South West Academic Health Science Network

West of England Academic Health Science Network

COVID Oximetry @ Home

4 November 2020
16:30-18:00

Part of The AHSN Network

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South West Academic Health Science Network

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Welcome

- The webinar will be starting at 16:30.
- Please remain on mute to reduce background noise.
- Use the Zoom chat function to submit questions throughout the webinar.
- Please note this webinar is being recorded.

Access the recording here: vimeo.com/475632680

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Welcome

Natasha Swinscoe, West of England AHSN

Part of TheAHSNNetwork

South West Academic Health Science Network

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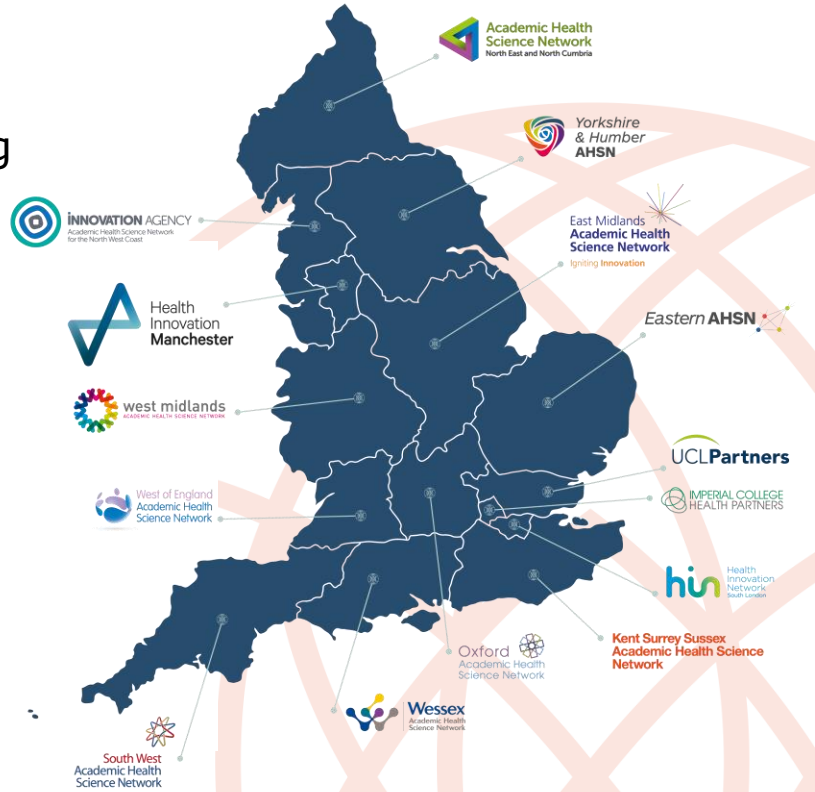
Who are the Academic Health Science Networks?

We bring together all the key players innovating health and care in our region:

- the health and social care community
- industry
- local government
- higher education
- research bodies
- patients and the wider public.

We work collaboratively to drive transformation that is based on genuine need, is successfully embedded and sustainable.



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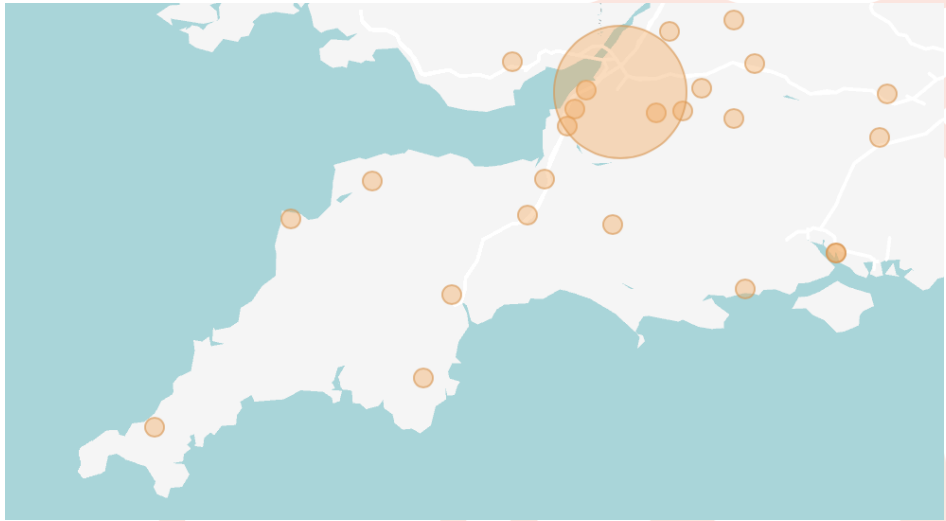
Who is here today?



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Meet the team

Natasha Swinscoe
Chief Executive Officer, West of England AHSN and AHSN Network Patient Safety Lead

Matt Inada-Kim
Consultant Acute physician, HHFT,
Clinical Director Patient Safety/Digital at Wessex AHSN,
National Clinical Lead Deterioration/Sepsis

Karen Kirkham
GP & Senior Medical Advisor to the Primary Care Provider Transformation team, NHS England

Anita Randon
Director of Programmes, South West AHSN

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Meet the team

Anne Pullyblank
Medical Director, West of England AHSN

Alison Tavaré
Primary Care Clinical Lead, West of England AHSN

Malcolm Gerald
GP and Primary Care Lead for Covid Virtual Ward implementation, Gloucestershire CCG

Kelly Matthews
Deputy Director of Transformation and Service Redesign, Integrated care System programme lead for respiratory, Gloucestershire CCG

Agenda

16:30–16:35	Welcome	Natasha Swinscoe
16:35–16:50	National Evidence and Policy, including Oximetry (how/when/where/what)	Matt Inada-Kim
16:50–17:00	Evaluation of national pilots	Karen Kirkham
17:00–17:10	Gloucestershire pilot	Kelly Matthews & Malcolm Gerald
17:10–17:15	The AHSN offer	Anne Pullyblank
17:15–17:55	Discussion and Q&A	Chaired by Alison Tavaré
17:55–18:00	Next steps	Anita Randon

Q&A

- Please put questions in the chat, we will have a Q&A session after the presentations

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Matt Inada-Kim

National Evidence and Policy, including Oximetry (how/when/where/what)

WHY?

~~Late~~ Early presentations

Silent hypoxia

56 year old, usually well man with a PMH of hypertension/asthma

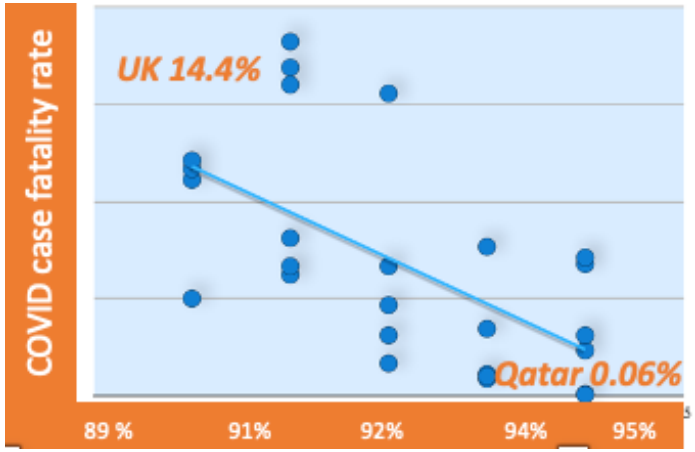
- 14.4 first symptoms -> isolation, partner worked in care home
- 21.4 1st NHS call
- 23.4 2nd NHS call Terrible cough, joint pains
- 24.4 3rd NHS call asked if he was breathless & if he could walk upstairs
- 24.4 partner was admitted with hypoxia via ambulance
- 28.4 Damian died

Robert Peston

The tragic case of Damian Holland

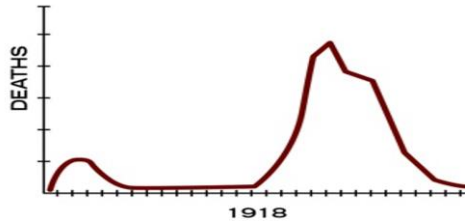
"a characteristic of this virus that causes oxygen saturation levels of some sufferers to fall to dangerously low levels without them suffering conspicuous difficulties when breathing."

The battle for lives will be won in the community



It is GPs, paramedics & ED staff who will shift the balance & save most lives.

It will be clear, sound triage systems & clear clinical guidelines that will determine mortality more than the total number of ventilators available"

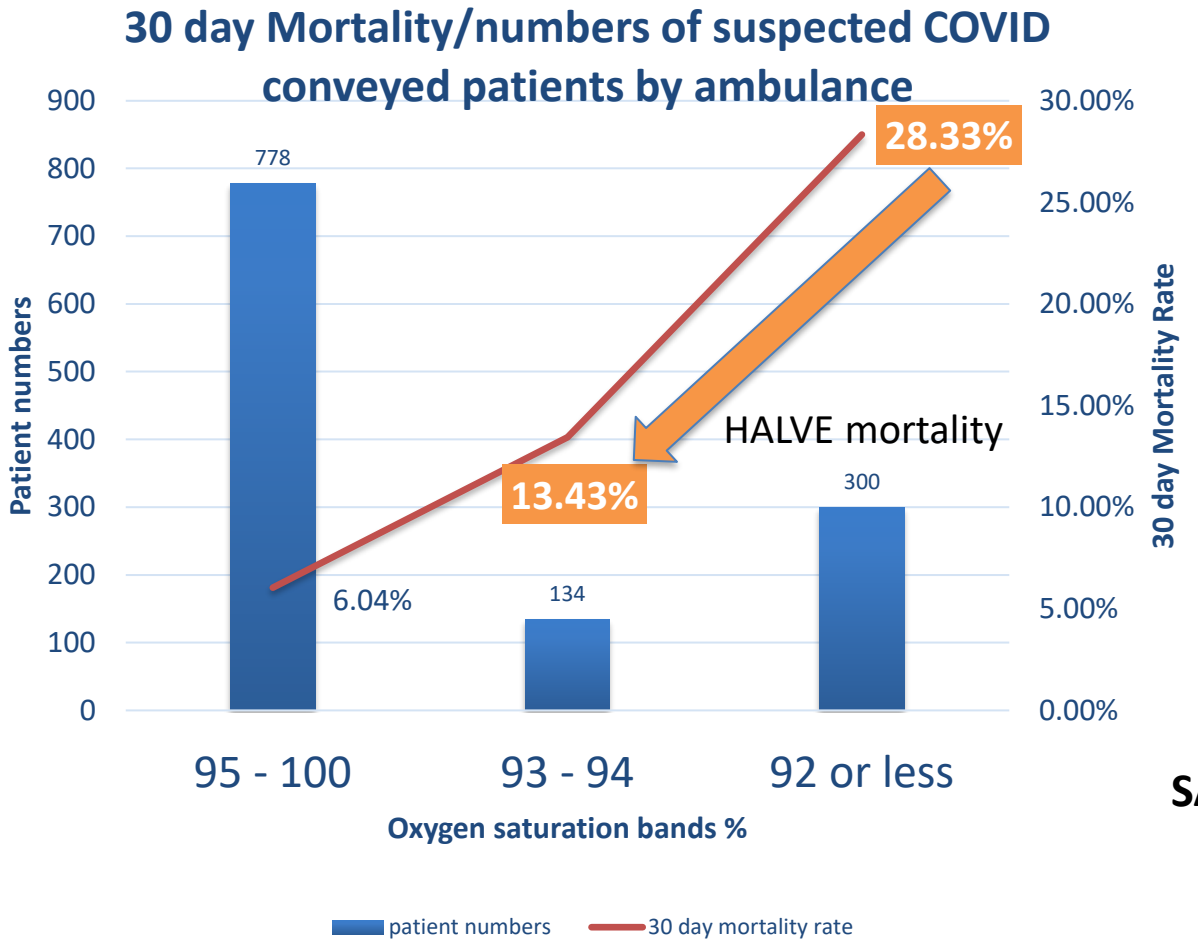


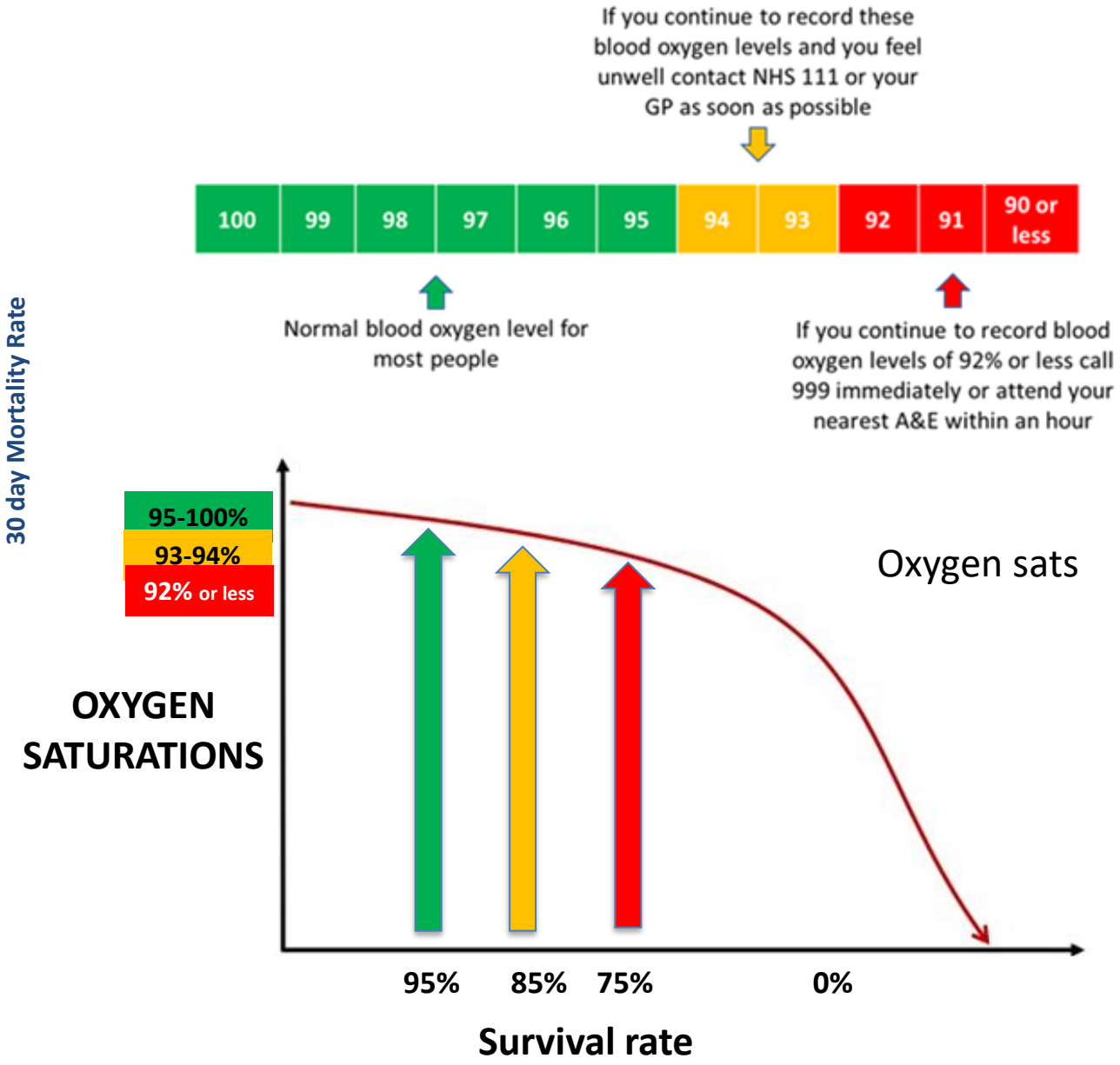
Reduce mortality
Reduce LOS
Reduce ICU admissions
Reduce Long COVID
Keep Flow going,
and as much BAU as possible

SW - Empowering COVID-19 patients with Pulse oximetry @home to self-monitor & spot & act on early deterioration

Matt Inada-Kim, Consultant Acute physician, HHFT, Clinical Director Patient Safety/Digital, Wessex AHSN
National Clinical Lead Deterioration/Sepsis, COVID Clinical Reference groups- primary care, care homes, secondary care

the importance of oxygen measurement



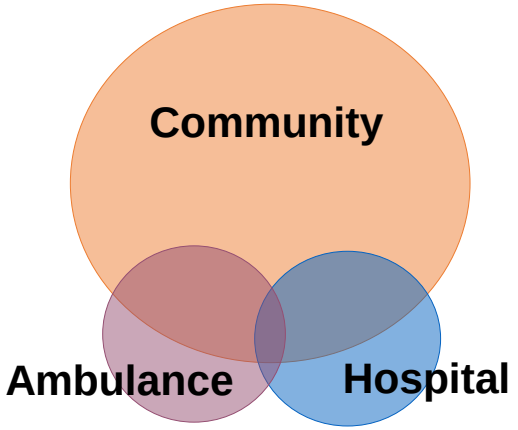


HOW?

