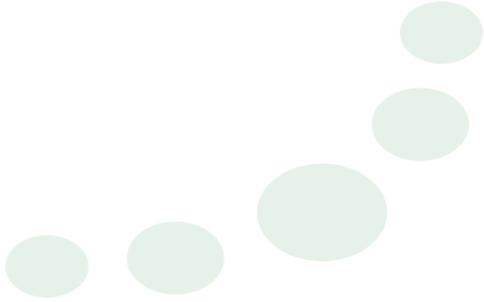
MANAGING RISK

- **Robust playbook** for mobilisation and service delivery
- **Real-time reporting** against clinical outcome measures
- Supported by a **24/7 clinical on-call service**

We are pre-qualified for Virtual Ward provision on the NHS SBS Framework.

HomeLink Healthcare: the NHS partner for Virtual Ward delivery





Jon Green

Former NHS Chief Executive &
Consultant Advisor, HomeLink Healthcare



Jo Probert

Clinical and Operational Lead,
HomeLink Healthcare

Thank you.

Come and see us at our stand today!



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Speaking Now...



Chris Prada
Virtual Ward Service Lead
Northampton General
Hospital



Chris Johnson
Head of Patient Experience &
Engagement - Northampton
General Hospital

Virtual Ward Patient Feedback

Challenges and successes from an Acute General Hospital

**Chris Johnson, Head of Patient Experience &
Engagement**

Chris Prada, Virtual Ward Service Lead

July 2024



Northampton General Hospital
NHS Trust



The Value of Patient Feedback

- 
- **The Service Users Voice – A Powerful Driver for Change**
 - **Supports Service Development**
 - **Demonstrates Service Value**



**What is so
difficult
about
capturing
'Patient
Experience'?**

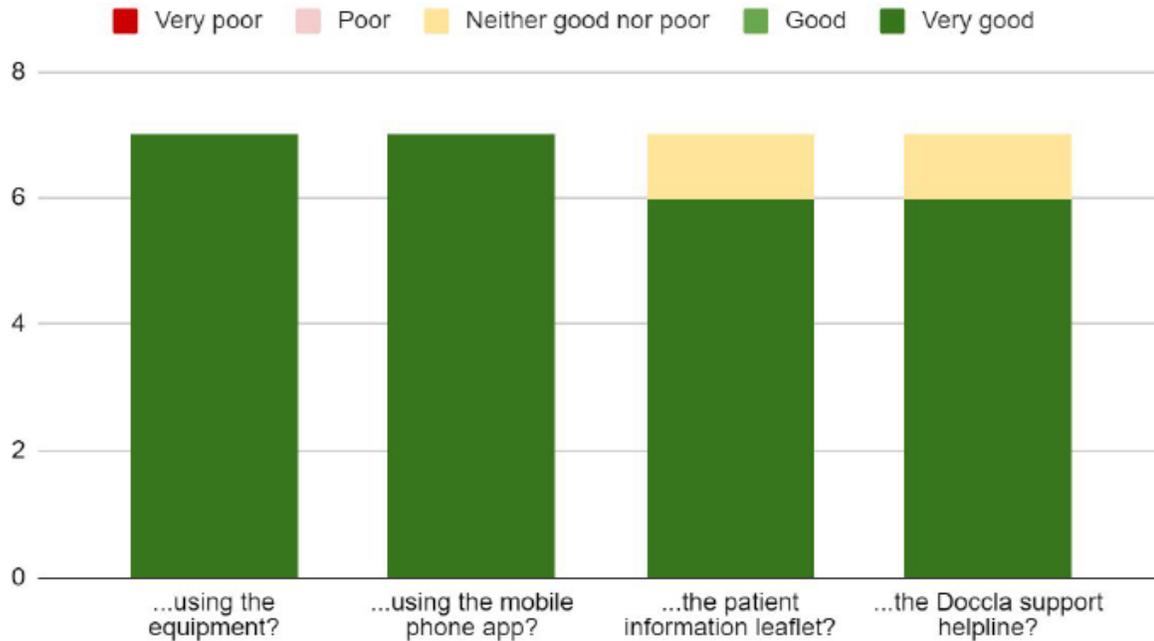
Challenges



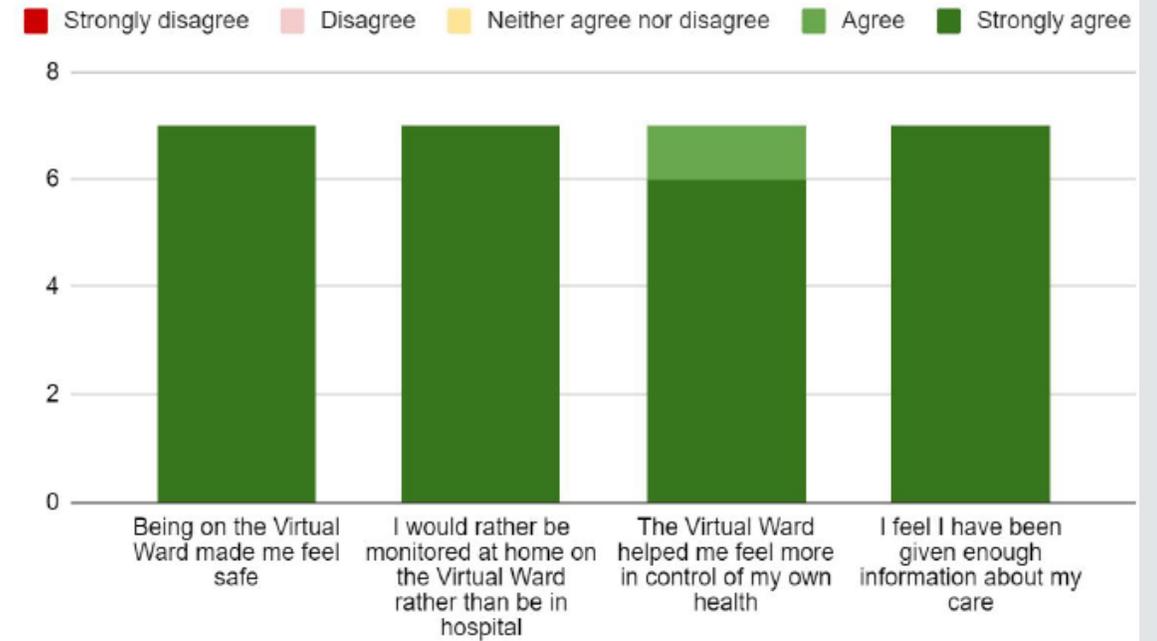
- **Limitations to traditional FFT systems**
- **Patient survey fatigue & low patient response rate**
- **Type & quality of data**
- **Service specific designs for bespoke solutions**

