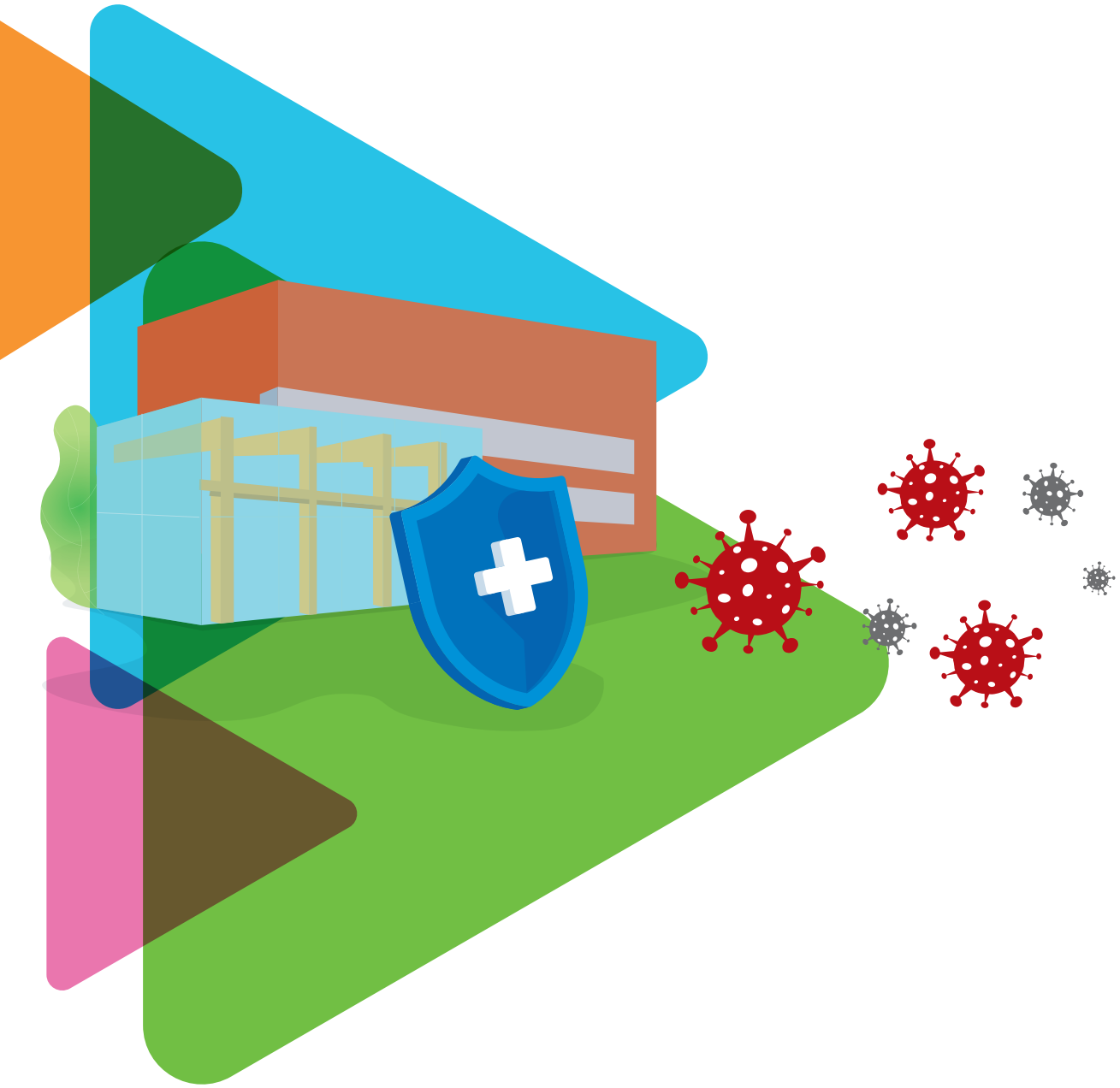
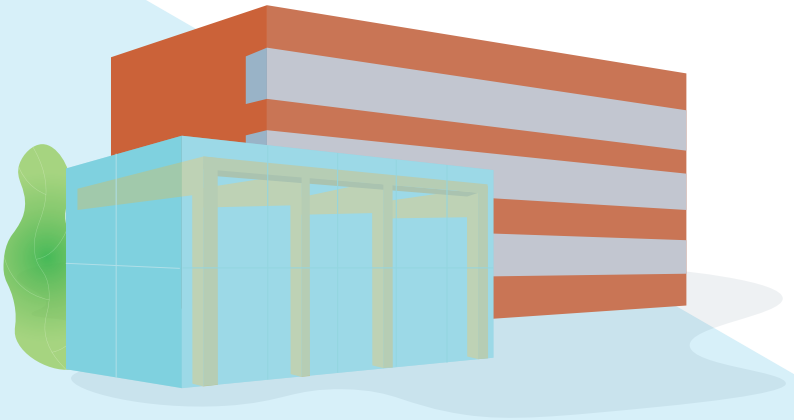
together we will