COVID Clinical strategy

To improve outcomes/LOS/ICU admission rate through earlier recognition of deterioration

1. Establishing the optimal clinical model in all settings



Aligned pathways

- Consensus formed through National COVID Clinical Reference Groups

Remote assessments

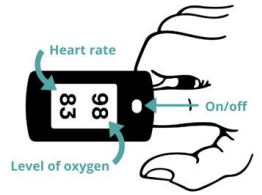
- remote consultations where possible with reduced face to face appointments.
- For COVID and all other conditions

COVID Virtual Ward

- Monitoring suspected COVID patients at home for ‘Silent hypoxia’ and early deterioration at home
- Enabled with Pulse oximetry monitoring

Safety Netting

- Sent/kept at home from all settings (e.g. hospital, community, care home, ambulance)



2. Digital supporting innovations (that are interoperable & bridge all settings)

3. Evaluation (NHS Digital, Ara Darzi (ICHP), UCL, NIHR, PHE, Nuffield Trust)

4. Scale & Spread High degree of clinical consensus (national COVID CRGs)

Local implementation is already happening e.g. Leicester, Greater Manchester (3m population), Liverpool (1m population), NE (9m) and SE (9m)

Pulse oximetry learning network and national e-forum (600 members)

COVID-19 Clinical Pathway

*The COVID virtual ward describes an enhanced package of monitoring (of symptoms and O2 sats) for patients at risk of future deterioration/admission, provided within a patient's own home (or usual residence) and can be managed by either community or hospital teams.

Possible COVID
- Community
- Hospital
- Ambulance

CCAS/GP/SDEC Remote/F2F Clinical Assessment + COVID Testing, O2 sats +/-Biomarkers +/-Resp.panel

COVID ruled out

Alternate potential diagnosis Manage as appropriate

COVID suspected

e.g. Sats<93%

Admit

COVID Care @home

Active follow up

High Risk

Diary & COVID Virtual Ward*

RECOVERY

DETERIORATION**

e.g. Sats<93%

Admit

Low Risk

Passive follow up

deterioration**

Diary & Safety netting

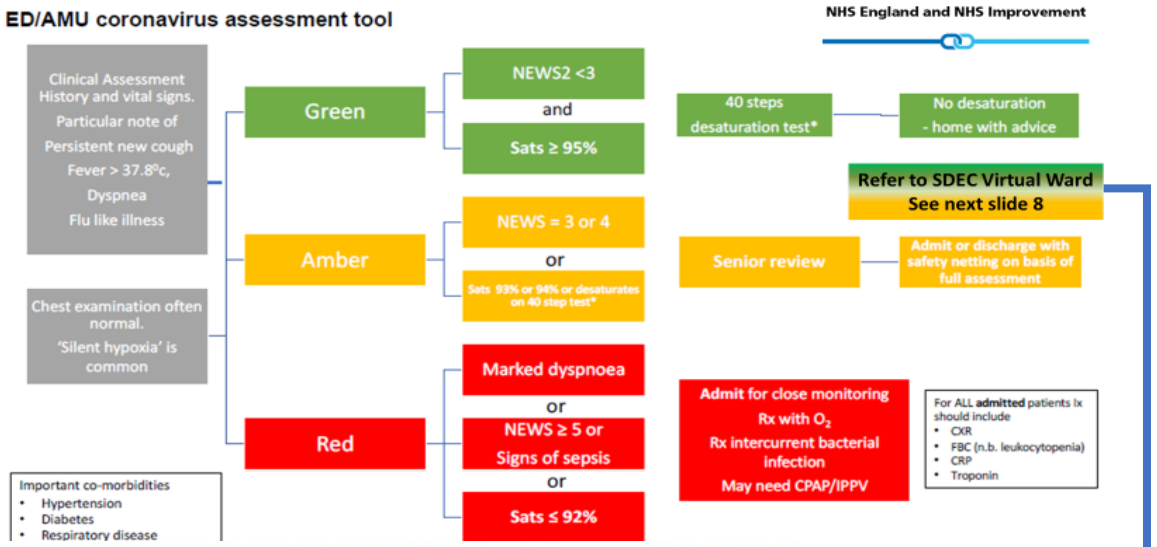
RECOVERY

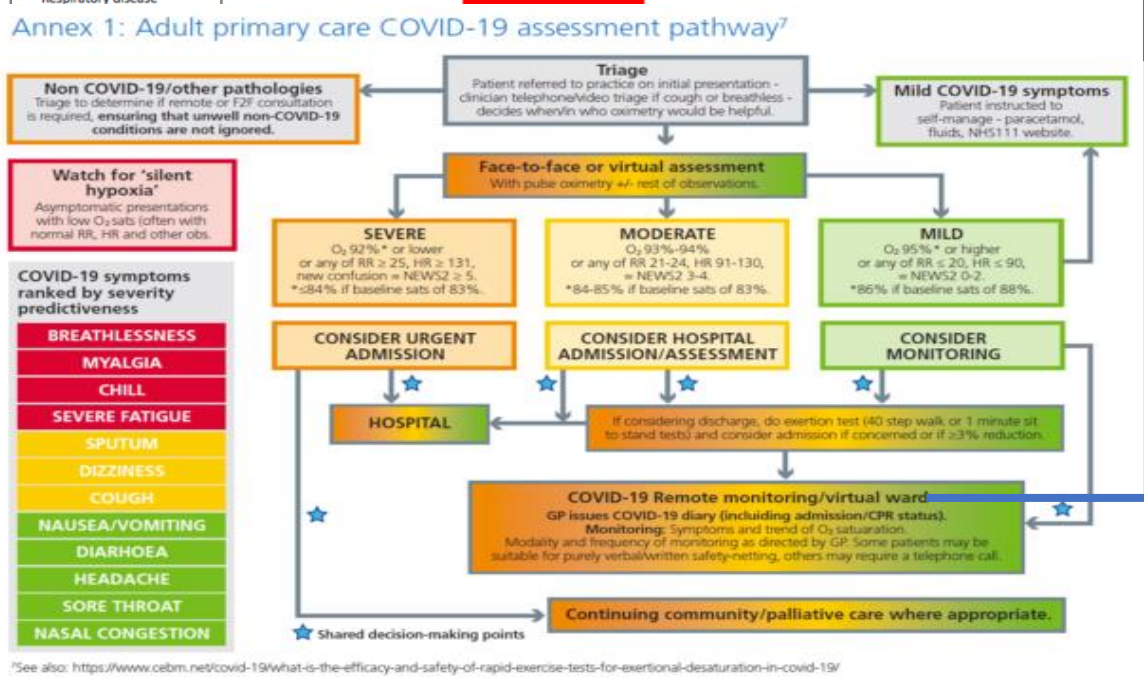
If patients are test negative
They require clinical review prior to discharge from the COVID virtual ward

**Deterioration in Suspected COVID patients is signalled by
Significant decrease in oxygen saturations
Significant deterioration of symptoms

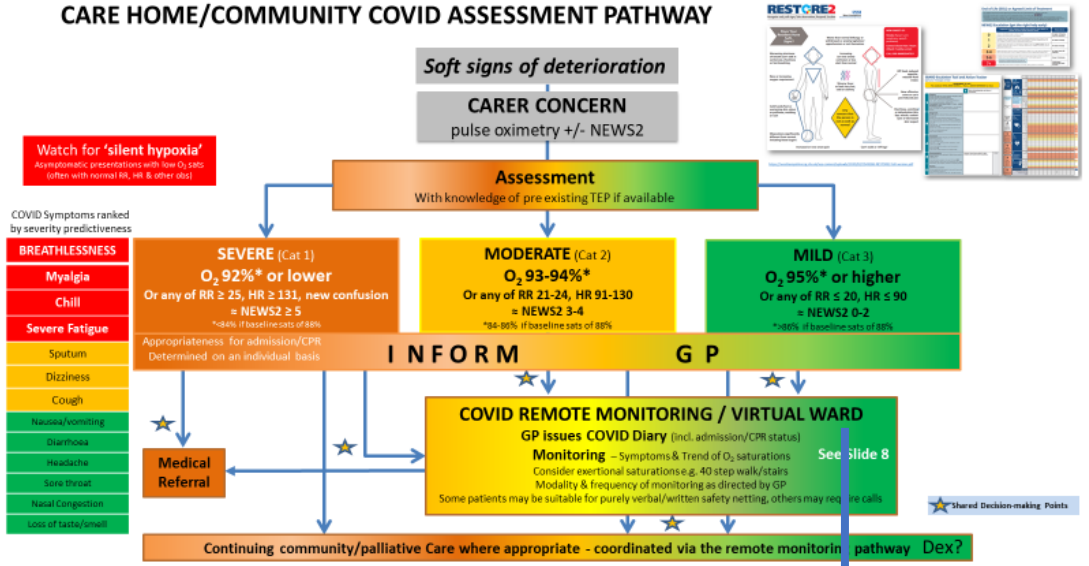
Adapted from/with thanks J.Benger & C.Moran

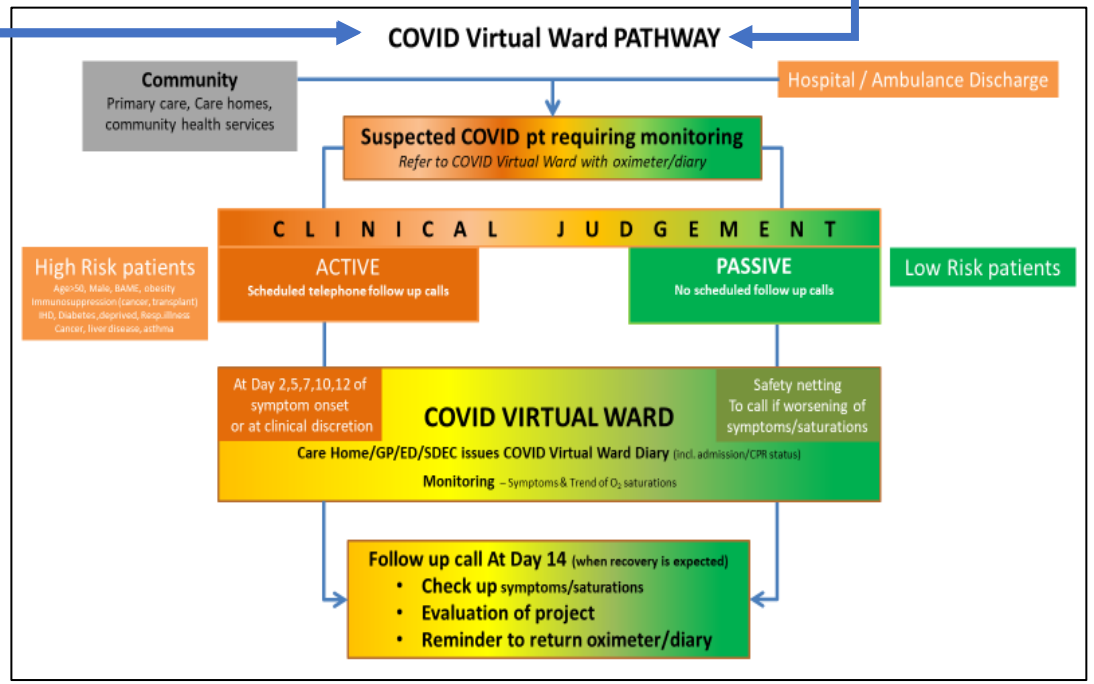
Aligned national pathways across all settings





[7]See also: https://www.cebm.net/covid-19/what-is-the-efficacy-and-safety-of-rapid-exercise-tests-for-exertional-desaturation-in-covid-19/





High Risk non-admitted patients are 'placed' on the COVID virtual ward

ADULT PRIMARY CARE COVID ASSESSMENT PATHWAY

Non-COVID/other pathologies
Triage to determine if remote or F2F consultation is required
Ensuring that unwell non-COVID conditions are not ignored

TRIAGE
Patient referred to practice on initial presentation
Clinician telephone/video triage if cough or breathless
Decides when/in whom oximetry would be helpful

Mild COVID symptoms
Patient instructed to self manage – paracetamol, fluids, NHS 111 website

Face to face or Virtual Assessment
With pulse oximetry +/- rest of observations

Watch for **'silent hypoxia'**
Asymptomatic presentations with low O_2 sats (often with normal RR, HR & other obs)

COVID symptoms ranked by severity predictiveness

- **BREATHLESSNESS**
- **Myalgia**
- **Chill**
- **Severe Fatigue**
- Sputum
- Dizziness
- Cough
- Nausea/vomiting
- Diarrhoea
- Headache
- Sore throat
- Nasal Congestion

SEVERE
O_2 92%* or lower
Or any of RR ≥ 25, HR ≥ 131, new confusion
≈ NEWS2 ≥ 5
*Or if O2 sats >4% less than usual

MODERATE
O_2 93 - 94%*
Or any of RR 21-24, HR 91-130
≈ NEWS2 3-4
*Or if O2 sats 3-4% less than usual

MILD
O_2 95% or higher
Or any of RR ≤ 20, HR ≤ 90
≈ NEWS2 0-2
*Or if O2 sats are 1-2% less than usual

CONSIDER URGENT ADMISSION

CONSIDER Hospital ADMISSION / ASSESSMENT

CONSIDER MONITORING

Hospital

if considering discharge, do exertion test (40 step walk or 1 min sit-to-stand tests & consider admission if concern or if ≥ 3% reduction

COVID REMOTE MONITORING / VIRTUAL WARD
GP issues COVID diary (inc. admission/CPR status)
Monitoring: symptoms & trend of O_2 saturation
Modality & frequency of monitoring as directed by GP
Some patients may be suitable for purely verbal/written safety-netting, others may require call

Shared Decision-making points

Continuing community/palliative Care where appropriate

https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/06/C0445-remote-monitoring-in-primary-care-revised.pdf

The Urgent Need for SDEC COVID virtual wards

thebmj covid-19 Research Education News & Views Campaigns Jobs

News » EXCLUSIVE

Covid-19: Patients to use pulse oximetry at home to spot deterioration

NEWS

SAFE COVID @home CARE

Cite this as: *BMJ* 2020;371:m4151
http://dx.doi.org/10.1136/bmj.m4151
Published: 27 October 2020

Covid-19: Patients to use pulse oximetry at home to spot deterioration

Ingrid Torjesen

Patients with covid-19 who don't need immediate hospital attention but are at high risk of developing serious symptoms are to be given pulse oximeters to use at home to reduce the risk of serious deterioration, *The BMJ* has learnt.

NHS England is believed to have purchased around 200 000 pulse oximeters for the scheme, which clinical commissioning groups across England will be able to access.

The initiative is set to be rolled out across the country over the next six weeks and is being led by Matthew Inada-Kim, national clinical lead for deterioration at NHS England and a consultant in acute and general medicine at Hampshire Hospitals NHS Foundation Trust.

NHS England has advised since the start of the pandemic that medical intervention is necessary if oxygen saturation levels began to fall.[1] But during the first wave it became clear that some patients developed "silent hypoxia," where desaturation occurred but they exhibited no obvious symptoms, such as shortness of breath or feeling very unwell.

espiratory

Ambulance COVID study
617/1080 had Sats 95-100%

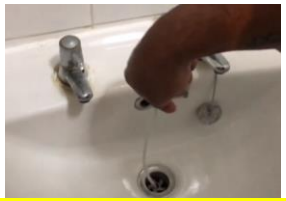
of the first areas to implement the monitoring at home scheme, told *The BMJ* that the evidence was now fairly strong that if oxygen saturation fell to 94% or 93% the mortality risk increased to around 13%, and if it fell below that level the risk would increase to to make the recovery almost impossible." But he pointed out that this would put more pressure on the hospital system.

"As we monitor more patients in the community, we will know what the tipping point is for them to get into hospital, which is likely to be earlier than we might do if we weren't monitoring them at all," he

Just to let you know. COVID virtual ward started this week in East [redacted] (mobilised within 2 weeks after I had been nudging for months and finally things lined up for a decision). 48 patients admitted to it in 1 week! I am doing the MDT for it twice a week (it happens daily Monday to Friday within GP, AP and community nurses) from Monday.

Well done thaT's fantastic. Really hope it helps improve outcomes and helps keep the flow going

6 admitted from hospital and 42 from primary care.



ADMISSION ADVOIDANCE

Wow hard to watch that bulletin
No pressure [redacted] we need to get our wards working ❤️

I was at work today and again tomorrow .. it's all hands on deck .. we are overwhelmed and ran out of ITU capacity last night Patients ventilated in theatre recovery
We managed to get more patients out on the CVW pathway
Every little helps and more and more patients being added to the CVW pathway —> this cannot be a simple silent hypoxia pathway ..
We are behind in terms of digital solution and MH/ Learning disability patients —> unless we do something about that soon we will not be able to level up them very inequalities we need to !!

EARLY DISCHARGE

This is absolutely amazing team work this morning👌AED full and no space on unit shows what is necessary to create capacity and discharge patients safely. Amazing dedication 😊👏
@JanChristian66 @skimmingstones1 @mattinadakim

EAU @ SRFT @NEWSEAU · Oct 28

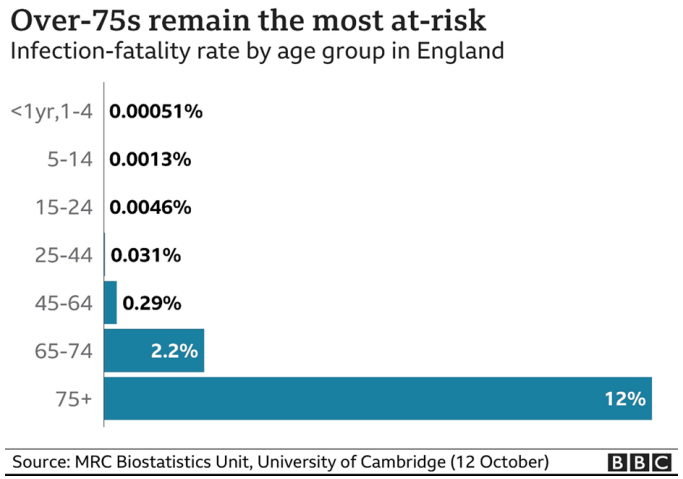
Covid Virtual Ward set up in less than an hour and first person discharged. Special thanks to @bushra_alam1, @EprSrft and all the EAU team for making this happen. Looking forward to collaborative work with the community to progress and expand this initiative ❤️

WHAT?