Monitoring Supplier: Questionnaire

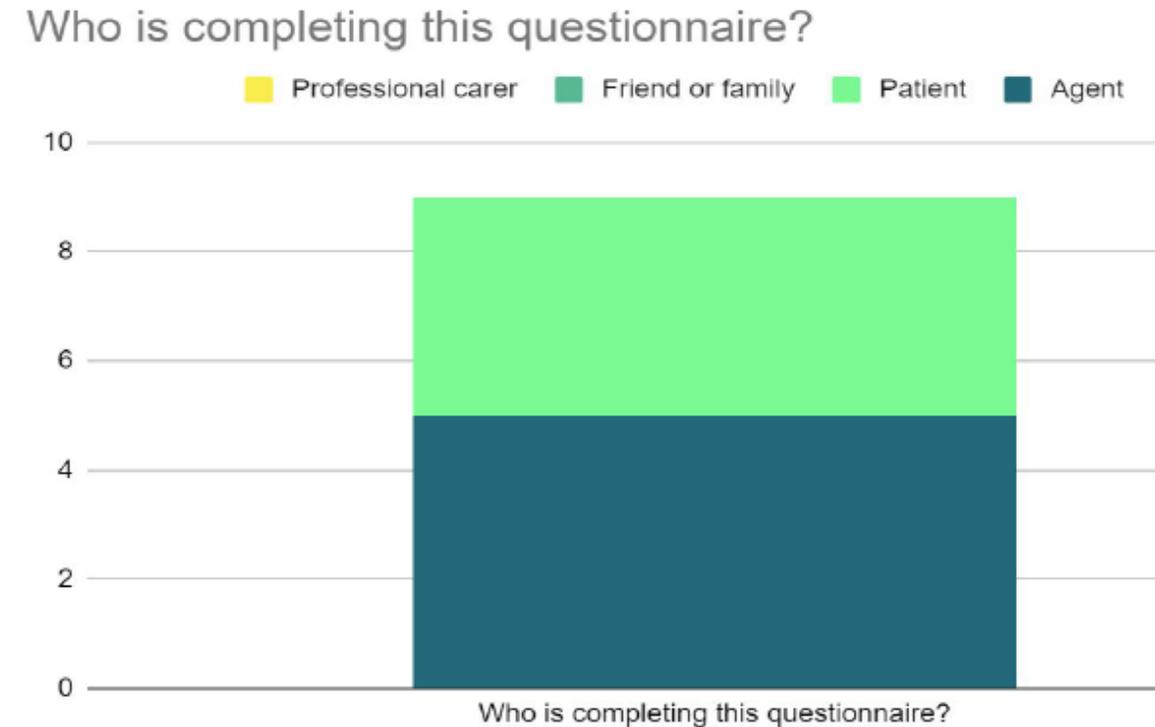
How was your experience of...



How much do you agree with these statements



Monitoring Supplier Feedback Solution



Trust Patient Feedback Design

How can we accommodate our different virtual ward models?

- Home Care
- Remote Monitoring
- Diagnostic Waits

Service Specific Design



01 July 2024

Patient Experience Team

Billing Road
Northampton
NN1 5BD

PRIVATE & CONFIDENTIAL

Main Switchboard: 01604 834700
Direct Dial: 01604 544054

*When telephoning, please ask for the
Patient Experience Team*

Dear Patient

I am writing to you as a patient who has recently been admitted on a Virtual Ward to request feedback about your experience. This feedback will assist us in improving our services and highlight areas of good practice for us to share with the team and others.

Please note: This is a different survey to one that you may receive through our regular patient feedback text or landline voice message system.

Please complete the survey by typing the link below into your web browser or scanning the QR Code opposite with your mobile phone or tablet. Your responses will remain anonymous.



<http://ratenhs.uk/WPrgbn>

Example

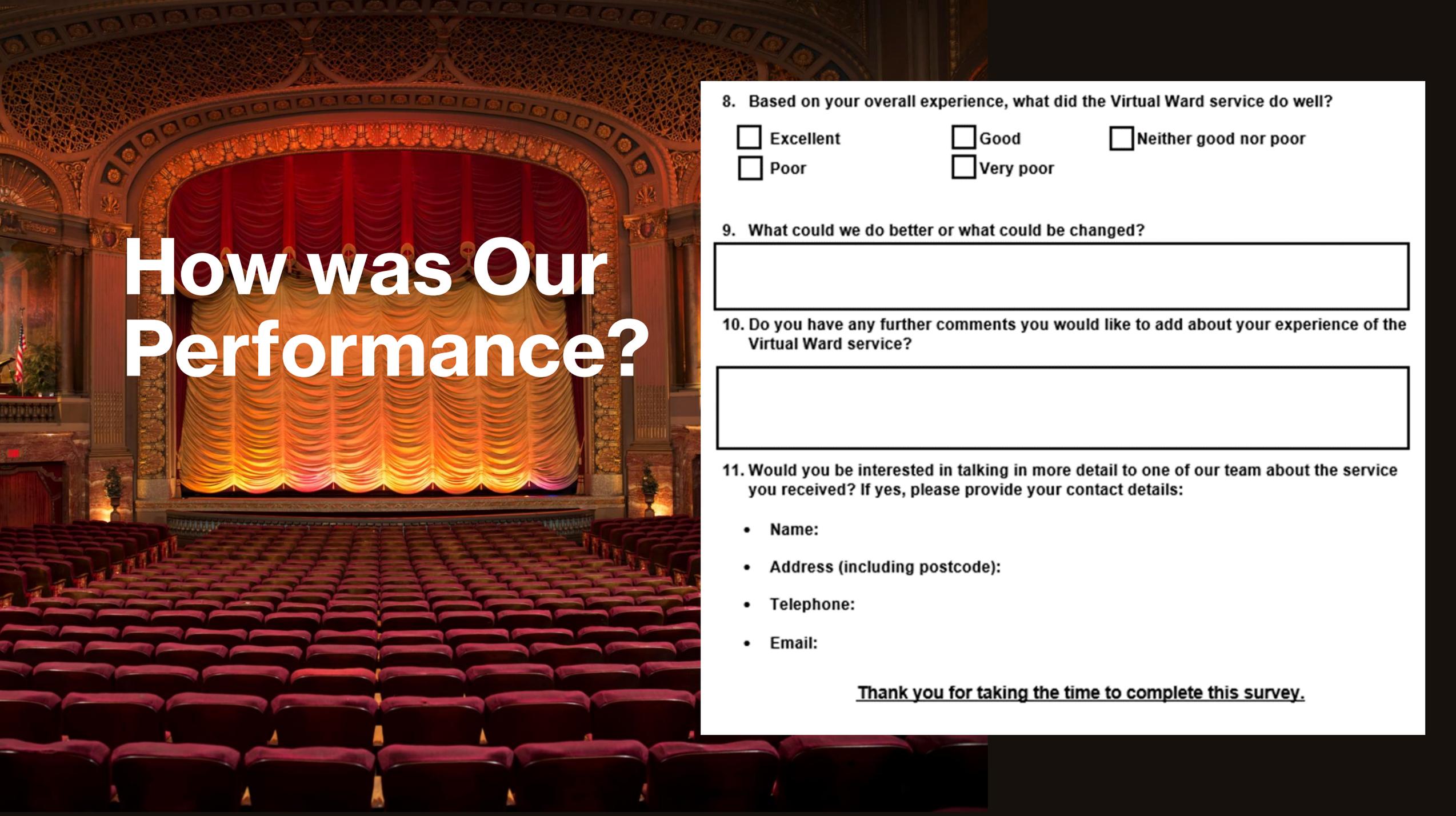
Example

If you would like to opt out of receiving surveys from the hospital, please email the Patient Experience Team on: ngh-tr.patientexperience@nhs.net or alternatively please telephone 01604 544054 or 544135.

I would like to thank you for taking the time to complete the survey and helping us improve our Virtual Ward services for the future.

Kind regards

A handwritten signature in black ink, appearing to be "CF".



How was Our Performance?