NHS
Wirral University Teaching Hospital
NHS Foundation Trust



OUR COVID-19 RESPONSE



Introduction

The COVID-19 pandemic in the United Kingdom is part of the worldwide pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

The virus reached the UK in late January 2020.

This report outlines the Wirral University Teaching Hospital NHS Foundation Trust (WUTH) response to the pandemic, aimed at providing optimum safety to both patient and staff.

The report is structured to provide an overview of response along the timeline of the past 12 months, with topic specific detail.

Contents

Key Timeline

31/01/20
Wuhan guests repatriated to the UK

23/03/20
First National lockdown

11/04/20
WUTH 1st Peak
131 inpatients

01/07/20
Restart of non-urgent activities

20/10/20
WUTH 2nd Peak
87 inpatients

08/12/20
Opening of
Clatterbridge
Vaccination
Centre

22/01/21
WUTH 3rd Peak
279 inpatients

01/07/21
Restart of
non-urgent
activities

Wuhan and 'Diamond Princess' Quarantine

At Wirral University Teaching Hospital NHS Foundation Trust (WUTH), the impact of COVID-19 was realised sooner than the clinical impact on the NHS. In January 2020, the Arrowe Park site was designated as the country's first quarantine unit to host British Citizens repatriated from Wuhan in China where the virus was first detected.

The initial arrival group of guests were quarantined in the accommodation block on the Arrowe Park Hospital site for two weeks.

This was followed by a further group of guests repatriated from the 'Diamond Princess' cruise liner from Japan, who were similarly quarantined for two weeks.

The quarantine situation resulted in media interest nationally and internationally, as well as a huge amount of coordination from WUTH staff. All guests left with a clean bill of health.

In early March 2020, in response to the spread of the COVID-19 virus across the world, the NHS declared a Level 4 incident. As such, the NHS was placed in a "command and control" environment, where all activity was directed from NHS England / NHS Improvement (NHSE/I), NHSE / NHSI Incident Management Team.

At Regional and Trust level, incident command structures were established to co-ordinate the response to the pandemic and oversee all daily functions.