1. Diagnosis of COVID-19: either clinically or positive test result **AND**
2. Symptomatic **AND**
3. Aged 65 years or older

OR for patients *under* 65 years: + Clinical concern

4. Those who meet criteria 1 and 2 above, **AND** are included on the Clinically Extremely Vulnerable list, **OR** have received a letter informing them they are included in the high risk score group (excluding children).
5. Patients with a Learning Disability who are on the GP Learning Disability register.



COVID Virtual Ward PATHWAY

Community
Primary care, Care homes, community health services

Hospital / Ambulance Discharge

Suspected COVID pt requiring monitoring
Refer to COVID Virtual Ward with oximeter/diary

CLINICAL JUDGEMENT

ACTIVE
Scheduled telephone follow up calls

PASSIVE
No scheduled follow up calls

Low Risk patients

At Day 2,5,7,10,12 of symptom onset or at clinical discretion

COVID VIRTUAL WARD

Safety netting
To call if worsening of symptoms/saturations

Care Home/GP/ED/SDEC issues COVID Virtual Ward Diary (incl. admission/CPR status)

Monitoring – Symptoms & Trend of O_2 saturations

Follow up can be undertaken by AHPs/HCPs under the supervision of senior clinicians

Follow up call At Day 14 (when recovery is expected)
- **Check up** symptoms/saturations
- **Evaluation of project**
- **Reminder to return oximeter/diary**

Early results
1% mortality
N=1,800 COVID patients

Early recognition, escalation, admission and treatments save lives in COVID

Follow up of suspected or confirmed COVID-19 patients with oximetry monitoring & symptoms @home/institutions *?B4/volunteer to do this*

Monitoring in the community, discharge from the hospital, non-conveyance from ambulances

Three times daily diarising of oxygen levels/function, patients instructed to contact where appropriate outside of review times

Early escalation (desaturation +/-symptoms) to admit patients as soon as they deteriorate

COVID virtual ward resources

analogue

digital

Safety netting

COVID-19 Safety Netting Guidance

Public facing guidance to support people with suspected COVID-19 isolating at home at risk of physical deterioration and silent hypoxia

Theme 1: What to do if you suspect you have coronavirus

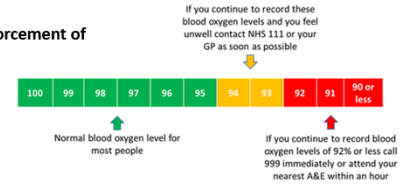
- Advice on self isolation based on national guidelines, and link to isolation and self-care guidance, access to volunteers etc.
- National guidance on how to arrange a COVID-19 test, with a reminder not to wait.
- Advice on utilising the support of friends and family, regular check-ins, help to monitor soft signs of deteriora

Theme 2: Ways in which symptoms can change and guidance on managing deterioration

- An outline of standard COVID-19 symptoms and management: symptoms could last for at least 3 weeks; advi recovery: rest, paracetamol, fluids etc.; recognition that for some symptoms may be more prolonged and signposting to Long COVID guidance and resources
- An outline of symptoms/signs that may be a cause for concern and advice to contact NHS111 or GP
- An outline of serious symptoms/signs of deterioration and advice to attend the nearest ED within an hour or immediately

Theme 3: Using a pulse oximeter and reinforcement of blood oxygen triggers for response

- Information on blood oxygen, pulse oximeters and where to find out more information
- 3 phase scale of for blood oxygen readings and what to do next



Contact NHS 111

If you experience any the following COVID-19 symptoms, you should contact 111 as soon as possible. **You can access 111 online** at www.111.nhs.uk, by telephoning 111 or via your GP

- **Feeling breathless or difficulty breathing, especially when standing up or moving**
- **Severe muscle aches or tiredness**
- **Shakes or shivers**
- **If you use a pulse oximeter and your blood oxygen level is 94% or 93% or consistently lower than your usual reading and you feel unwell**
- **Sense that something is wrong (general weakness, severe tiredness, loss of appetite, peeing much less than normal, unable to care for yourself – simple tasks like washing and dressing or making food)**

You should tell the operator you have recently been seen in A&E and have been told you might have coronavirus

ATTEND YOUR NEAREST A&E WITHIN AN HOUR OR CALL 999

You should call attend A&E as quickly as possible or call 999 immediately if you experience the following:

- **Your blood oxygen levels are 92% or less**
- **You are unable to complete short sentences when at rest due to breathlessness**
- **Your breathing gets worse suddenly**

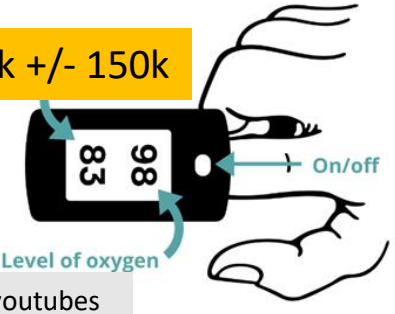
OR if you develop these more general signs of serious illness:

- **Cough up blood**
- **Feel cold and sweaty with pale or blotchy skin fade when you roll a glass over it**
- **Develop a rash that doesn't**
- **Collapse or faint**
- **Become agitated, confused or very drowsy**
- **Stopped passing urine or are passing much less than usual**

You should tell the operator you have recently been seen in A&E and have been told you might have coronavirus. A minority of people with COVID-19 will experience these more severe

COVID Diary

210k +/- 150k

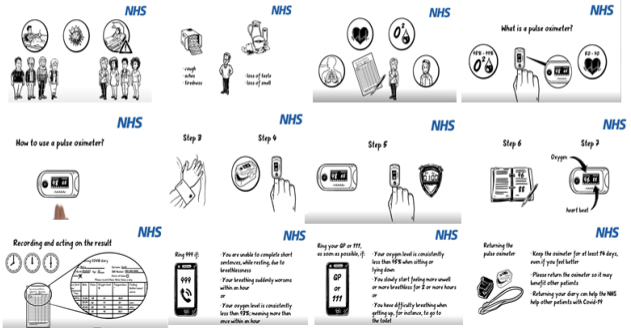


Pt instruction youtubes

Animation

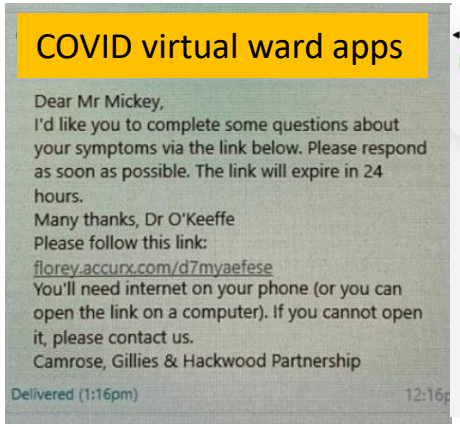
with thanks to simpleshow, Matt Hammerton & HEE

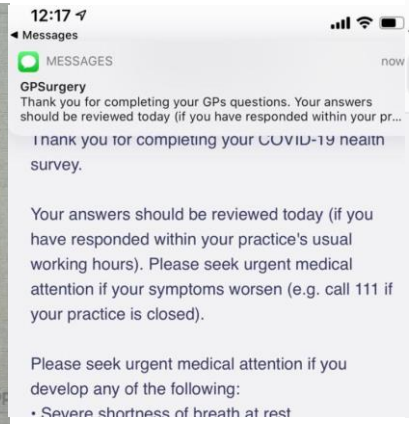
Hindi: https://www.youtube.com/watch?v=e1ipiJY-zwk
Punjabi: https://www.youtube.com/watch?v=wU5V6wVEHoM
Urdu: https://www.youtube.com/watch?v=rkGRRLumW4
Polish: https://www.youtube.com/watch?v=Lkd-BNeMvLs
English: https://www.youtube.com/watch?v=nx27Ck7xOgo

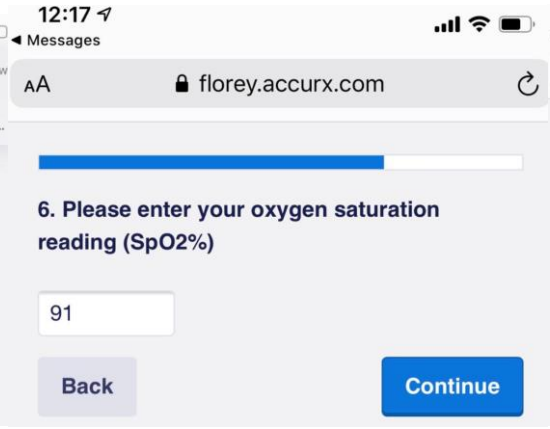


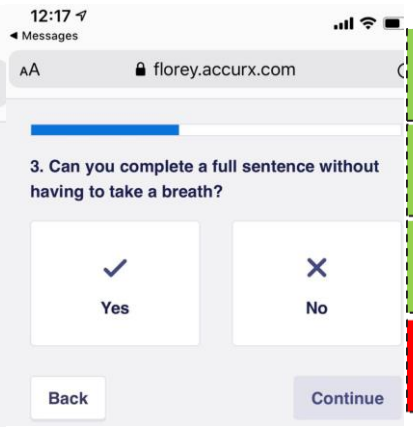
Multilingual translations in progress

COVID virtual ward apps

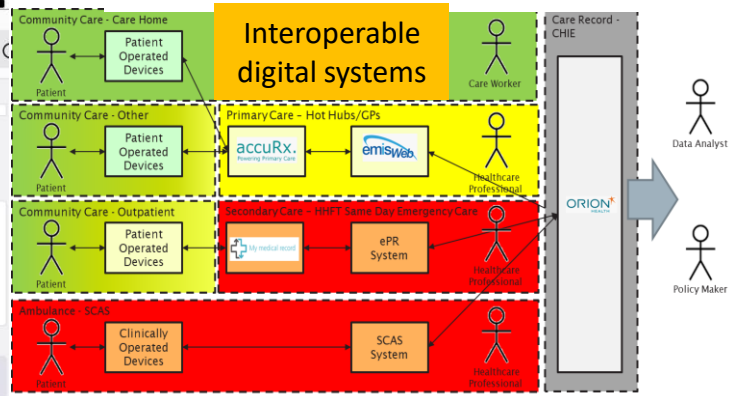






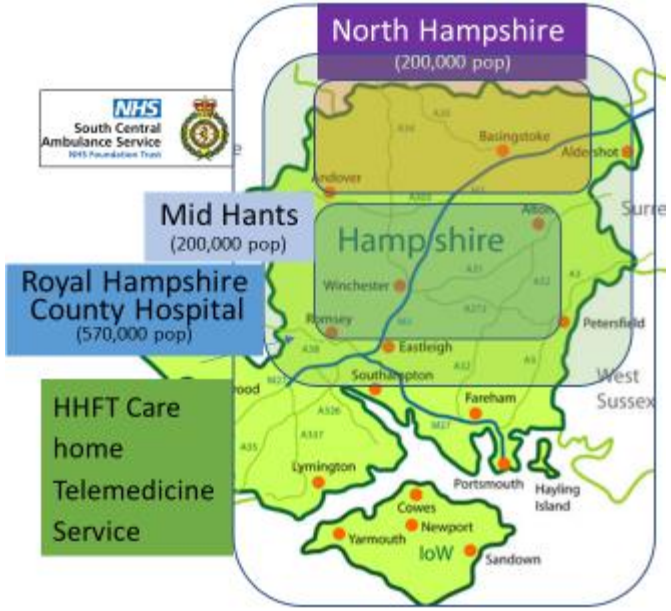


Interoperable digital systems



https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/06/C0445-remote-monitoring-in-primary-care-annex-2-diary.pdf

SCALE & SPREAD- regions and time periods

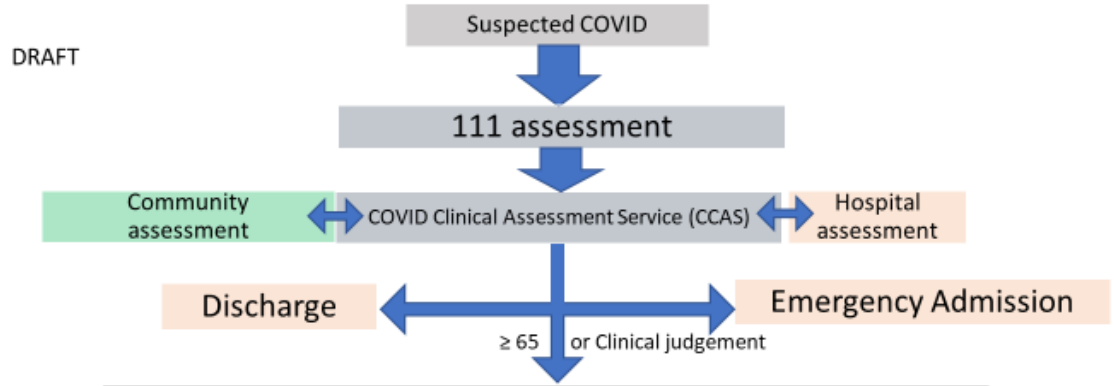


NOW
2 Community hot hubs
1 hospital SDEC
100 Care homes
1 Ambulance trust
Covering 600k people

FUTURE
9 Community hot hubs
5 hospital SDEC
600 Care homes
1 Ambulance trust
Covering 2 million people

2,000 COVID/non COVID patients managed so far
0 deaths (!) from 130 SDEC/Winchester city COVID virtual ward pt
COVID virtual wards- 1,800 patients- 1690 discharges (110 admissions)
Care home Telemedicine avoided conveyance in 138/269 cases
Enabled remote prescriptions in 84/269 cases

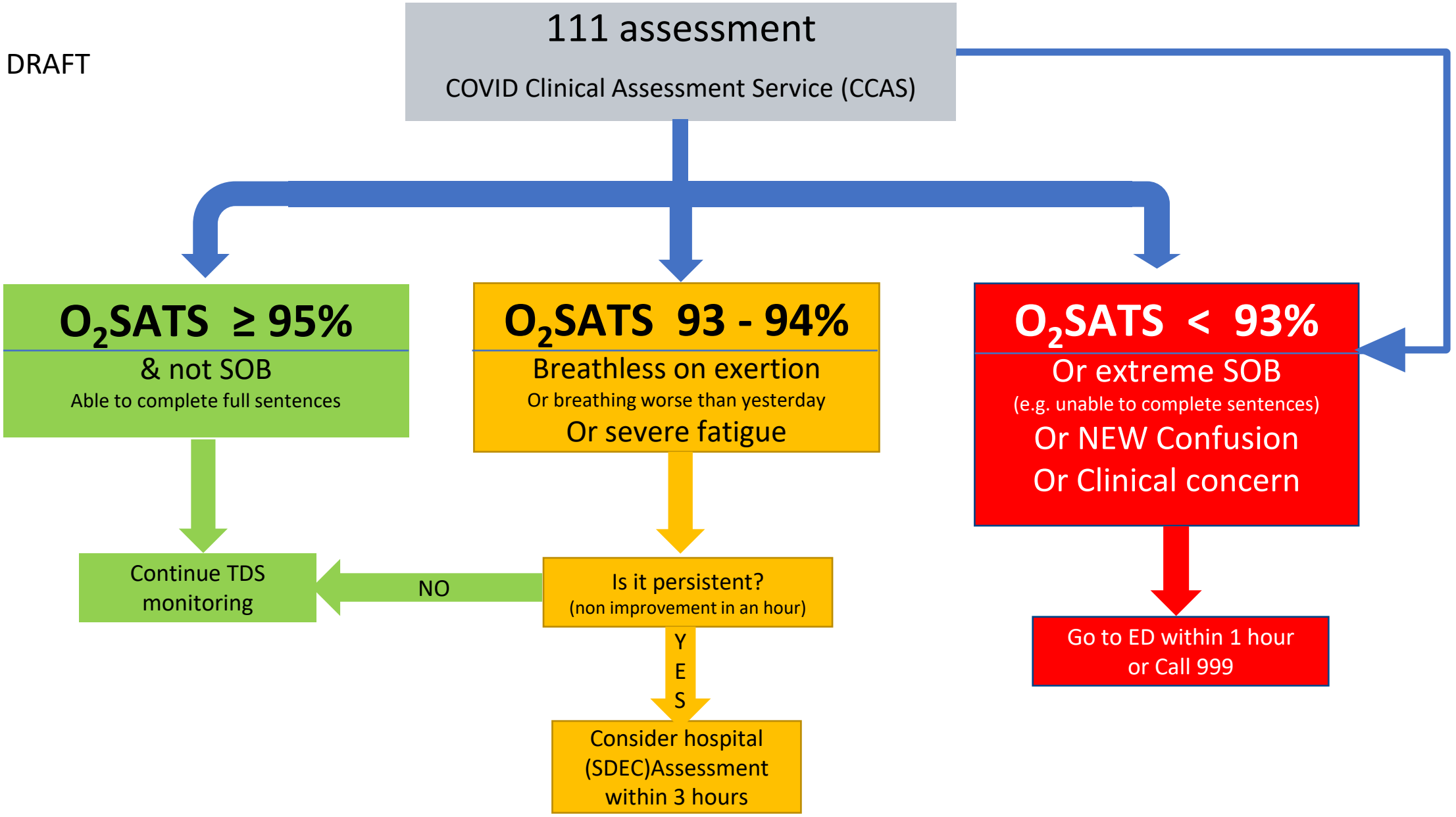
COVID Oximetry @home (Virtual Ward) onboarding and monitoring