8. Based on your overall experience, what did the Virtual Ward service do well?

Excellent

Good

Neither good nor poor

Poor

Very poor

9. What could we do better or what could be changed?

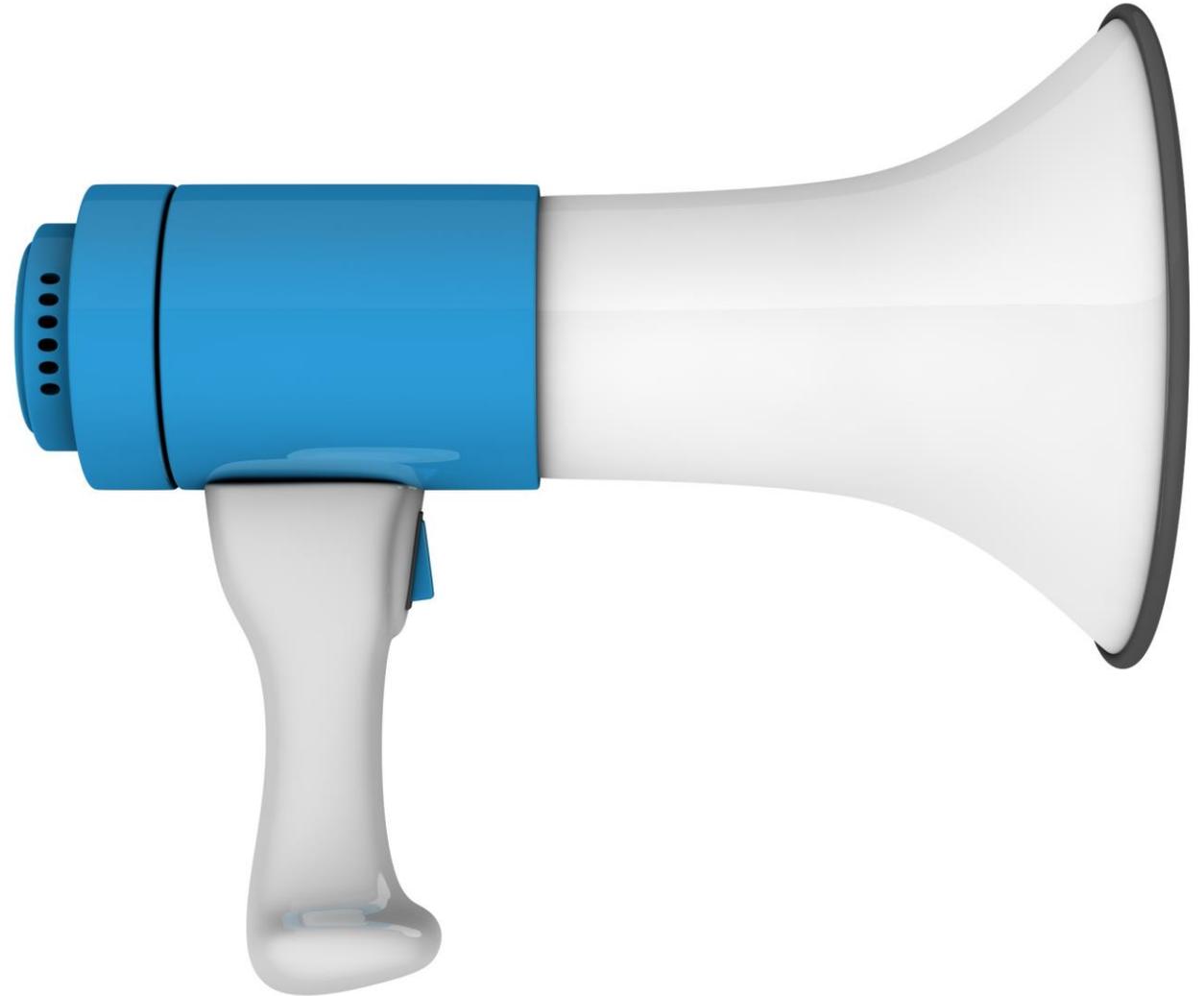
10. Do you have any further comments you would like to add about your experience of the Virtual Ward service?

11. Would you be interested in talking in more detail to one of our team about the service you received? If yes, please provide your contact details:

- Name:
- Address (including postcode):
- Telephone:
- Email:

Thank you for taking the time to complete this survey.

The Patient's Voice





NHS
Northampton
General Hospital

**Patient Experience
at Northampton
General Hospital**

Get involved and
shape the future

04 544054
patientexperience@nhs.uk
northamptongeneralhospital.nhs.uk
Use your experience to help make improvements

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Opening times
Mon - Fri 9:00am - 5:30pm
Sat 9:00am - 5:00pm

6 **Hospital**
Listening event here today

Use your experience to help make improvements

Dedicated to excellence

**at Northampton
General Hospital**

**Get involved and
shape the future**

04 544054
patientexperience@nhs.uk
northamptongeneral.nhs.uk
Use your experience to help make improvements

Did you know?
There is a charity
that supports
Northampton General Hospital

£650,000

Help us today to improve our services

Trade Ward Coffee
Mornings
Sunday 28th April 2024
10am - 12 midday
Workbridge
Coffee Shop

Public Engagement



Patient Feedback

“Gave me peace of mind.” **“if I can be monitored at home...that’s a bonus”**

“It is a boost in every way to be able to recover at home. You feel worse when you are in a hospital bed.” **“Very consistent and quick response.”**

“I didn’t need to spend money on parking or petrol at the hospital, and it fit around my work much better (patient’s wife).”

“Great follow up, everything was clear. Dad was very happy with it.”

“Everything I was told happened, was really easy to use.”

“Still was not well when discharged, so was nice to be reassured at home whilst being monitored.” **“I felt supported by the virtual ward team.”**



What is the feedback telling us? (Part 1)

- Trust feedback system (FFT) was not appropriate for measuring the virtual ward patient experience.
- Bespoke feedback methods allowed us to separate positive and negative feedback to seek improvements.
- Small Virtual Ward uptake locally resulting in low amounts of feedback to demonstrate its benefits or challenges.

What is the feedback telling us? (Part 2)

- Patient feedback should be reviewed frequently for improvements **AND** celebrating success.
- Predominant feedback indicates a virtual ward user experience which supports:
 - +The patient's health needs and preferences
 - +The expansion of our virtual wards
 - +Changing mindsets



So...what are you going to do with the feedback?



- **Process Review and Redesign**
- **Communication**
- **Progress Reports**
- **Stakeholder Meetings**
- **Promotion Events**
- **Inspire and Drive Change**

Any Questions





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NHS Implementation
and best practice



Case Study...





Slido

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Speaking Now...



Laura Thompson
Head of Marketing
Access Group



Deborah Snook
Integrated Care
Consultant – Digital
Access Group



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Lunch & Networking



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Chair Opening Address



Douglas Hamandishe

Chief Digital Officer/Broadcaster and Presenter -
Context Health and Centric Health Media



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Case Study...





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Speaking Now...