ROI
- **> 10% Reduction in COVID mortality (& acuity of presentations)**
- **> 35% Reduction in ED COVID admissions**
- **> 20% Reduction in hospital admissions from care homes**
- **5 hour Reduction in clinician time / day / virtual ward** (digital solutions)

COVID Oximetry @home (Virtual Ward) DETERIORATION via 111 CCAS

DRAFT



COVID Virtual Ward Staffing Competencies

With thanks to Helene Irvine, Sam Sherrington & team

STAGE 1
Referral via 111/999/GP Practice, Hospital or Community
Registered Professional

Stage 1
Registered Professional competent in assessment of COVID-19 respiratory conditions and uses clinical judgement to diagnose and assesses against COVID pulse oximetry inclusion criteria

STAGE 2
Triage at hot hub or by phone
Registered Professional

Stage 2 referral to Primary care Hot hub or other.
The Registered Professional will be capable and competent in:

- understanding the process and entry criteria for the Covid-19 pathway
- understanding the EWS pathway for referral
- can make an assessment to ensure no deterioration since the individuals initial assessment
- assessing if the individual is able to self monitor or if any assistance is required
- arranging referral and delivery of equipment to a designated HCSW/ volunteer

STAGE 3
Onboarding to COVID Oximetry@home
HCSW & Volunteer

Stage 3
Role of the HCSW
Involved in monitoring of the individual
Liaises with designated volunteers to deliver oximeter equipment
Competent in the ability to record and monitor an individuals vital signs
Ensures the individual is able to use the equipment provided
Can instruct the individual in undertaking the I min sit and stand assessment
Checks that the individual knows how to record the data in their dairy
Uses appropriate resources to enable the individual to become actively involved in self care e.g. Talking heads or you tube
Recognises any signs that are outside of the defined parameters and escalates appropriately
Is clear of their role, responsibility and accountability
Works within their scope of practice and follows national and local guidelines in relation to IC

STAGE 4
Patient monitored for up to 14 days by a HCSW
Clinical 'check-in' phone calls on days 2, 5, 7, 10 and 12
HCSW /supervision Registered Professional

Stage 4

- HCSW contacts the individual following the agreed proforma to check compliance
- Checks that the individual is safely and accurately using the equipment
- Is able to answer any questions eliciting support from a health care professional as necessary
- Monitors and documents results
- Recognises and acts upon any data that is outside of parameters
- Works within clear guidelines to know when and how to escalate to; a Registered Professional, 111 and or 999

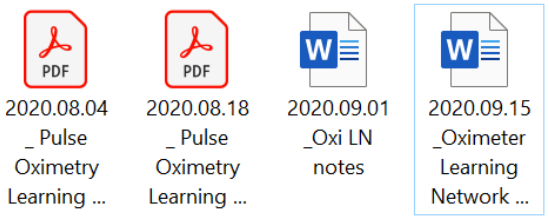
A Registered Professional will provide direct supervision and be accessible to the HCSW in person and by phone to answer any queries and or concerns. They will also be responsible for reviewing the data collected & when necessary review the patient remotely – via phone/video etc. They will be competent in the care pathways and processes for escalation as required

Stage 5
Registered Professional competent in clinical assessment and decision making to have the confidence and capabilities to discharge the individual from the care pathway
HCSW
Liaises with volunteers to arrange & return oximeter adhering to IPC measures

STAGE 5
Recovery and discharge
Registered Professional

Fortnightly COVID Virtual ward learning network

- is a tool that uses social media and technology to collect communicate, collaborate and create with connected colleagues anywhere at any time
- Members make requests and share resources
- Open collaboration without limits
- An opportunity to share ideas, **resources**, and learning materials with educators anywhere in the world.
- A way to gain perspective on practice/ideas for future innovations
- 4 meetings so far, fortnightly led by Catherine, Tony, Jo, Tara, Samson, Jo, Leoni & matt.70-150 attendees.



4. NHS@Home Pulse Oximetry Learning Network

Agendas, notes and links shared at the bi-weekly NHS@Home Pulse Oximetry Learning Network webinars. These webinars are open to anyone interested in or currently setting up a Covid Virtual Ward service. Please email leonilde.yahyaoui1@nhs.net to be added to the invite list. Webinars every other Tuesdays 3.30pm-4.30pm and recordings in this folder.

Sort by Name

1st meeting 04.08.2020
Updates from National, North Hants CCG, Slough, Hillingdon, Tees Valley

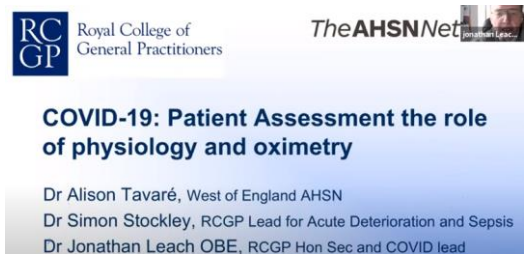
2nd meeting 18.08.2020
Updates from Leicester, Manchester & Tees Valley Discussion topics: -Messaging for the public about 'virtual wards' – working with patients and the public -Digital tools: -what are people finding useful? -Resource requirements: - how are you staffing your service? -Temperature devices -Funding models

3rd meeting 01.09.2020
Implementing pulse oximetry and Restore mini in an LD setting, Michael Hammond Page Implementing pulse oximetry NHS Hampstead CCG, Dr Tara Sood Out of Hours GP/Patient Covid-19 Experience, John Caldwell

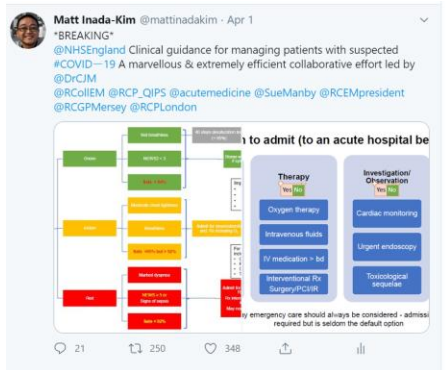
4th meeting 15.09.20
Open meeting to poll users, raise some of the discussion points from the discussion forum and gain an understanding of what the Covid Virtual Ward community would like from this learning network.

5th meeting 29.09.2020
Southampton Primary Care UCL/NIHR virtual ward evaluation findings Digital support from NHSX

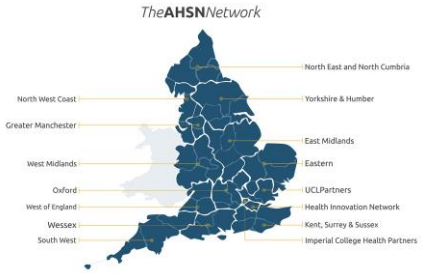
6th meeting 13.10.20
Sandwell COVID virtual ward, Kelly Redden-Rowley, Sandwell and West Birmingham Hospitals NHS Trust; How to set up a COVID virtual ward Jo Murray, Patient Safety Programme Manager, Oxford Patient Safety Collaborative;The logistics of virtual wards: Part 1) How volunteers can (and can't) support – Emma Easton, Head of Voluntary Partnerships, NHSE/I; Part 2) Bike Shed COVID Crisis Rescue – Dr Sharon Raymond, COVID Crisis Rescue.



10,637 views • Streamed live on Apr 29, 2020



Impressions 68,140
times people saw this Tweet on Twitter



National deterioration & COVID Forum

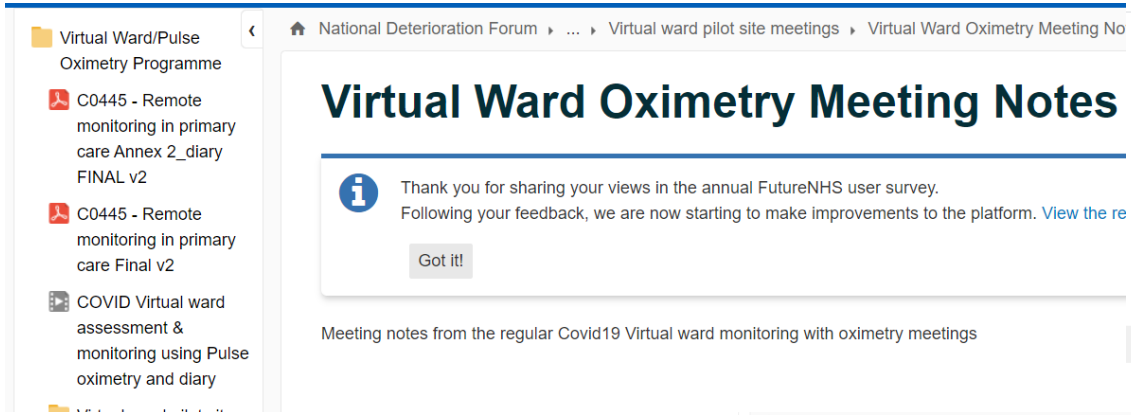
NHS England and NHS Improvement

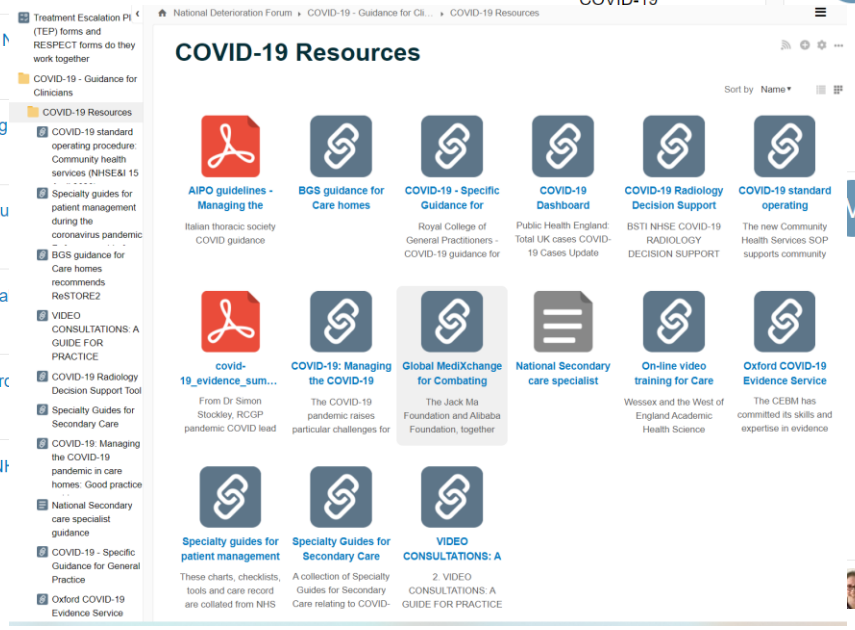
600 members, 25 new posts/day, 250 views/day

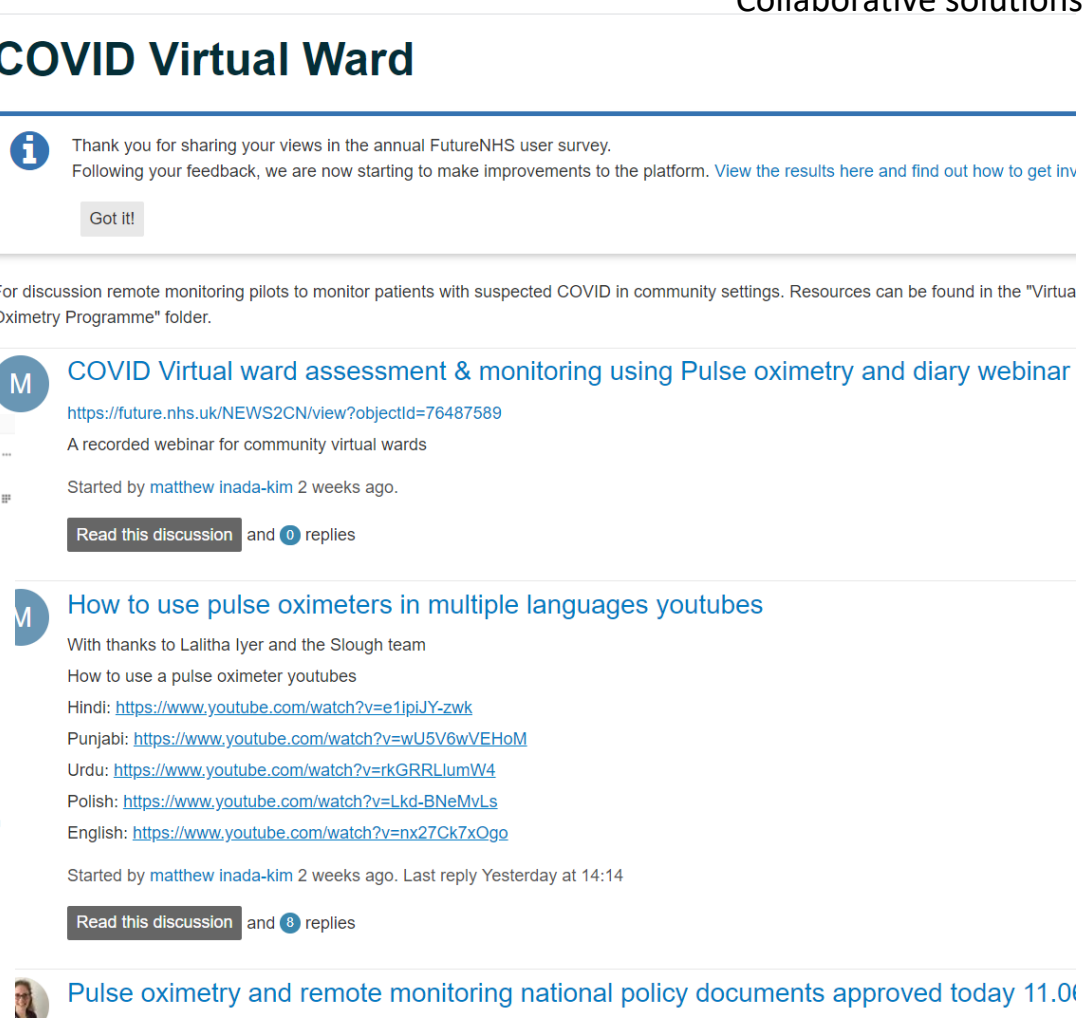
Adaptive work

Front line- central engagement

Where is the stress in the system?
How can leaders assist?
Bidirectional flows of information
Frame issues
Collaborative solutions





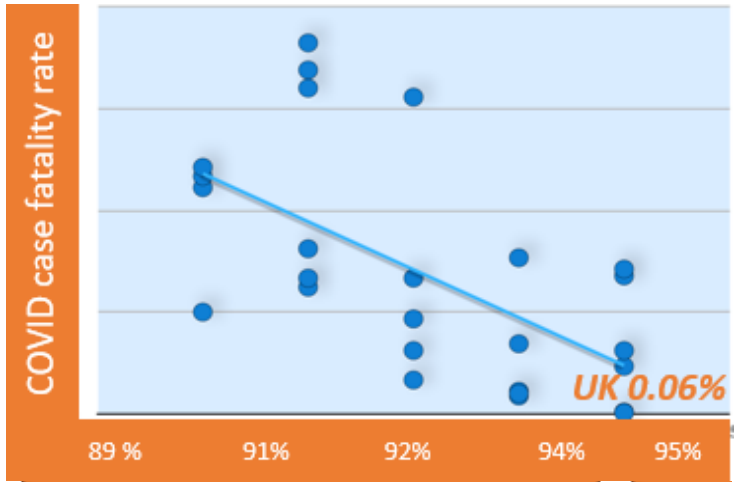


What next?

- NIRB full support
- National Implementation by end of November
- How should 111/GP/OOH/SDEC CVW interface?