Michel Paquet
CEO and Founder
Aetonix



Remote Patient Management

Virtual care in the Canadian community and an innovative UK digital ICU recovery pathway



Agenda

- **Aetonix Overview**
- Virtual care in the Canadian community
- An innovative UK digital ICU recovery pathway

Company Overview



- A Canadian Company
- Founded in 2014
- Our Solution: aTouchAway™
- Connecting clinicians and patients through complex virtual pathways of care safely and effectively.
- Virtual Care and Remote Patient Management
- Patient First focus
- A portfolio company of the Trudell Medical Limited Group

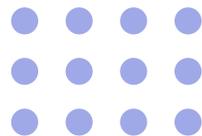


- Trudell Medical Group is a private Canadian Company
- 100 years - Founded 1922
- Products in 110 Countries
- Delivering innovative medical devices and services to patients and healthcare professionals
 - AeroChamber®
 - AeroVent®
 - AeroBAN®
 - Aerobika®

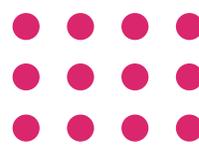


Our Vision

Envisioning a world where health systems and care teams are empowered to seamlessly manage the health needs in the comfort of their homes.



Value Proposition



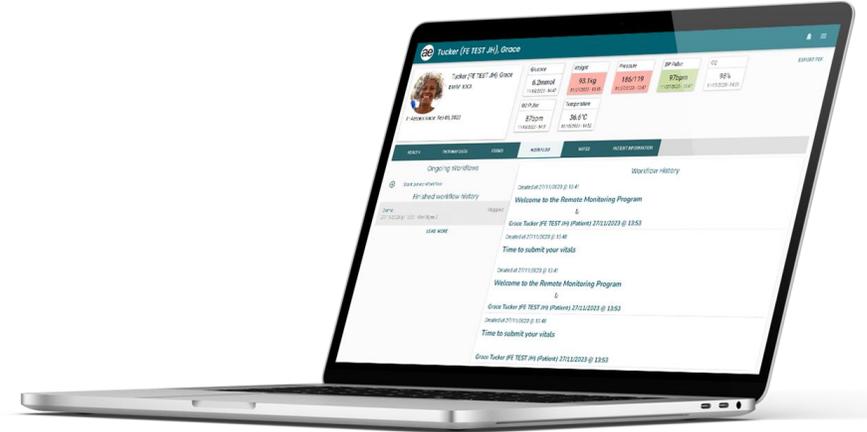
Healthcare Professionals

- Manage patient remotely.
- Provide a safe and secure environment.
- Reduce readmissions.
- Increase care plan engagement and adherence.
- Improve case load management.



Patients

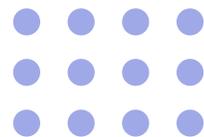
- Enable access to care from the comfort of their home.
- Improve adherence to care plan driving better outcomes.
- Reduce the need for unnecessary visits to hospital.



lower 30-day COPD hospital readmission rates

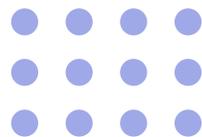


of patients report feeling a higher sense of security

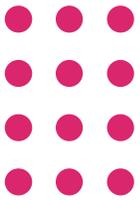
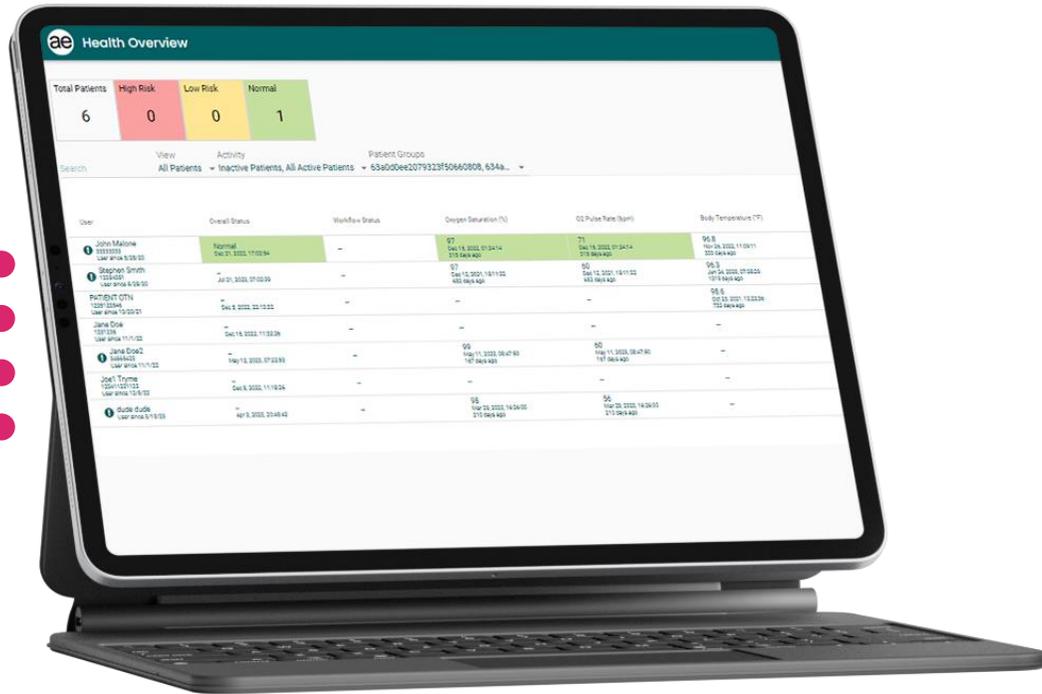
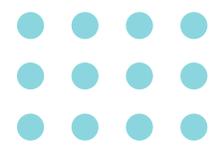


Remote Patient Management

- Digital platform built to manage the care of remote acute, chronic, and complex patients
- More than just monitoring
- Aetonix has developed a management platform to be customized around the patient
- Treat to guidelines and empower users to self-educate.
- Drive improved patient care plan adherence and proven superior outcomes



Product Overview: aTouchAway



Key Features



Cloud Based Solution



Library of Clinical Pathways



Full Logistic Process, Lease or Buy Model, Onboarding, and 7 days Support



Secure Communications
(OTN Validated, SOC2 Type 2, PHIPA, HIPAA, and GDPR compliant)



Remote Patient Monitoring



Multi-Language Support



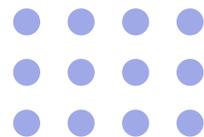
Robust Workflow Engine



Care Plan Management



HL7, JSON, XML Integration – EPIC, MEDITECH, CERNER



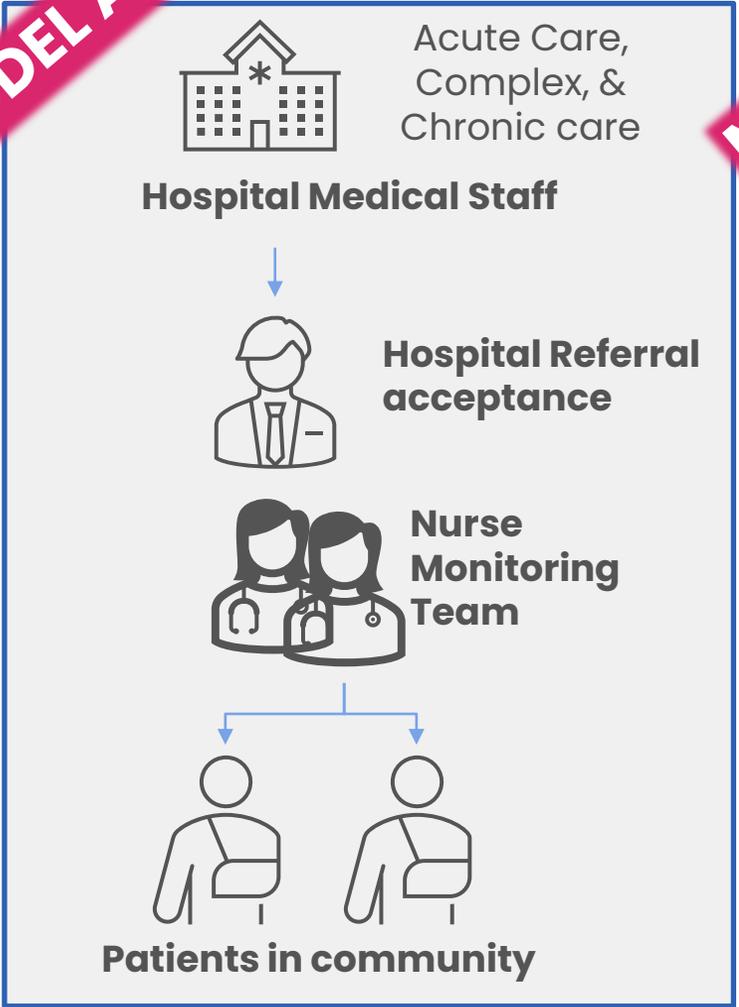
Connecting clinicians and patients through virtual pathways of care

Agenda

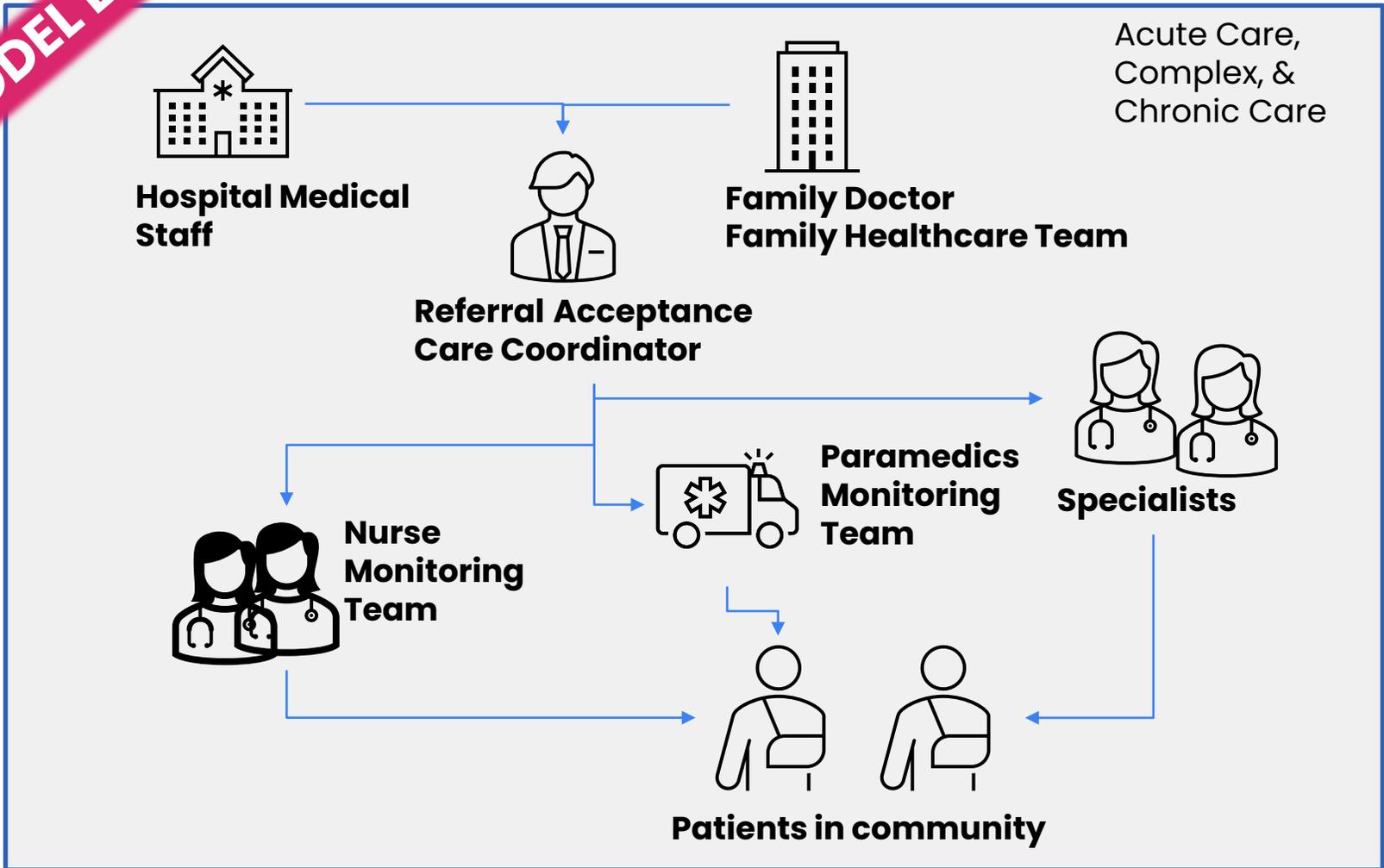
- Aetonix Overview
- **Virtual care in the Canadian community**
- An innovative UK digital ICU recovery pathway

Virtual Care in Canada : Province of Ontario

MODEL A



MODEL B



Virtual Care Use Case in Canada : Home Community Care Services in Ontario



Hospital Medical Staff



**Hospital Referral
Acceptance by Home
Community Care**



**Home Community
Nurse Monitoring
Team**



Logistic team



**AE Onboarding / Offboarding
team**



**Patients in
community**



Protocols supported:

- Respiratory Issues (COPD),
- Heart Failure,
- COVID
- Diabetes
- Care @ Home – Transition
- Frail Elderly
- Fall Prevention

- 14 Regions in Ontario for Care
- 14 Home Community Care Services
- 1,600 patients monitor daily
- 4 months program duration
- Ship and retrieve kits every day

Agenda

- Aetonix Overview
- Virtual care in the Canadian community
- **An innovative UK digital ICU recovery pathway**

Virtual Care in a unique community population: UK ICU survivors



ICU survivors have substantial physical, emotional and cognitive burden requiring specialised care in the community

Yet they experience loss of care continuity, missing information and little to no dedicated community services

In partnership with Aetonix, KCL/GSTT developed an innovative dedicated ICU digital 3-month recovery pathway

Assessment
of recovery
barriers

+

Personalised
recovery
goals

+

Digital
recovery
resources

+

Monitoring of
recovery goal
achievement

+

Referrals to
address
symptoms &
recovery needs

[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

The aTouchAway digital ICU Recovery Pathway

Weekly goals

What goal would you like to achieve?

- ✓ Choose an item below
- Self-care
- Productivity
- Leisure
- Person

What would achievement of this goal look like?

How do you feel today about your ability to achieve this goal?

Choose an item below

How important is this goal for you?

Choose an item below

How difficult do you think this goal will be to achieve?

Choose an item below

Comment

Remove

Weekly goals

What goal would you like to achieve?

Self-care

Select sub type

- ✓ Choose an item below
- Moving around inside
- Moving around outside
- Arm/hand function
- Community access
- Personal care
- Bladder and bowel care
- Women's Health
- Sexual Health
- Nutrition
- Swallow
- Sleep
- Medication/supplies management
- Medication appointments
- Communication
- Choose an item below

How difficult do you think this goal will be to achieve?