Can monitoring be shared between primary/secondary care

- Public facing campaign for empowerment
  - Who/why/where/how/when to access the NHS
- Preparedness/planning for community hot hubs
  - Drivethru all-in-one testing (COVID pcr, Clin. Assessment, Oxygen sats)



Identify High Risk Groups educate/empower

Admit/determine TEP early

- Reduce mortality
- Reduce LOS
- Reduce ICU admissions
- Reduce Long COVID
- Keep Flow going,

  and as much BAU as possible

Implementation: facilitators

Key stakeholders

- Role of **influential, dedicated clinical leaders** in establishing
- Significant **support and 'buy in'** from senior management within acute trusts/CCGs to set up virtual wards
- Some acute hospitals had **SDEC/AEC** which supported the set up of virtual wards more quickly

Patients

- Developing paper and video **patient information** (as well as using digital platforms) was very useful to explain the concept of virtual wards and how to take measurements
- Positive **engagement from patients** and trust in clinical staff

Staffing

- The majority of interventions can be delivered by nurses with minimal senior clinical oversight
- Many of the virtual wards driven by NHS staff going above/beyond their day-to-day roles
- Clear staff communication

Evidence

Real world Pragmatism

Pan System Engagement

Collaboration

Consensus

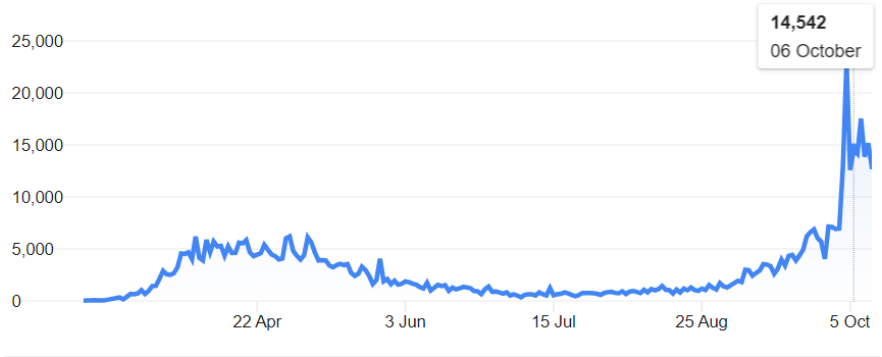
Compromise

Strong Leadership

Systemwide alignment

Commissioning

Measurement



A regional COVID Virtual ward strategy

Is there the will for a regional collaborative strategy

Engage across the pathway through Patient Safety Collaboratives

Form a Stakeholder DELIVERY GROUP, request oximeters early

Clinicians (community/hospital), Commissioners

Develop implementation strategy, funding, set up regional webinars

Develop/Acquire pathways/get resources

Join the national community of practice

Share to help others in their implementation

NIRB approval ✓

Letter to the system

SOP

1. Implementation
2. Training/resourcing
3. Inclusion criteria
4. Patient Pathway
5. Evaluation
6. Oximetry logistics
7. Funding (primary care)

Dear Matt

Patient, male aged 79 and underlying comorbidity of AF, on apixoban. SH Fiercely independent, retired hospital chaplain but still actively practicing C of E vicar, lives with wife in West Country.

On 10/10/20 assessed after a fall getting out of a car and minor head injury – taken to hospital where he was diagnosed with sinusitis and started on A/Bs. CT scan brain NAD

On 12/10/20 he 'fell' / collapsed at home. His wife tried to get him off the floor for 90 minutes – 999 call made. Crew assessed and diagnosed 'sepsis' due to low blood pressure, tachycardia and altered level of consciousness. Admitted to medical ward.

13/10/20 patient deteriorated (low sats) and transferred to ICU where he was proned / on CPAP sats around 65% on high flow oxygen. Remdesivir / dexamethasone started

21/10/20 condition stable – transferred back to medical ward where he remained on sats monitoring / nasal oxygen. Hated every minute and was desperate to get out of hospital ASAP!!!!!

26/10/20 arrangements made for him to be discharged once home oxygen available after review by respiratory consultant. Air Liquide attended home address same day and set up condenser and cylinder, and gave instructions for use to patient's wife. Patient discharged PM.

It may well have been the patient's drive / fortitude to get home, but he says he was told to just 'use oxygen when he needed it' and had no pulse oximeter and no worsening instructions.

As you know, I have now bought him a sats probe and sent him your fantastic guidance – and thank you so much for your help.

Approval from RCGP, RCEM, SAM, AoMRC, NASMeD, RCP, RCOG, RCS, RCPath, RCPysch, RCPCH,

Deterioration/sepsis boards, primary care cell, NHS@home, care homes cell, NHSD, NHSx

CO@h UK progress

Region	AHSNs	Presentation done	Follow up	Decision	Medical Director contact AHSN contacts	Key Leads
North West	Innovation Agency, Health Innovation Manchester	Yes	NW coast (Thurs, weekly) Manchester (Wed, weekly)	Pan region implementation	David Levy HIM- Jay Hamilton IA- Andrew Cooper, Katie Whittle	Bushra Alam John Caldwell Binita Kane Rosie Kaur
South East	Oxford Wessex Kent, Surrey and Sussex	Yes	SE region CO@h programme board (Mon /Wed /Fri three times/week) HIOW (Tue, weekly) WAHSN (Thu, weekly)	Pan region implementation	Vaughan Lewis Oxford- Paul Durrands, Katherine Edwards, Jo Murray Wessex- Nicola Bent, Kathy Wallis, Anna Wykes KSS- Jo Wookey, Obi Onyiah, Ursula Clarke	Nigel Watson, Karen Kirkham, Lalitha Iyer Caroline O'Keeffe, Matt Hammerton, Barbara Rushton, MIK
London	Imperial, UCL, Health Innovation Network	Yes		Pan region implementation	k.renno@nhs.net	
Midlands	East and West midlands AHSNs	Yes		Pan region implementation	Eddie.Alder@nottingham.ac.uk	
North East	NENC, YH	Yes		Pan region implementation	David Black Tony Roberts	
East of England	EoE	5.11, 5-6pm			melanie.iles@nhs.net Tara Marshall	
South West	Medical director meeting SWAHSN WEAHSN	30.10 4.11 4:30-6		?agreement to proceed	Mike Marsh	
Scotland		Yes			Alice.Carmichael@gov.scot	
Northern Ireland		TBA			Neal.Morgan@southerntrust.hscni.net	
Wales		3.11, 4:30-5:45			Alastair.Roeves@wales.nhs.uk	
National Q&A webinars		2.11, 2-3 4.11, 3-4				
NHS@home Pulse oximetry learning network			Every 2 weeks		Leoni	Catherine Dale, Tony Roberts, Jo Murray Tara Marshall, Samson Ifere, MIK

9 October 2020

To: ICS CEOs in South East England

Kent Surrey Sussex Academic Health Science Network

Wessex Academic Health Science Network

Oxford Academic Health Science Network

Dear Colleague

South East AHSN COVID Virtual Ward Collaborative

We are bringing you this update on the excellent progress in establishing the COVID Virtual Ward pilots throughout the South East. Early evaluation of the pilots has indicated that these COVID Virtual Ward pilots, which include the use of pulse oximeters, have shown significant patient and system benefits both in promoting the early recognition and escalation of patients with hypoxia, and the initiation of treatments. The data so far shows an extremely low, overall mortality rate of 1% in patients managed through the virtual ward (n= 1,800). We know that many systems have already recognised the value of early pre-hospital pulse oximetry in monitoring patients who may be at higher risk of poor COVID outcomes, such as BAME populations and people with certain comorbidities.

Our expectation is that expansion across the system will lead to demonstrable, large scale reductions in mortality rates, hospital length of stays, intensive care admission/ventilation and the incidence of severe long COVID symptoms.

You will already be aware that COVID Virtual Ward rollout is being considered as a NHSE/I national requirement. All Patient Safety Collaboratives, part of the Academic Health Science Networks (AHSNs), have been commissioned to support the current pilots and support scaling.

Last Friday, we agreed with Vaughan Lewis and Shahed Ahmad, that the three AHSNs across the South East region, will work with their local systems to provide scaling support in advance of national discussion/agreement on resourcing national roll-out. The three AHSNs have reprioritised their work to bring more resource in to accelerate COVID Virtual Wards over the next 6 weeks. We have set up a programme board to work collaboratively across the South East. The workstreams, aims and programme board representation are outlined in Annexes B, C and D. The contact details of the AHSN COVID Virtual Ward leads are in Annex E.

We are keen to ensure that the collective resource of the AHSNs is immediately and practically relevant to the work being undertaken to operationalise COVID Virtual Wards successfully. To that end, we anticipate providing local systems with implementation support including: information, webinars (to directly assist implementation, as part of a learning network and membership of a COVID Virtual Ward e forum) and training; as well as evaluation and communications support over the coming weeks. We are keen to get this balance of offer right. As such, please let us know how we could be most effective in supporting COVID Virtual Ward roll out within your system, eg, this may include part funding back fill for clinical leadership time or project manager time and support. We are keen to be as agile and flexible as possible to respond to local system needs.

The COVID Virtual Ward model must embed in local systems, and therefore working with ICPs and ICSs is essential to a successful strategy. The current status of the COVID Virtual Wards as far as we are aware is summarised in Annex A.

We would be grateful if you could:

- confirm that your system will implement COVID Virtual Ward. If you have adopted (or are planning to adopt) alternative arrangements, could you provide evidence that an equivalent operation to COVID Virtual Ward is up and running.
- Identify a) a nominated clinical lead and b) a management lead of COVID Virtual Wards for us to liaise with and to join the COVID Virtual Ward Programme Board
- fill in any gaps on our mapping of local COVID Virtual Ward provision, so that we can ensure information shared with NHSE and I is as complete and up to date as possible.

Given the current spread of COVID, as being witnessed nationally, we have a narrow window to get this right.

It would be good to get the two nominations, from your respective systems, in place by next week.

On behalf of Kent Surrey and Sussex, Oxford and Wessex AHSNs,

Yours sincerely

Annex B COVID Virtual Ward workstreams

1. Delivering clinical pathways workstreams
- Baselining current use of pulse oximeters and virtual ward models across the region and operating protocols already in place
- Developing and standardising the COVID Virtual Ward pathway in all settings and keeping under review in light of experience – **How To Guide** piloted
- Funding and resources particularly primary care
- QI plan
- Communication plan

2. Pulse oximeter logistics
- Distribution, retrieval and disinfection of pulse oximeters
- Mobilisation support to pathway adopters (including implementation guides)
- Operational support – including eg helpline
- Availability of pulse oximeters from national procurement
- QI plan
- Communication plan

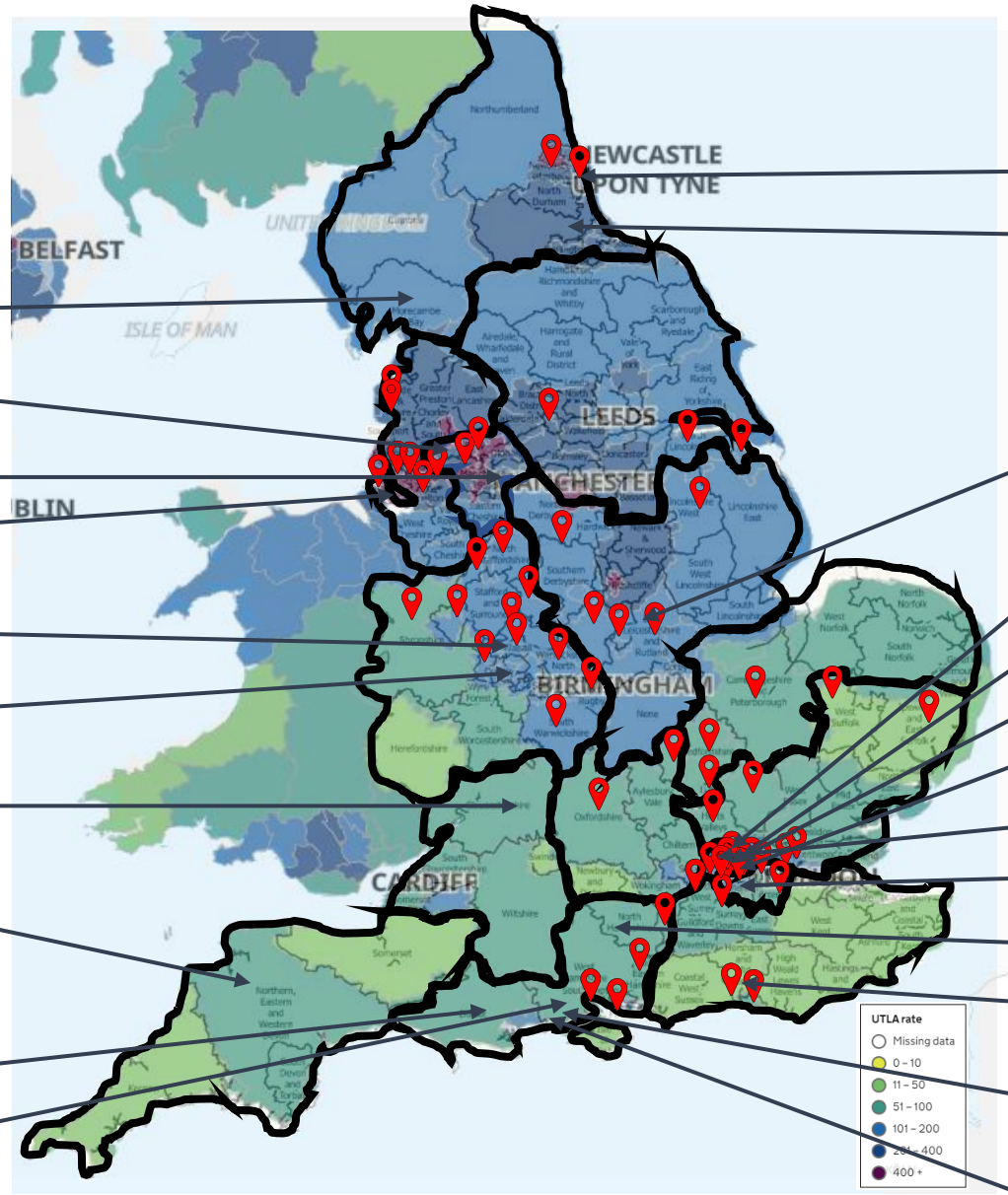
3. Information and training workstreams
- Training and development (Matt running virtual community of practice, etc)
- PPI – consideration for language needs. Access to patients through pilots
- Traditional and social media for broader understanding
- QI plan
- Communication plan including public and patient-facing communications

4. Measurement and evaluation workstreams
- Reporting progress and benefits
- Evaluations have been completed by UCL and the overall COVID mortality rates from both is 1%.
- Data capture from pilots learning from Imperial and UCL evaluation
- Data capture and insight from roll-outs
- We must get prospective data capture right, from the start. With appropriate DPIA docs all signed off from the beginning.
- Local learning webinars and responsive roadshows – sharing learning
- Research

5. Governance and policy
- Regional governance – phasing, risk management, resourcing, learning
- Interdependencies with other national/regional COVID workstreams

CCGs who have not requested pulse oximeters (Oct 14th) overlaid 7 day average covid-19 case per 100k pop and virtual ward sites

With thanks to Janine Lucking & the NatPatSip Team



Lancashire and South Cumbria STP

Wigan

Greater Manchester STP

Liverpool

Walsall Healthcare NHS Trust

Sandwell and West Birmingham NHS Trust

NHS Gloucestershire CCG

South West NHSEI Learning Disability and Autism

NHS Dorset CCG

Winchester City PCN

NHS South Tyneside CCG

NHS Tees Valley CCG

Leicestershire

Hillingdon

Bike Shed - Royal Free - Hampstead

London (Disability Homes)

NHS Hampstead CCG

Slough - The Frimley Health & Care ICS

Imperial College HC Trust

NHS North Hampshire CCG; CGH partnership

Sussex Model & Thinking

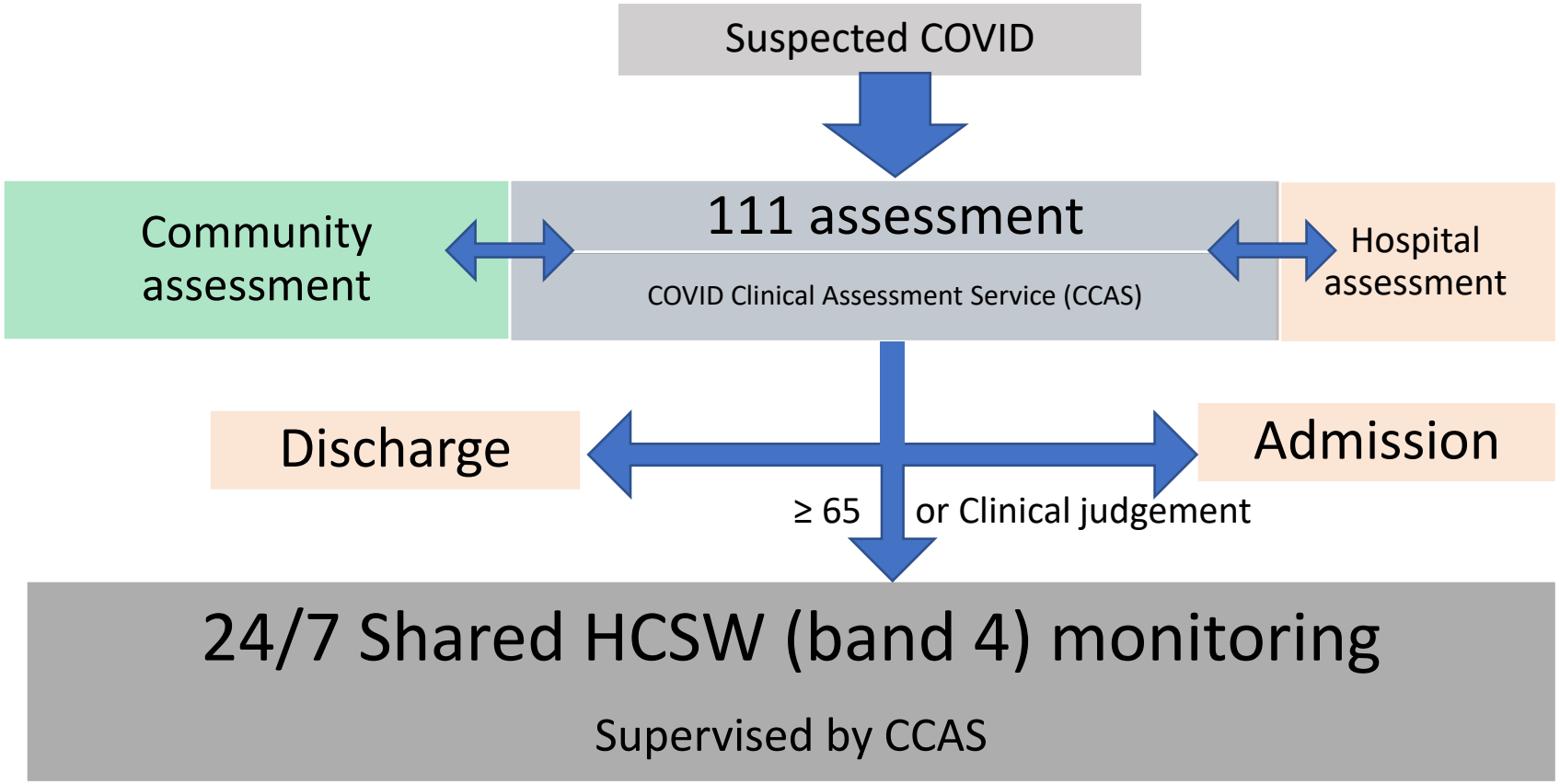
Royal Hampshire County Hospital - Department of Acute Medicine