Choose an item below

Comment

Goal Review - Past weekly Goals

What goal would you like to achieve?

Self-care

Goal:

To use public transport on my own

Comment

Do you think you have met this goal?

Yes **No**

What was your ability to achieve this goal:

- As expected
- Somewhat better than expected
- Much better than expected

Done **Cancel**



Thank You

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Speaking Now...



Dr Robin Fackrell

Associate Medical Director and Clinical Lead for AcuteCare@Home (Virtual Wards), BSW Consultant Geriatrician - Bath and North East Somerset, Swindon and Wiltshire ICB. Royal United Hospitals NHS Foundation Trust, Bath

The future of ~~Virtual~~ Wards (Hospital at Home – the future vision)

Dr Robin Fackrell FRCP MA

Consultant Geriatrician & Associate Medical Director, BSW ICB

Clinical Lead for *BSW Hospital at Home*

(A stubborn optimist)

There just isn't enough money....



We need a paradigm shift in thinking...

There isn't enough money due to the current inefficiencies of healthcare and the high cost of individuals staying in hospital and consequent deconditioning

Early recognition and intervention with requisite left shift of resource is economically more prudent and patient centred





Cautionary note...

If we think 'virtual' wards will be a fix all for the issues around hospital capacity we are unlikely to succeed...

If instead we focus on the absolute benefit for the **patient**,

- Opportunities to
 - Enable them in their own environment
 - Deprescribe
 - Carry out holistic assessment
 - Discuss RESPECT and advanced care planning

The Stark Context

Impact of Bed Rest on a (especially the frailer older adult)

- First 24 hours
 - Reduced muscle strength – 5%
 - Circulating volume reduced by 5%
- First 7 days
 - Circulating volume reduced by 20%
 - Muscle strength reduced by 20%
 - V02 max reduced – 8-15%
 - Forced residual capacity reduced 15-30%
 - Compromised skin integrity



Benefits of Hospital at Home

Reduced risk of:

- Falls
- Delirium
- Physical, Cognitive and Emotional Deconditioning

8 x less likely to experience functional decline

5 x less likely to acquire serious infection

2.5x less likely to require readmission



Hospital level
diagnostics

Multidisciplinary
team



Hospital level
interventions

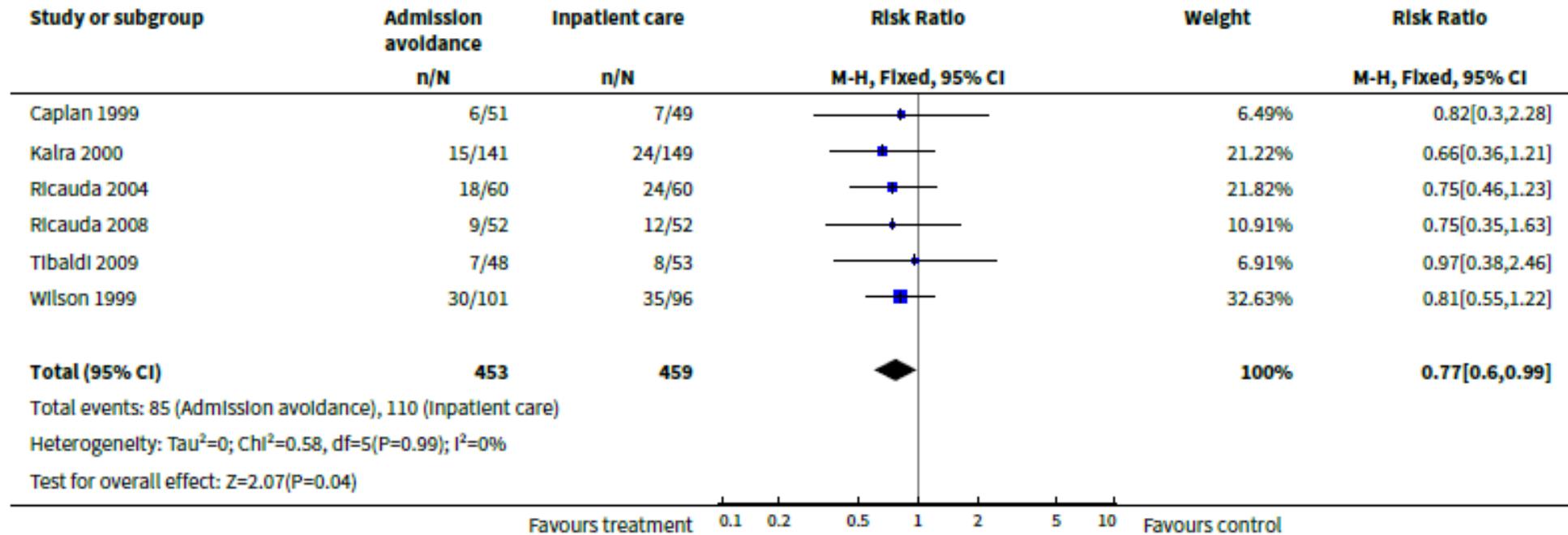
Equity of access to other
specialty advice

Specialist clinical
leadership

The RUH, where you matter

Cochrane Review 2016

Analysis 1.2. Comparison 1 Admission avoidance hospital at home versus inpatient care, Outcome 2 Mortality at 6 months' follow-up (using data from trialists, apart from Caplan).



Clinician perceptions of ownership in secondary care

- **My**

- What possibilities
- I can hospital
- Have allow
- What are your concerns...?



are so

ts of

sation and

Focus on convincing the 'specialists'

- 'The heart as the only organ of concern....'
- More work is needed to allay the fears of organ specific specialists who fear their work can only be done in physical hospitals
- Their work is unlikely to dry up if more patients are seen by H@H
- Inundate them with patient stories of success!
- Quantify the inpatient risk of their ward patients





Habits are the ruin of ambition,
of initiative, of imagination.

Dorothy Dunnett

Future foci

- Health Inequalities and 'Hard to Reach' groups
- Data
- Workforce
- Scope expansion
- Monitoring



Hard to reach
'groups'?

Or hard
to reach
Services?



Engage with 'hard to reach' groups



Find a form of engagement that works for different groups and individuals – consider a wide range of potential channels including visual, audio, online and, where possible, face-to-face engagement. Make it easy to engage with your organisation.

Go beyond digital engagement – consider the digital divide and what this means for your communities. **#END DIGITAL POVERTY**

Make it beneficial to the communities you engage with – always engage on the benefits of engaging. And first engage on matters that are of most concern to the people you are trying to reach

Augmented reality...