Telemedicine Service for Care Homes across Hampshire and Isle of Wight

Last updated 19/10/20 4pm

https://coronavirus-staging.data.gov.uk/details/interactive-map

COVID Oximetry @home (Virtual Ward) by setting and time period



COVID Oximetry @home (Virtual Ward) DETERIORATION via 111 CCAS

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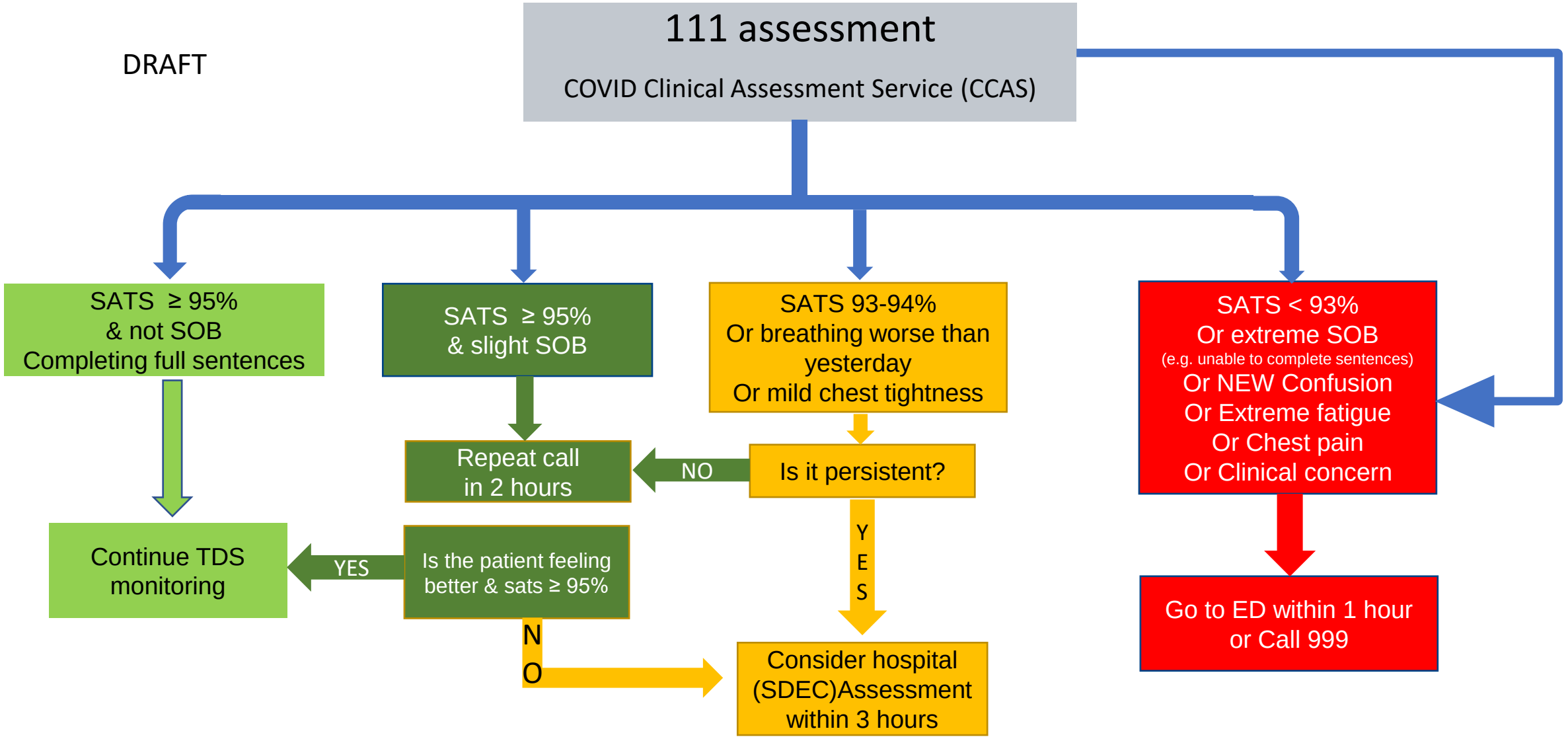


Rapid evaluation of remote home monitoring models during COVID-19 pandemic in England

23rd October 2020

RSET BRACE Rapid Evaluation Centre

FUNDED BY NIHR | National Institute for Health Research

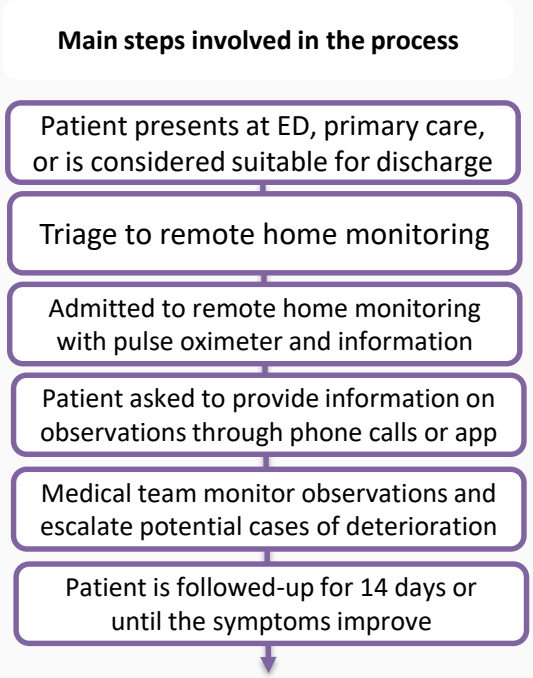
Rapid systematic review: findings

- Important to avoid framing the remote home monitoring model as an admission avoidance model; instead see it as an approach to **maintain patients safe in the right setting.**
- **Use of apps** for monitoring allowed the follow-up of a higher number of patients (compared to paper-based models), but some of the studies indicated that models based on **telephone calls were more inclusive** (i.e. including patients without internet access or technological literacy).
- **Patient/carer training** was identified as a key determining factor of the success of these models.
- **Coordination between primary and secondary care** facilitated implementation
- **Primary care led** models were considered in some cases as more adaptable to evolving patient and system needs, and easier to replicate in contexts with limited secondary care access and capacity.
- A few models have **integrated mental health and social care support** during and after patient monitoring, highlighting a wide range of patient needs.

Source: Vindrola et al (preprint): https://www.medrxiv.org/content/10.1101/2020.10.07.20208587v2

Workstream 2: Rapid empirical study of remote home monitoring models

- ***Aim***: monitor patients considered high-risk who can be safely be managed at home to: 1) avoid unnecessary hospital admissions (appropriate care in the appropriate place), and 2) escalate cases of deterioration at an earlier stage to avoid ventilation and ICU admission.



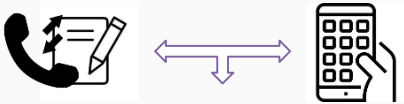
Remote home monitoring models: a typology

Pre-hospital

- **Primary care model** — Patient presents at primary care and is followed-up by primary care team
- **2ndary care model** — Patient presents at ED and is followed-up by secondary care team
- **Step-down care model** — Patient is discharged from hospital and is followed-up by secondary care team
- **Mixed (pre-hospital and step-down care model)** — Patient is onboarded from primary care, ED or after discharge from hospital and is followed-up by secondary care team

Phone call + paper-based system for patient recording (medical team uses spreadsheets or uploads information to EHR)

App for patient recording (medical team reviews observations submitted by patients on dashboard)



Model with both options for patients (phone calls or app)

Expected outcomes (as identified by sites)

All models
Minimize patient mortality
Early identification of cases of deterioration
Appropriateness of escalation
Positive patient and staff experience

Pre-admission models (primary care and ED)
Minimize attendance/reattendance to ED (as appropriate)
Increase cases that can be treated with non-invasive ventilation

Step-down models
Minimize readmission rate (to hospital and to ICU), as appropriate
Reduced length of stay (as appropriate)

Implementation: facilitators (1)

Key stakeholders

- Role of **influential, dedicated clinical leaders** in establishing
- Significant **support and 'buy in'** from senior management within acute trusts and across CCGs to set up virtual wards
- Some acute hospitals had **pathways in place** (i.e. ambulatory care) which supported the set up of virtual wards more quickly

Patients

- Developing paper and video **patient information** (as well as using digital platforms) was very useful to explain the concept of virtual wards and how to take measurements
- Positive **engagement from patients** and trust in clinical staff

Implementation: facilitators (2)

Staffing

- The majority of interventions can be delivered by nurses (both in primary and secondary care) with **minimal senior clinical oversight** (GPs, respiratory consultants)
- Many of the virtual wards **driven by collective spirit and goodwill** from NHS staff going above and beyond their day-to-day roles
- **Clear staff communication**
- Acute trust IT teams **willing to adapt** from perceived best practice protocols

Lessons learned

Patients and staff

- Patient experience was described as positive; staff described high levels of patient engagement
- Monitoring patients remotely perceived to reduce the risk to staff from contracting Covid-19
- No control group so not possible to compare effectiveness. Mortality rate (1%) appears low, especially versus other COVID-related mortality rates; but caution needs to be taken when drawing comparisons as populations, severity, etc., are likely to be different.

Personalised care

- Patient/carer training key to success
- App only model not appropriate for everyone – need paper/phone option
- Personalised support required to avoid patient anxiety and reach those who may be difficult to monitor remotely e.g. homeless people
- Information needs to be culturally appropriate and in different languages

Resourcing

- Site leads considering whether monitoring can be carried out by lower band roles (with senior-level input).
- Concern over sustainability of services – set up on discretionary input but require dedicated funding, clinical and admin/project management support
- 7DS a challenge; need to consider links with 111 and OOH
- Opportunity to flex services to demand and in due course to expand beyond COVID

Implementation

- Services established rapidly (in days/weeks, not months)
- Whether primary or secondary care led depends on where initiative arose and existing assets/services
- Clear referral criteria and processes needed to ensure service targeted at patients that can benefit most
- Timely access to pulse oximeters essential
- Data a challenge particularly for primary care led models and across primary and secondary care.
- Better integration with Test and Trace required to streamline referral process

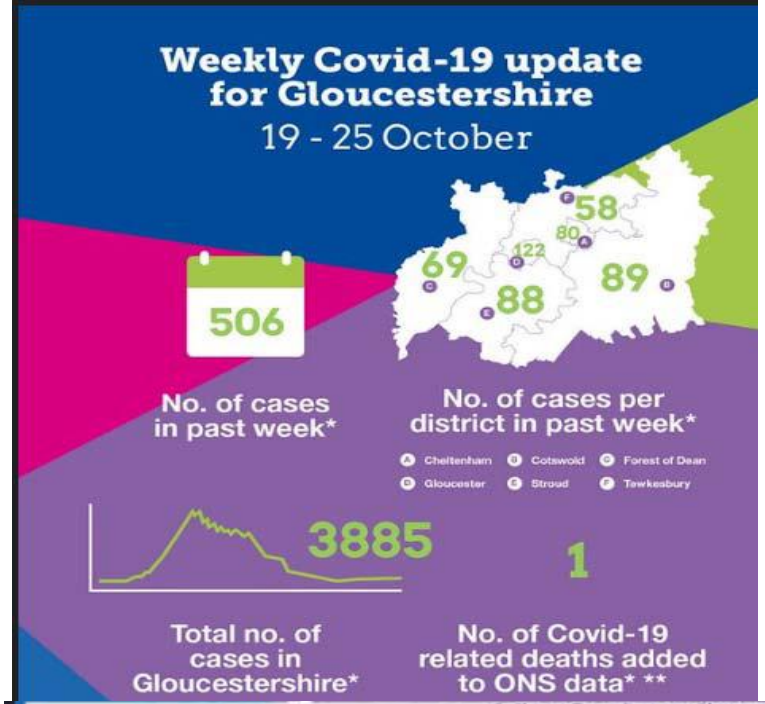
Learning from sites and support

- AHSN and Patient safety collaboratives support
- Wealth of information available- competencies, patient leaflets, pathways
- Sites can be set up with short timescales
- Digital developments will come
- System working together essential
- Don’t wait for perfection ….

Gloucestershire COVID Virtual Ward

Malcolm Gerald
GP and one of the Primary Care Leads for Covid Virtual Ward implementation

Kelly Matthews
Deputy Director Transformation (GCCG), Respiratory Programme Lead, One Glos ICS



One Gloucestershire
Transforming Care, Transforming Communities

Gloucestershire
Seven days to 23 October 2020

Total cases
465 ↑ 52 (12.6%)

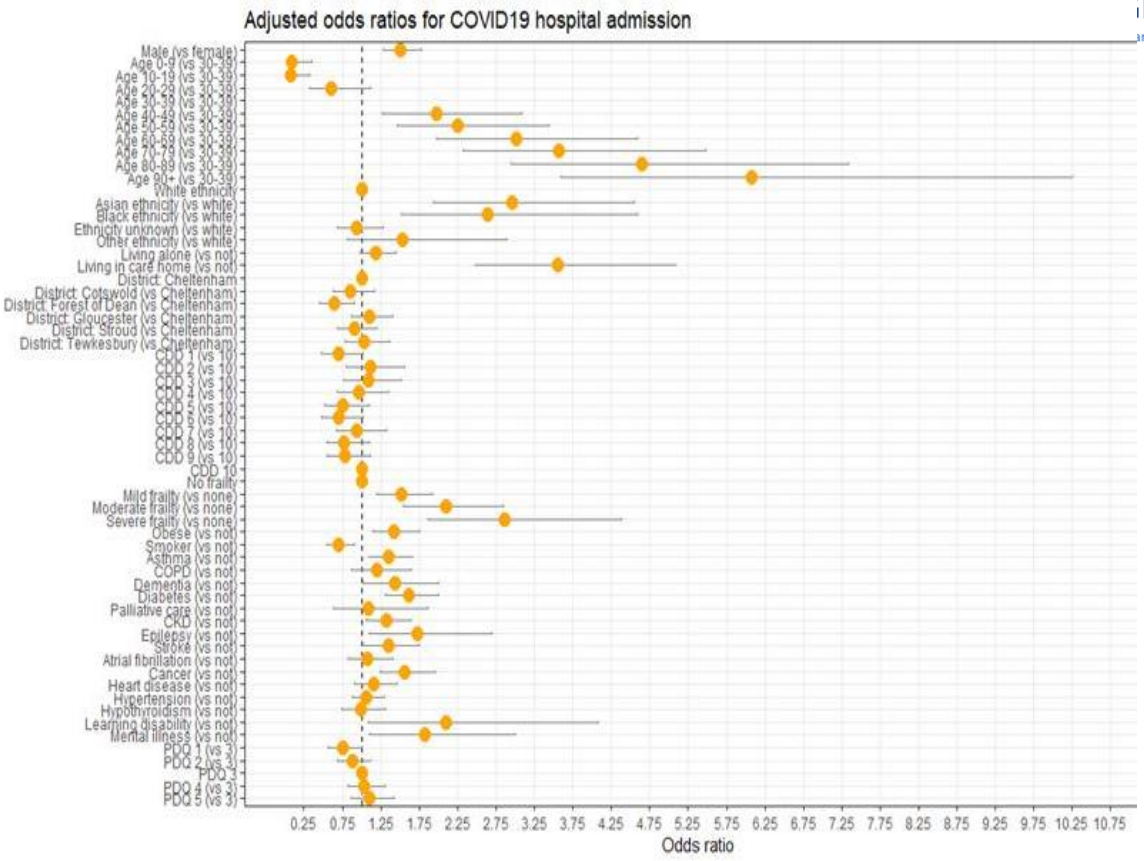
Rolling rate
73.0

Case rate compared to the UK average

Below average — Above average

Source: COVID-19 in Gloucestershire – weekly data summary (Week 43)

Risk factors



Overview of Virtual Ward

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- **AIM:** To identify patients who are showing signs of early deterioration in the community and where clinically appropriate escalate their care to provide better outcomes.
- **Ensure practices are aware of COVID +ve patients** – *proactive identification, early risk assessment*
- **Use pulse oximetry to reduce risk of silent hypoxia** – *timely management of escalation to include hospital admission if appropriate, aim to improve outcomes*
- **Proactive oversight of those at greatest risk deterioration** – *reduce inequalities, patients at right services, link to other services (e.g. CC@H), use of remote monitoring to support equity of access and reducing workforce demand*