Augmented Reality (AR) overlays digital information onto the real world, delivering real-time, context-aware data during remote consultations. AR empowers clinicians to visualise medical records, diagnostic images and lab results to provide an accurate diagnosis and personalise treatment plans all while

In the patients' home



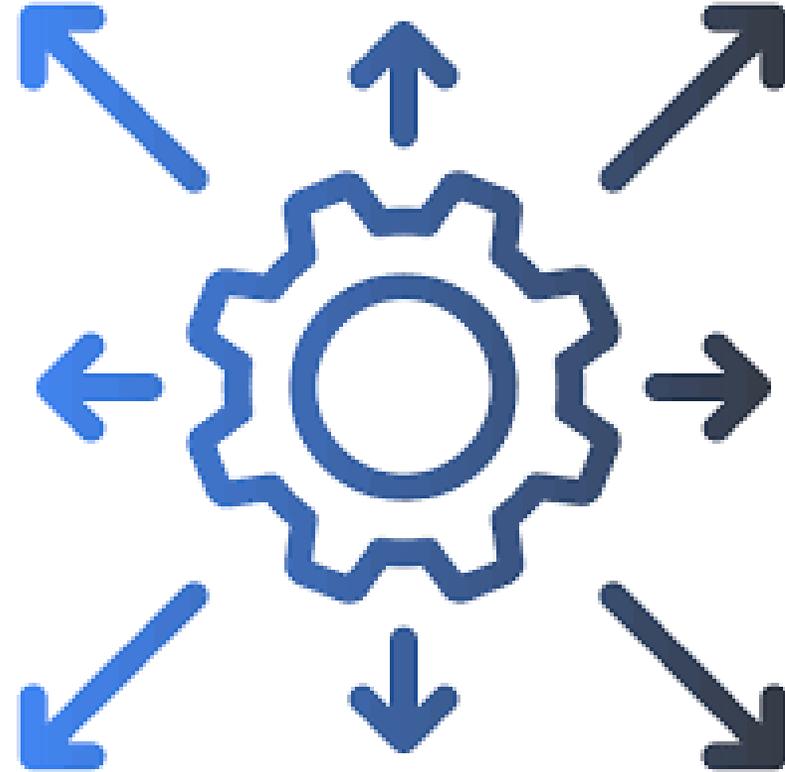
Expand the workforce

- Work towards 24/7 staffing
- Rapid specialist opinion in situ
- 24/7 monitoring and live response to change
- Acute fast turnover wards operating at the acuity required for true Hospital@Home needs access to senior clinical experience and those with suitable risk appetite mirroring more accurately an acute hospital
- Fellowships, Apprenticeships, Secondment, Development Roles
- Define a new specialty branch of Medicine



Expand the Scope

- Oncology/Haem
 - Chemo
 - Neutropaenia
- CYP and Mental Health
- Obs and gynae:
 - Hyperemesis
 - Mastitis
- Cardiac
 - Infective endocarditis
 - pre CABG/valve surgery and angioplasty waiters



Internet of Medical Things for continuous monitoring



- A network of devices and sensors that collect and transmit real-time patient data – DOES NOT REQUIRE DIGITAL LITERACY
- IoMT can monitor patient vital signs like heart rate, blood pressure and oxygen levels, movement sensors, urine volume analysis with this data securely transmitted to healthcare providers for remote tracking and analysis of health status WITHOUT any PATIENT EFFORT
- Continuous monitoring assists in the early detection of complications and enables timely intervention to reduce the likelihood of hospitalisation
- Alert healthcare professionals in the event of emergencies, activating an immediate response.

Wearable technology



- Smartwatches and fitness trackers, have gained real popularity among the public.
- Integrating these into virtual wards enables continuous health monitoring, personalised care and self-awareness for the patient.
- These devices often track sleep, activity and stress levels, generating insightful health data.
- Wearables can offer patient medication reminders and monitor chronic conditions, as well as providing lifestyle insights that encourage patient engagement and participation in their own care for better health outcomes. **Minimal need for digital literacy**

Artificial Intelligence



- Deployed to analyse patient data, symptoms, medical history and imagery to assist healthcare professionals in triaging patients accurately.
- Effective prioritisation of patients to ensure an appropriate response. Intelligent planning of visits...
- Predictive analytics helps to identify and initiate interventions where patients are at risk of deterioration or developing complications.
- Facilitates natural language processing for seamless communication in virtual consultations. – Bot enabled advice and triage...

Shared data & Collaborative Governance

- One pathway
- One Training passport (IRMER)
- One central repository
- One version of the truth re data collection and use
- One approach to governance
- One point of access

**"We need people who dream impossible things,
who maybe fail, sometimes succeed, but in any
case, who have that ambition."**

– Emmanuel Macron





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Case Study...

inhealthcare
by *ResMed*



RMVW

Remote Monitoring Virtual Ward Hub



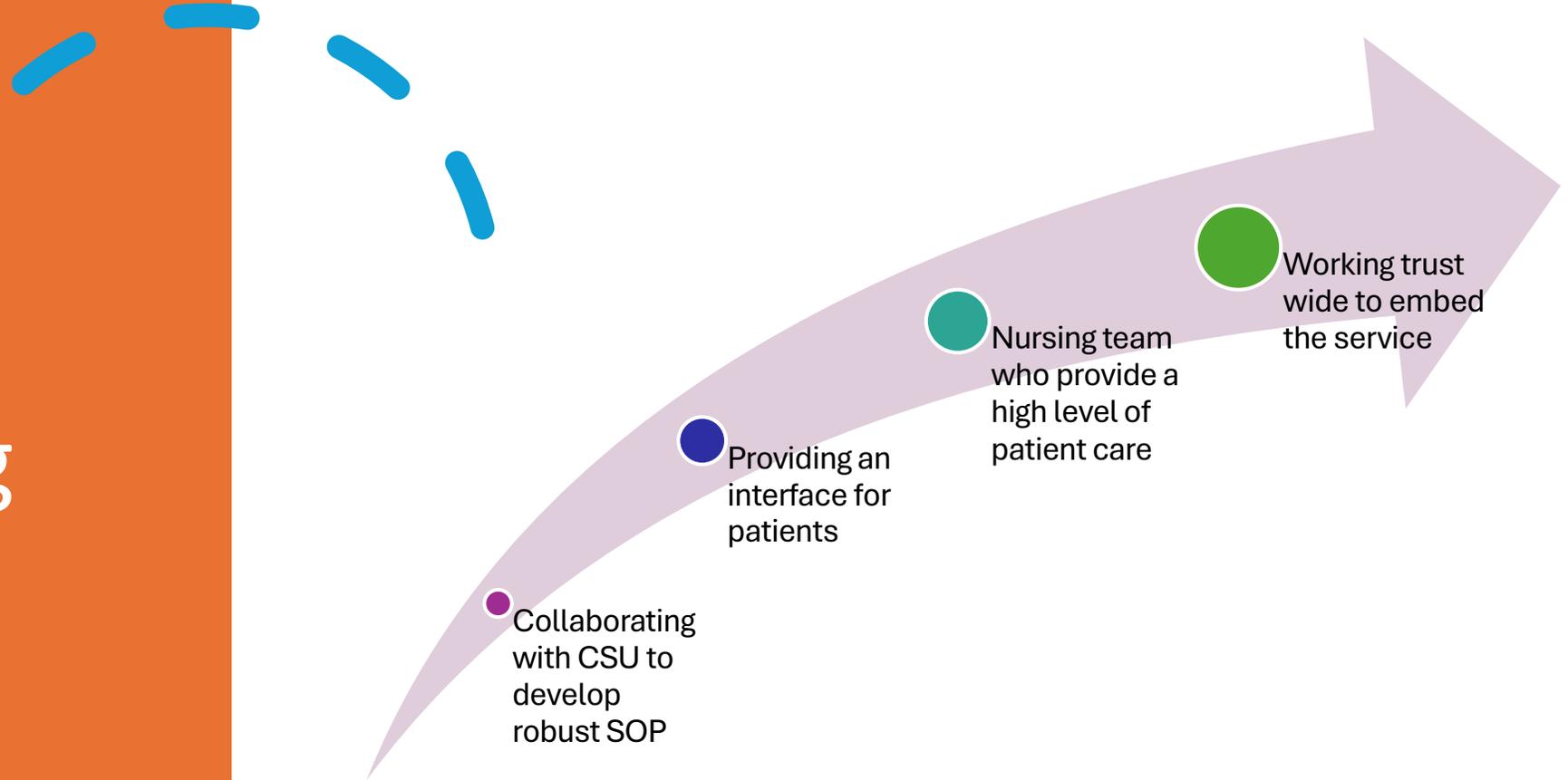
What are we aiming to achieve?