Types of Covid Virtual Ward

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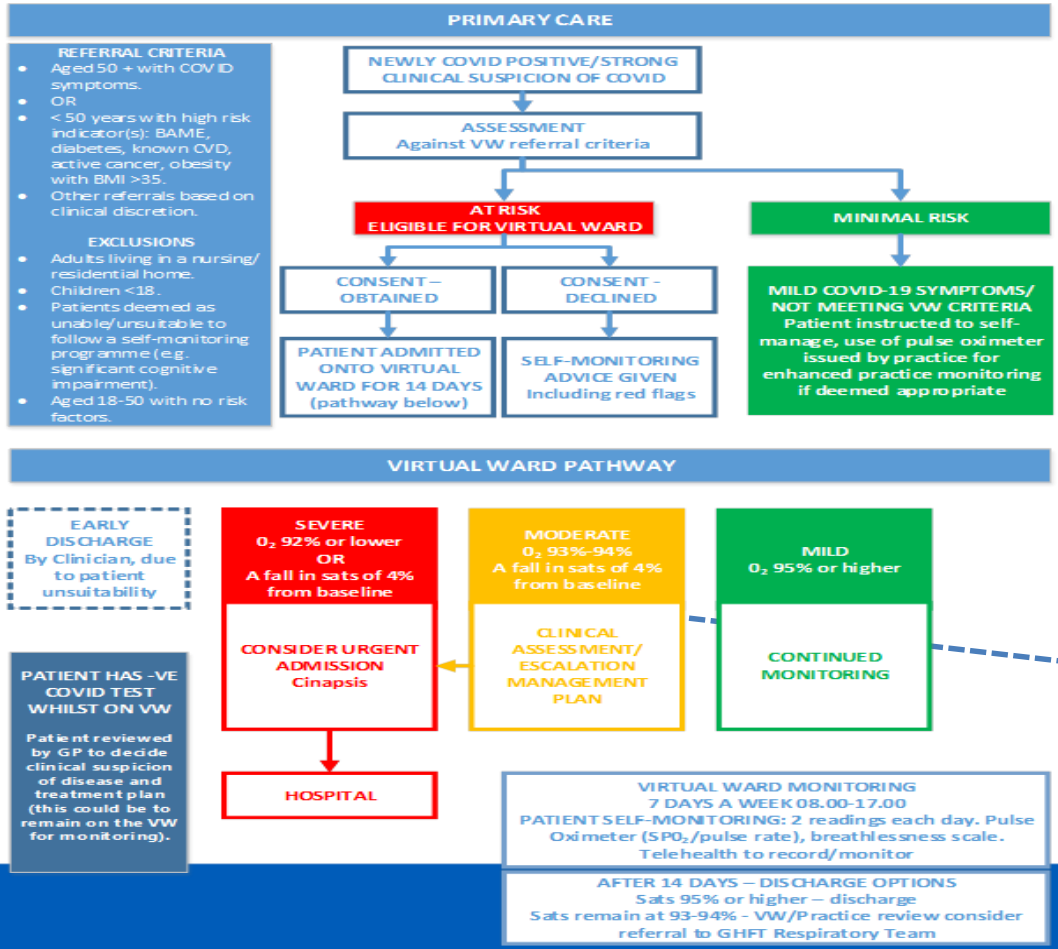
There are three general forms of virtual ward;

- **Home based monitoring to detect deterioration and facilitate early escalation of care**
- Care Home monitoring to ensure appropriate intervention and treatment
- Post-Acute Care to facilitate early discharge from inpatient admission and ensure subsequent deterioration is detected early

Gloucestershire Model

- Proactive identification and assessment
- Referral based on risk algorithm:
  - COVID Positive / Clinical Assessment = COVID
  - >=50 years
  - >18 years and <50 with one/more of the following risk factors – diabetes, BAME, known CVD, active Cancer, BMI > 35
- Referral available to central virtual ward, supported by remote monitoring and pulse oximeter (Baywater) – *see next slide for pathway*

Pathway



Countywide service provision will be available supported by remote monitoring via Baywater

Link to other services: Primary care, OOH, Rapid Response, Complex Care at Home, Social Prescribing, Other specialist teams

Patient Storyboard

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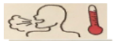
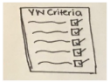
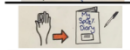
Patient storyboard & tasks	In-practice	Practice/PCN
 1. Patient develops COVID-19 symptoms.  2. Patient arranges to receive an antigen test. 3. Patient has antigen test.	**Contact from symptomatic patient;** • Practice signposts patient to local COVID testing site.	N/a – pre Virtual Ward
 4. Patient received test result & is COVID-19 positive. 5. Patient starts self-isolation.	**Patient identification;** • Daily clinical system searches are completed to identify patient newly diagnosed with COVID-19.	N/a – pre Virtual Ward
 6. Patient risk assessment against Virtual Ward (VW) Criteria (done without patient's knowledge in practice)	**Patient risk assessment;** • Practice staff risk assess COVID patients against VW risk criteria. **Ineligible patients;** • Practice staff contact patient & advise them to contact practice if they symptoms worsen. **Eligible patients;** • Practice staff contact patient to gain consent to refer them to the VW.	N/a – pre Virtual Ward
 7. Eligible Patient contacted by Practice staff for referral consent; a) Patient **doesn't** consent to be being referred to the VW (self mgt advice given). Or b) Patient **does** consent to be being referred to the VW.	**Patient refusal;** • Practice staff inform patient to contact practice if they symptoms worsen. **Patient consenting;** • Practice staff send patient referral to VW • Completed referral form is entered to patient records.	N/a – pre Virtual Ward
 8. Patient is admitted VW & receives equipment & resources. 9. Patient is contact by VW staff member & is inducted to the ward.		**Patient admission to VW;** • Patient referral is received. • VW clinician to contact patient to arrange equipment delivery, risk stratify to decide how often proactive contact is made over the 14 days & induct them to the VW.
 10. Patient monitors their SpO_2 % four times a day for 14 days.		**Daily patient monitoring;** • VW clinician reviews patient self-reported observations once a day. • VW contact made at agreed points over the 14 days.
 11. Patient outcomes; a) Patient doesn't deteriorate & is discharge from ward. Or b) Patient deteriorates & admitted to hospital. Or c) Patient discharges themselves from ward early & contacts their practice if symptoms worsen		**Patient remains stable;** • VW clinician assesses whether patient can be discharged at day 14. • Discharge process if followed. **Patient deteriorates;** • VW clinician coordinates Secondary Care escalation/A&G by Cinapsis. • Patient admitted to hospital & VW discharge process is followed. **Early patient discharge;** • VW clinician contacts patient to advise. • If patient still wishes to be discharged, discharge process is followed.
 12. Patient is contact by VW staff member & is informed for their discharge. 13. Patient returns the equipment to the VW.	**VW discharge notice;** • Practice staff adds VW discharge notice to patient record.	**Patient discharge process;** • VW staff arranges for equipment return. • VW staff send patient & their GP discharge notice. • Disinfection process followed on receipt of equipment. • Self management advice post-COVID issued

COVID Virtual Ward - The offer to Primary Care and their populations

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- **Gloucestershire COVID Virtual Ward Product** – *ready made system & templates for primary care to adopt/adapt so it works for your daily routines.*
- **Pulse Oximeters** – *mobilising ready to come out to practices.*
- **Options for self-monitoring** – *Active virtual ward platform from Baywater with readings submitted directly or ability to contact individuals.*
- **Potential to reduce impact on Practice Time** – *ability to refer to centralised model for VW oversight.*
- **Consultant support can flex to be available for you by way of MDTs**
- **Equitable offer, linked into countywide pathways with local adaptation where feasible**

COVID Virtual Ward – Scenario Planning

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It is impossible at this stage to make an assessment what the demand in the virtual ward will be. The high level estimate scenario is shown below:

- Circa. 5300 patients will come through the ward over the next 5 months.
- The maximum number on the ward will be 800, average 550 – 600 patients
- Daily admissions range from 14 – 56
- County prevalence of 60 – 200, with 30% being referred onto virtual ward.
- 5% – 10% will require active follow up

Example scenarios for Virtual Ward (VW)	Example scenarios not appropriate for VW
• 80yo man with moderate COPD, has a good quality of life, resting oxygen sats 98% • 55yo BAME usually well man who has pre-diabetes and BMI 35 *Proposed supported self management:* • 48yo well man with no co-morbidities and BMI of 27	• 70yo lady slowly deteriorating lung fibrosis, deemed palliative from respiratory point of view, does not want hospital admission. Resting oxygen sats 94% • 80yo frail man who lives in a nursing home with heart failure, CKD IV, diet controlled diabetes, resting sats 98% • 15 year old with Asthma

Benefits

The benefits we are aiming to achieve with virtual ward include:

- *Appropriate, timely admissions – not admission avoidance*
- *Reduced bed days and ITU admissions due to Covid (as a proportion of prevalence)*
- *Reduce the inequality gap in context of covid*
- *Improve patient outcomes*
- *Reduce unplanned demand on primary care through a supported model*
- *Support people to feel confident in managing at home*

We are linked into a national roll out plan, and will further develop detailed KPIs in line with wave 1 learning

Learning to Date

A PDSA completed within one PCN produced the following learning:

- 15 patients admitted onto virtual ward (limited referral criteria, 53% of total cases)
- Invest time in the proactive identification and assessment of patients – consent conversation with GP fundamental
- Clear induction onto ward required
- The remote monitoring platform that is easy to use can support offering an accessible ward, aiming to reduce time impact locally:
  - Missed readings (on average readings were inconsistent from day 9)
  - False amber results can impact on clinical time, particularly from heart rate escalations
- Patient feedback being compiled, initial results from 4 patients positive with themes including: patients feeling supported, confident what they expected whilst on the ward and whilst some had ongoing symptoms feeling confident managing recovery post discharge.
- At point of discharge all patients reported some ongoing symptoms (dry cough and/or fatigue)

Timeline

- PCN PDSA completed during October.
- Phased roll out commencing Monday 9th November

Work underway:

- SOP and service specifications drafted
- Contractual frameworks being put in place for 2 providers (Platform and Clinical Oversight)
- Practice engagement underway,
- Patient facing materials developed (following testing with patient representatives)
- Evaluation approach under development
- All pathway materials for primary care being finalised

With Thanks to:
Project Team Members (Hein Le Roux, Malcolm Gerald, Charlie Sharp, Andrew White, Megan Isaac, Kate Emsley, Megan Davis, Joy Lavender).
Remote monitoring, Informatics and Digital colleagues (Joe Blackford, Joe Green, Lee Tarbuck, Una Rice, David Miskell, Remi Pacifico, Helen Ballinger)
Colleagues in Aspen PCN, Churchdown, Baywater, G-Doc
Covid Steering Group Members – Including colleagues from GHNHSFT, GHC, GCCG, Public Health, Voluntary Sector.
Collaborative Learning Matt Inada Kim, Future NHS Collaborative, AHSN, NHSX, NHSE/I

Discussion & Questions

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The AHSN offer

Anne Pullyblank – Medical Director, West of England AHSN

- *Phase 1: Preparing the System (early November 2020)*

- Support and co-ordinate from a regional perspective, and support regions/systems to understand the programme.

- *Phase 2: Rapid national implementation (November 2020)*

- Support regional co-ordination of implementation, using Quality Improvement support, capture and share learning and insights

- *Phase 3: Ongoing regional and local system support for implementation, refinement, scale up and sustainability (Dec 20 – March 21)*

- National support for key multi-region processes – Standardised approach to baselining and population analysis, and central approach to measurement
- On going implementation support
- Collation of insights and learning from Phase 1 & 2

Accessing the toolkit

Anne Pullyblank

- The AHSN Network have convened a rapid learning and sharing network to support the pilot sites, and the development of a COVID virtual ward toolkit available on the FutureNHS collaboration platform.
- If you currently have access to this platform, log on and click on 'My Workspaces', then 'Find a Workspace' and search for 'National Patient Deterioration Forum'. Once access is granted, click on the 'COVID 19 Virtual Ward Toolkit'.
- For those not on FutureNHS, you can register if you have an NHS email address. Register for an account here (using your NHS email address) and request access to the National Patient Deterioration Forum. Once access is granted, click on the link in the forum for COVID 19 Virtual Ward Toolkit.

Discussion and Q&A

Chair: Alison Tavaré - Primary Care Clinical Lead, AHSN
Moderators: Anne Pullyblank / Rebecca Whitting
Panel:

- Matt Inada Kim
- Karen Kirkham
- Kelly Matthews
- Malcolm Gerald
- Janina Cross
- Shanil Mantri

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Next steps

Anita Randon

- Sign up to the FutureNHS platform
- Complete post event survey https://www.surveymonkey.co.uk/r/VX6LHP8
- Connect with your local AHSN and we can put you in touch with your local lead

Connect with us

South West Academic Health Science Network

patientsafety@swahsn.com
www.swahsn.com
@SW_AHSN

West of England Academic Health Science Network

ps@weahsn.net
www.weahsn.net
@WEAHSN

Additional information

- The following slides will instruct you on how to find the toolkit

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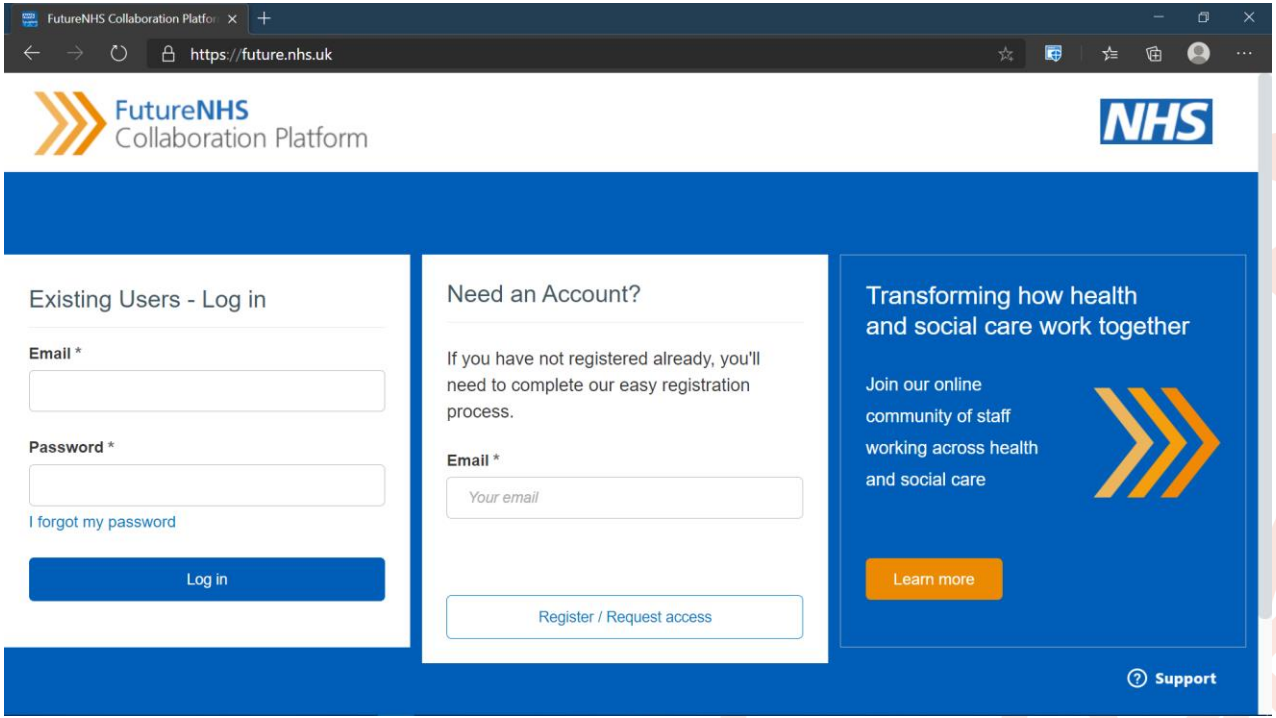
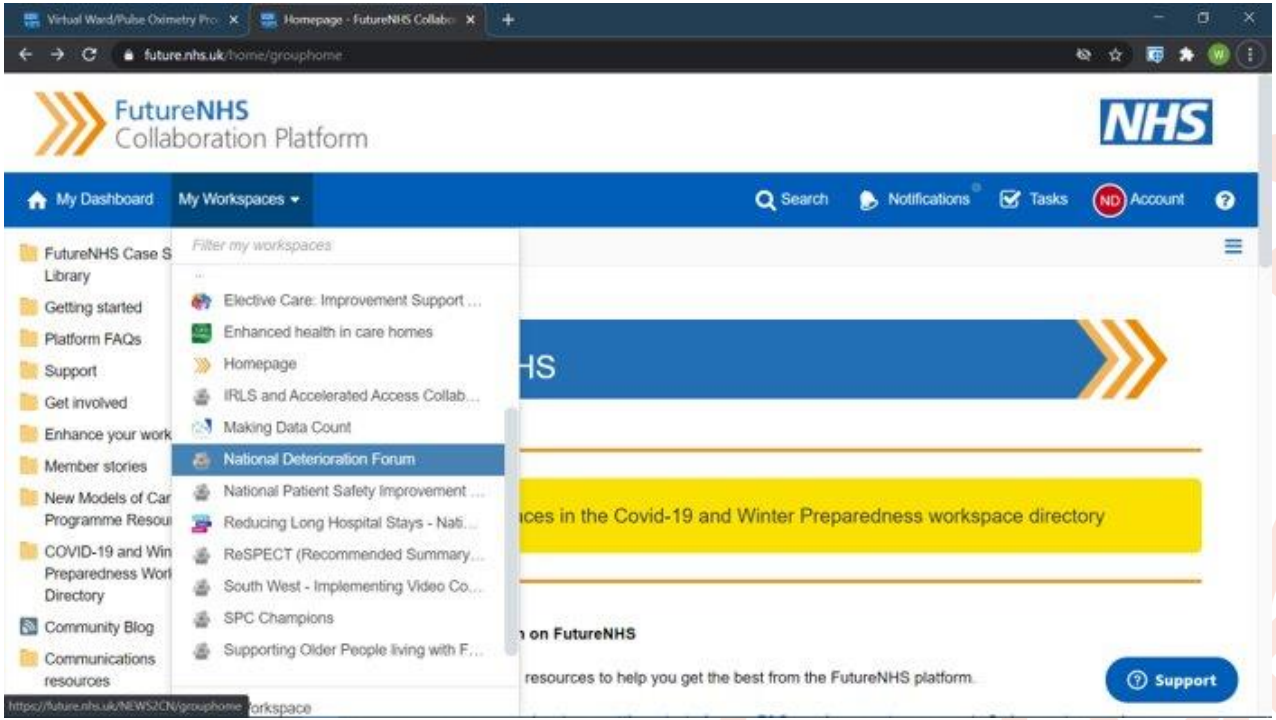
https://future.nhs.uk/