Aim:

- Providing an alternative to admission or facilitate earlier discharge for patients who are still in need of daily monitoring but are stable enough to be in their usual place of residence.



Reducing length of stay by Facilitating earlier discharge

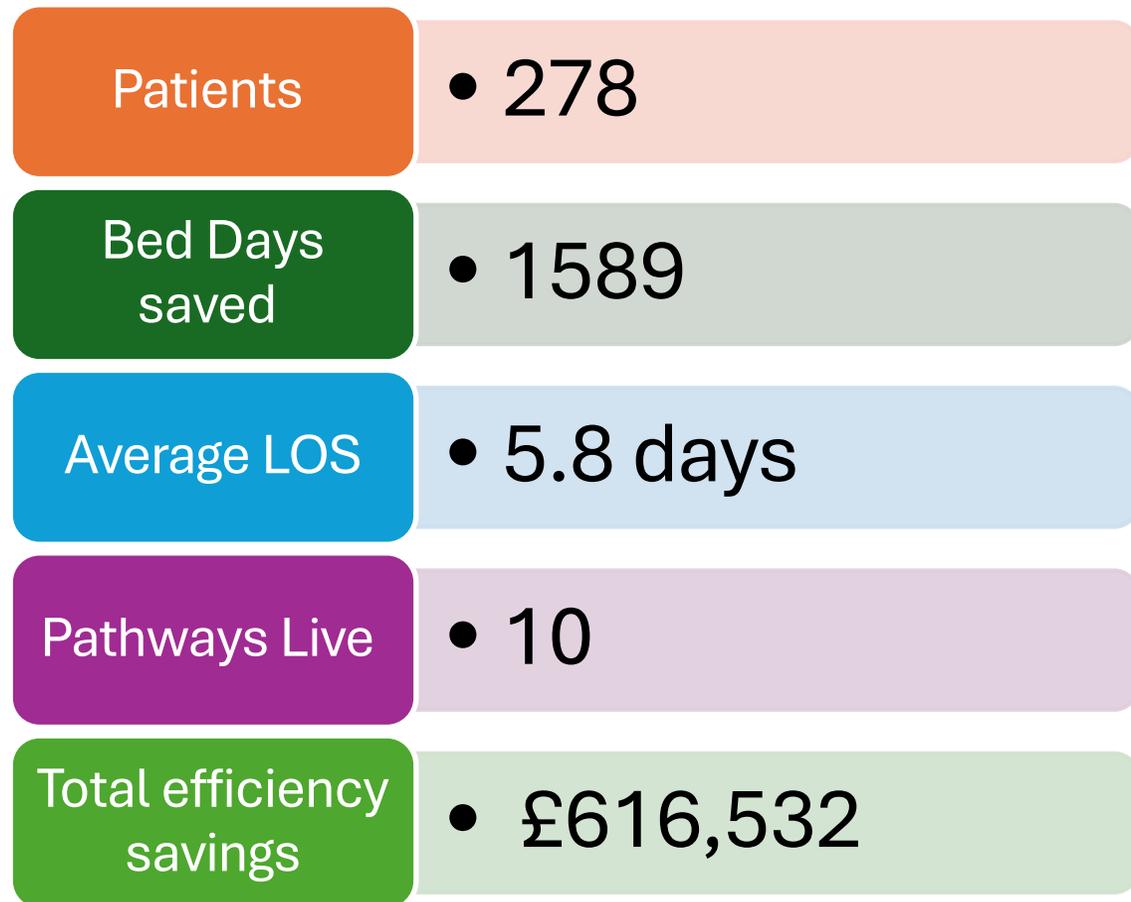


Pathways

Various pathways have now been developed, caring for patients pre and post procedures as well as general observations so that patients can be discharged quicker from a hospital bed.

- General surgical -ERCP, HGB, GSM, PANC
- Cardiology - TAVI, STEMI
- Urology
- Oncology
- Neurosciences - Lumbar
- Vascular - CLTI

Success to date (8/7)



Devices

Patients go home with devices completing their observations twice per day, observations are sent via an app to a platform called In healthcare.

- Blood Pressure
- Thermometer
- Oximeter



Software

NO-SANDPIT You are logged in as UTLET, Abigail (j) Leeds Teaching Hospitals NHS Trust - IT-Central_Hub (switch) Change pass...

Clinician Admin centre Organisation administration **Care facility**

Patient name or NHS number

inhealt

- Tasks 15
- Appointments
- ERCP
- Evaluation Dashboard
- GSM
- HGB
- Master Dashboard
- Neuro-Lumbar
- Oncology
- Patients
- Suuti
- Tavi
- Vascular

Patient Details	Pathway	Last date of submission	BP	HR	Spo2	Temp	Pain	Vomiting	Last date patient was contacted	Bloods reviewed	Procedure date	Estimated date of discharge
SMITH, James () NHS No. 363 031 5534 Gender Not known DOB 01-Jan-2000	ONCOLOGY	09-Apr-2024 11:11	170/56	90	100	50.0		No			10-Apr-2024 11:00	11-Apr-2024
SMITH, James () NHS No. 363 031 5534 Gender Not known DOB 01-Jan-2000	NEURO-LUMBAR	09-Apr-2024 15:36	170/60	90	90	36.0	3	No			12-Apr-2024 11:00	25-Apr-2024
SMITH, James () NHS No. 363 031 5534 Gender Not known DOB 01-Jan-2000	HGB	09-Apr-2024 15:38	130/80	90	90	36.0	6	1 episode			18-Apr-2024 15:30	18-Apr-2024
SMITH, David () NHS No. 540 250 3664 Gender Not known DOB 01-Jan-2000	HGB	10-Apr-2024 10:01	128/72	77	99	37.3	8	No	10-Apr-2024 09:00	19-Apr-2024 11:00		19-Apr-2024
SMITH, Sally () NHS No. 636 335 8078 Gender Not known DOB 01-Jan-2000	GSM	12-Apr-2024 15:05	150/60	90	96	36.0	3	No		11-Apr-2024 11:10	26-Apr-2024 11:00	26-Apr-2024
SMITH, Sally () NHS No. 636 335 8078 Gender Not known	HGB	16-Apr-2024 15:51	150/80	70	94	36.0	3	1 episode	16-Apr-2024 10:50	24-Apr-2024 10:00		29-Apr-2024

Patient Feedback



- “I saved time from travelling back and forth, I had regular check-up calls and staff were very helpful, I could voice any concerns”.-EGS
- “The staff and the virtual experience really helped me improve my health mentally due it being the simple case of being looked after whilst in the comfort of your own home. Thank you for all your help”. - EGS
- “This is a brilliant service. Support from staff was first class, I would highly recommend it to anyone with the option of using the system and would have no hesitation in taking it again if offered. I can’t think of anything that would have improved my experience”. - Oncology



Thank you



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Speaking Now...



Dr Sarah Holmes
Chief Medical Officer
Marie Curie



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Drinks and Networking



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