Workspaces > National Deterioration Forum



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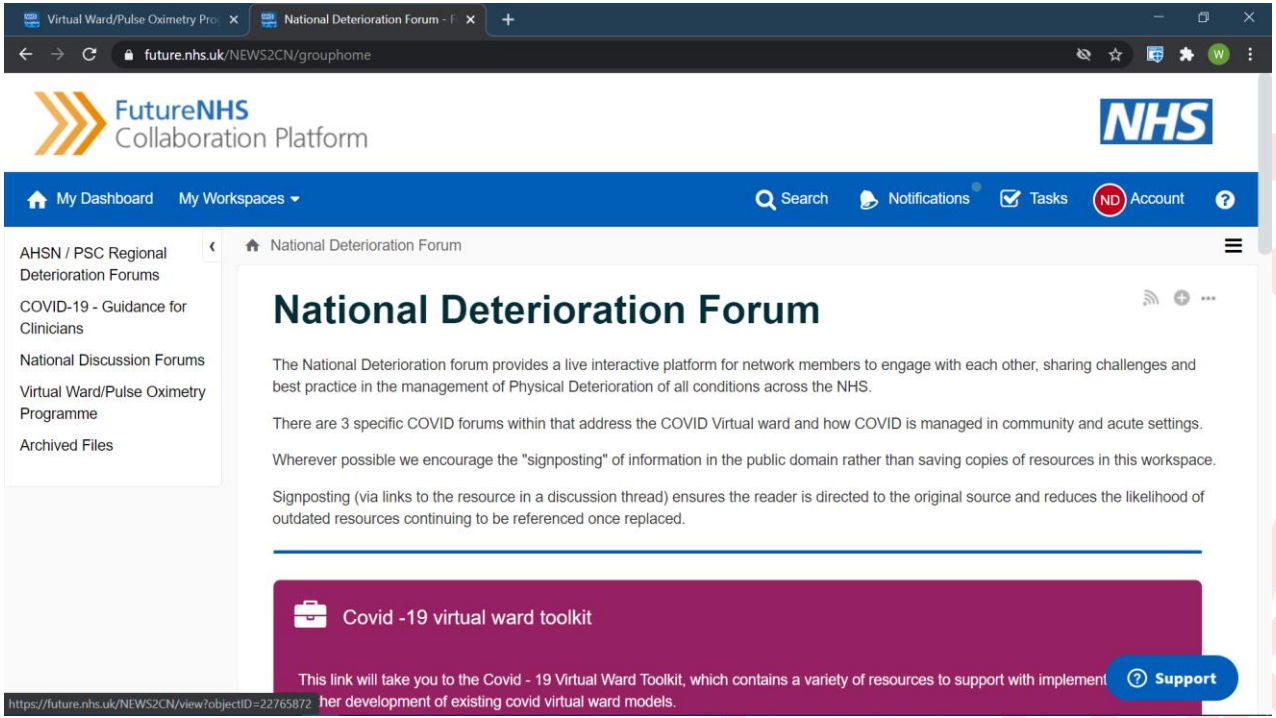
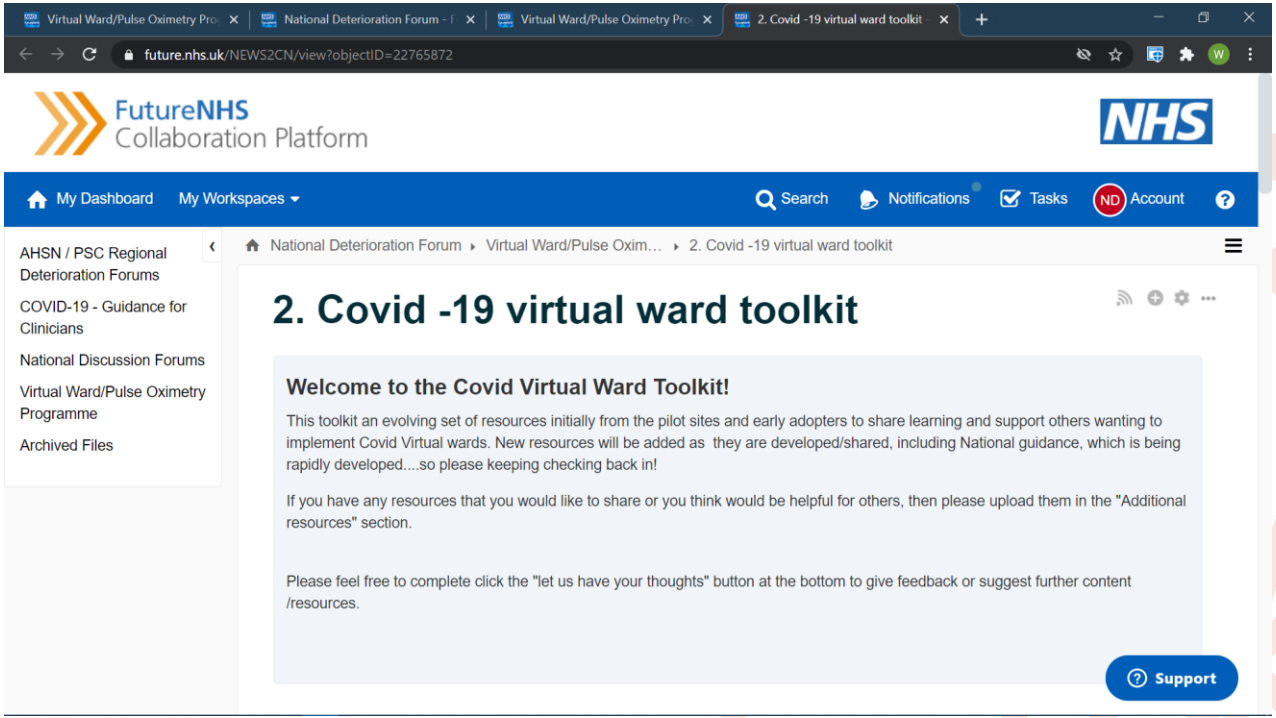
Click on the COVID-19 virtual ward toolkit




Virtual Ward/Pulse Oximetry Pro
National Deterioration Forum - F
Virtual Ward/Pulse Oximetry Pro
2. Covid -19 virtual ward toolkit
future.nhs.uk/NEWS2CN/view?objectID=22765872
FutureNHS
Collaboration Platform
NHS
My Dashboard
My Workspaces
Search
Notifications
Tasks
ND
Account
AHSN / PSC Regional Deterioration Forums
COVID-19 - Guidance for Clinicians
National Discussion Forums
Virtual Ward/Pulse Oximetry Programme
Archived Files
National Deterioration Forum
Virtual Ward/Pulse Oxim…
2. Covid -19 virtual ward toolkit
2. Covid -19 virtual ward toolkit
Welcome to the Covid Virtual Ward Toolkit!
This toolkit an evolving set of resources initially from the pilot sites and early adopters to share learning and support others wanting to implement Covid Virtual wards. New resources will be added as they are developed/shared, including National guidance, which is being rapidly developed....so please keeping checking back in!
If you have any resources that you would like to share or you think would be helpful for others, then please upload them in the "Additional resources" section.
Please feel free to complete click the "let us have your thoughts" button at the bottom to give feedback or suggest further content /resources.
Support

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Section 1 - What is a COVID Virtual Ward and why should I set one up?

Includes national guidance, introductory webinars, and examples of Covid-19 virtual ward models and the initial evaluation report of pilot sites.

Section 2 – 6 steps to setting up a COVID Virtual Ward

Provides 6 key steps that will support a team to set up a virtual ward.
1. Engage the local pathway through a Patient Safety Collaborative
2. Form a stakeholder delivery group
3. Design and agree your model; this includes example standard operating procedures
4. Develop your implementation strategy and implement it; this includes examples of system wide strategies
5. Request pulse oximeters early; guidance on where to get pulse oximeters and how to manage
6. Developing a local learning system

Section 3 – How will I know if my COVID Virtual Ward is a success?

This section provides information about measurement, how to guides and examples including patient experience.

Section 4 – How do I engage patients in my COVID Virtual Ward?

This section includes example communication plans, patient information leaflets and videos, including multilingual versions

Section 5 – Additional Resources

This section contains additional resources that will help you set up your virtual ward. The section includes top tips, case stories, training videos and e-learning to support the management of deterioration in care home and domiciliary care settings, e.g. Restore2TM

NHSX -Innovation Collaborative - Digital Health

Information and links to the NHSX Innovation Collaborative - Digital Health workspace on NHS futures, to support any digital options relating to Virtual Covid Wards

Let us know your thoughts on the toolkit!

Please let us know how useful you have found this toolkit, if you found the information you need or if there is anything you think would be beneficial to add - it will only take a minute and will help with further development.
Thank you!

Support

Additional information

- The following slides outline information about the RESTORE2 and RESTORE2 Mini tools and training resources

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RESTORE2

Recognise Early Soft Signs, Take Observations, Respond, Escalate

Adult Physiological Observation & Escalation Chart

Full Name:

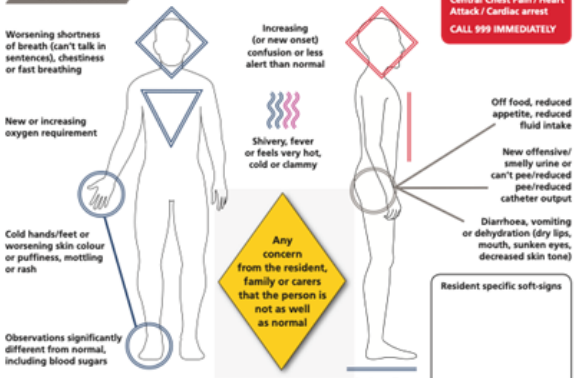
NHS No.

DOB: Room No.

Does Your Resident Have Soft Signs of Possible Deterioration

NEW ONSET OF:
- Stroke (facial / arm weakness, speech problems)
- Central Chest Pain / Heart Attack / Cardiac arrest

CALL 999 IMMEDIATELY



If you answer YES to any of these triggers, your resident is at risk of deterioration

RECOGNISE SOFT SIGNS OF POSSIBLE DETERIORATION → TAKE COMPLETE SET OF OBSERVATIONS AND CALCULATE NEWS → ESCALATE USING ESCALATION TOOL AND SBARD COMMUNICATION

RESTORE2™ mini

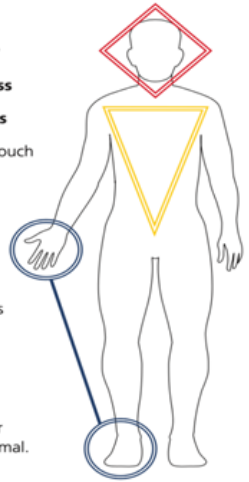
Recognise Early Soft Signs, Take Observations, Respond, Escalate

Ask your resident – how are you today?

Does your resident show any of the following **'soft signs'** of deterioration?

- Increasing **breathlessness** or **chestiness**
- Change in **usual drinking / diet habits**
- A **shivery fever** – feel **hot or cold** to touch
- Reduced mobility – **'off legs'** / less co-ordinated
- New or increased confusion/ agitation / anxiety / pain
- Changes to usual level of **alertness / consciousness / sleeping** more or less
- **'Can't pee'** or **'no pee'**, change in pee appearance
- **Diarrhoea, vomiting, dehydration**

Any **concerns** from the resident / family or carers that the person is not as well as normal.



If YES to one or more of these triggers – take action!

Get your message across

Raise the Alert within your home e.g. to a senior carer, registered nurse or manager.

If possible, **record the observations** using a **NEWS2** based system.

Report your concerns to a health care professional e.g. Nurse/GP/GP HUB/111/999 **using the SBARD Structured Communication Tool.**

		Key prompts / decisions
S	**Situation** e.g. what's happened? How are they? NEWS2 score if available	
B	**Background** e.g. what is their normal, how have they changed?	
A	**Assessment** e.g. what have you observed / done?	
R	**Recommendation** 'I need you to...'	
D	**Decision** what have you agreed? (including any Treatment Escalation Plan & further observations)	

Don't ignore your 'gut feeling' about what you know and see. Give any immediate care to keep the person safe and comfortable.

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RESTORE2 is free and you can access training and support for your area

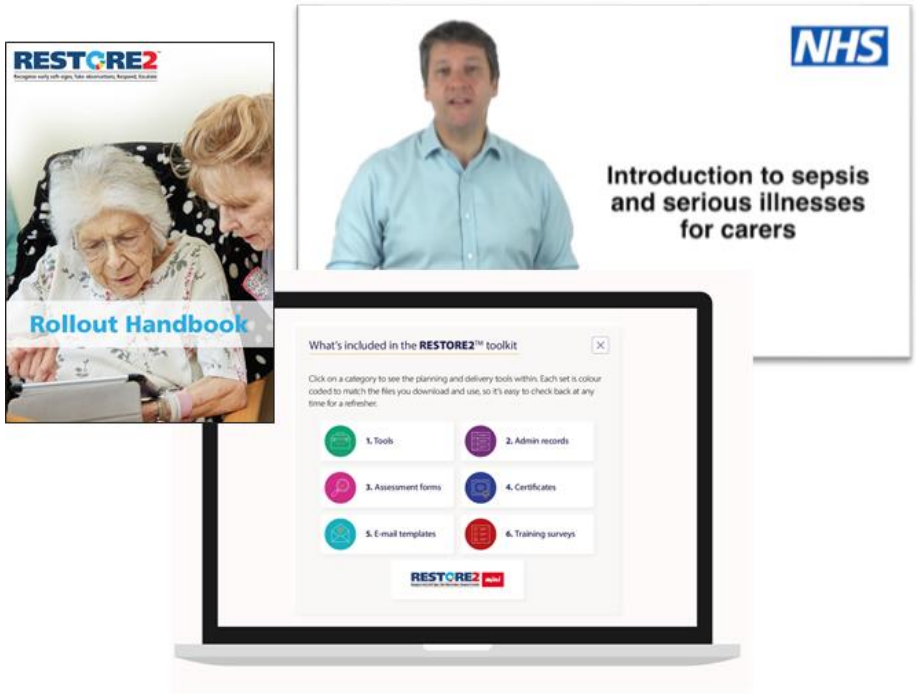
- Before using, you must ensure your staff have received appropriate training to use the tool safely. This includes (as a minimum) staff having completed physical observation training and competencies as well as online training in NEWS2 and deterioration and the organisation having processes in place to maintain and calibrate observation equipment. We strongly recommend that you frequently audit compliance and outcomes when using RESTORE2™. The organisation implementing and using RESTORE2™ has sole responsibility for ensure its appropriate use.
- There are a variety of free online training and resources available to help your team implement and use RESTORE2 and RESTORE2*mini* and we are also able to provide advice and guidance about these tools, virtual (video-based) staff training and other related issues including for example Soft Signs, the National Early Warning Score (NEWS2), the SBARD communication tool and End of Life considerations.

Contact details for your area:

- West of England: ps@weahsn.net
- Wessex: enquiries.carehomes@wessexahsn.net
- South West: patientsafety@swahsn.com

Resources for training and implementation

- RESTORE2™ approved resources from West Hampshire CCG
- RESTORE2™ training resources from Wessex Patient Safety Collaborative
- Short videos on Sepsis and Deterioration for Carers from Health Education England
- RESTORE2TM toolkit from South West Academic Health Science Network



Training videos for care providers and patients

- Video for care providers https://youtu.be/QabKghrtXps (West of England AHSN, Wessex AHSN and Health Education England part of a suite including soft signs and physical observations)
- Animation on how to use pulse oximeters and patient diary https://youtu.be/jAeZVIAQ2sQ (Matthew Hammerton and Health Education England)

Information in other languages (with thanks to Lalitha Iyer and the Slough team)

- Hindi: https://www.youtube.com/watch?v=e1ipiJY-zwk
- Punjabi: https://www.youtube.com/watch?v=wU5V6wVEHoM
- Urdu: https://www.youtube.com/watch?v=rkGRRLlumW4
- Polish: https://www.youtube.com/watch?v=Lkd-BNeMvLs
- Bangladeshi: https://youtu.be/Z_y7WhKi6ZE
- Somali: https://youtu.be/qF7OuGuxqjA
- Tamil: https://youtu.be/LA7dVHwwz2k
- English: https://www.youtube.com/watch?v=nx27Ck7xOgo