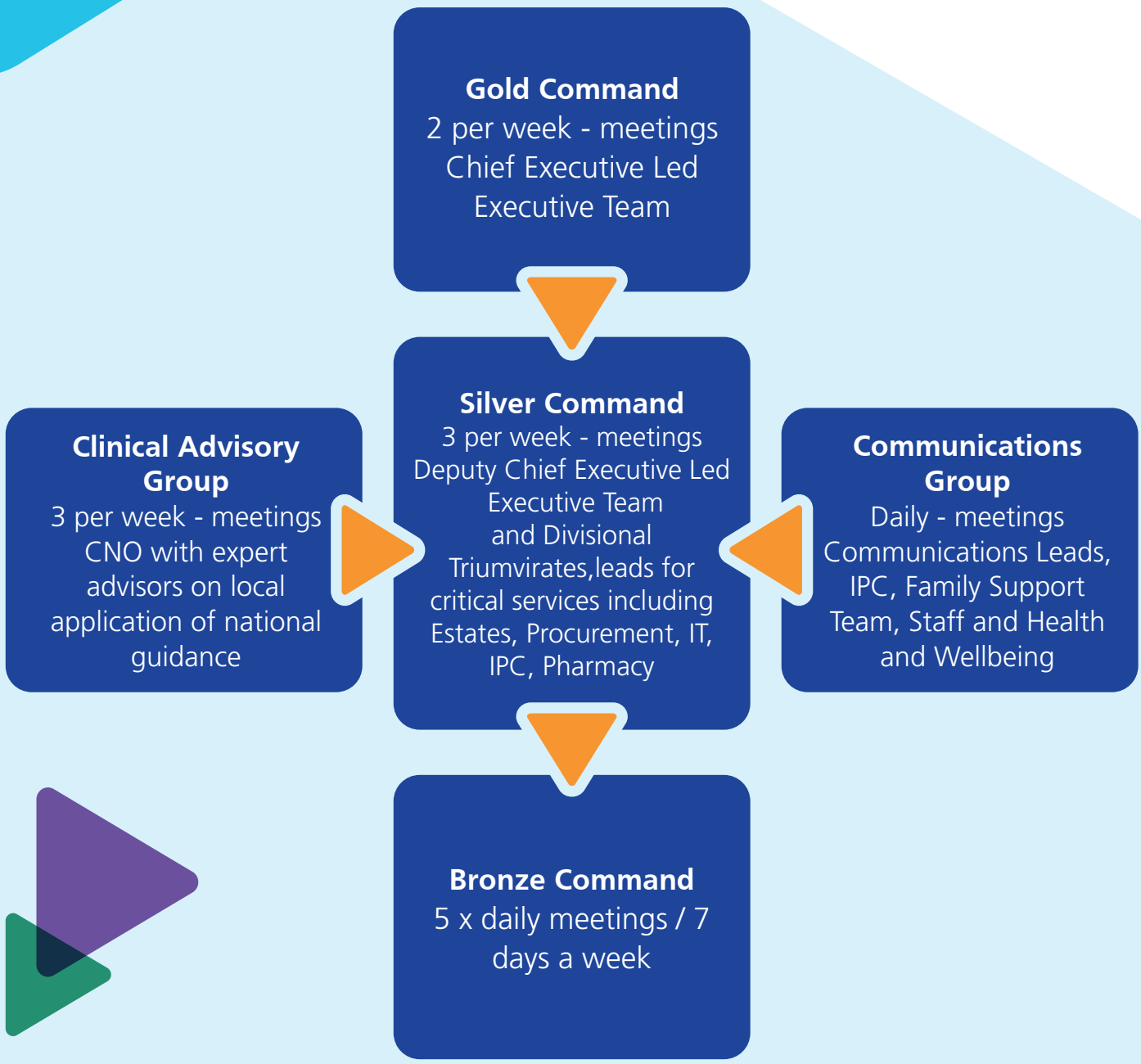
The repatriation of British Citizens from Wuhan was similarly managed through incident control structures. This had provided a great deal of insight and experience for the Trust.

The command structure employed by the Trust was adapted from that of the Wuhan incident.

The structure has included the centralisation of governance, the development and delivery of a COVID-19 clinical models, the reconfiguration of wards and beds, the expansion of staff wellbeing systems, the reduction of elective surgery, and then the restart of elective surgery, and transformation of outpatient services.

National Lockdown: Strategic response

National Lockdown: Command and Control Structure



The Command Groups and Advisory Groups increased frequency dependent on need at the time and met daily, including weekends for Bronze and Silver Command, during the 3rd wave

To support the system response to COVID-19, a further Chief Executive's Strategic Command Call takes place throughout the week. It was chaired by the Chief Executive Officer, Wirral Healthcare Communications (WHCC) and NHS Wirral Clinical Commissioning Group (CCG), in their capacity as Strategic Commander for the Wirral Health and Care System.

This meeting ensured that the system was linked to developments in regard to the NHS, Wirral Council and Merseyside Local Resilience Forum (LRF) at a strategic level and provided direction to the System Health and Social Care Cell.

National Lockdown #2

In line with national guidance, all non-urgent elective activity, as well as all outpatient activity, was postponed.

Visiting restrictions were implemented.

We moved to remote working for 600 staff.

Social distancing signage, floor markers and screens were placed trust-wide.

Environmental and individual staff health risk assessments were initiated.

Health and wellbeing hubs were established to offer practical and emotional support for staff.

The Family Support Team was created to keep patients connected with their families.

Rapid adaptations to the clinical model were implemented to provide an environment suited to the clinical needs of patient and safety for those staff providing direct patient care. Wards were re-designated according to COVID status rather than pure specialty management and infection protection controls were tailored stringently to the environmental purpose.

The initial designation of wards was as below:

Red Wards	COVID-19 confirmed
Amber Wards	High suspicion of COVID-19
Purple Wards	Step-down medically fit positive patients
Green Wards	Low suspicion of COVID-19
Silver Wards	No clinical suspicion of COVID-19 infection Elective only

The medical staffing model for the wards was adapted to ensure additional Consultant presence on each ward every day. This included Surgical Consultants and junior medial staff 'buddied up' with physicians to improved overall cover and provide extra resilience.

The designation of base wards was continually reviewed during the course of the pandemic. As access to greater and faster testing became available, the necessity for purple and amber wards was removed or reduced.

Wave 1: Clinical and Operational Model

Wave 1: Clinical and Operational Model #2

Emergency Medicine Department

The Emergency Medicine Department (ED) implemented a number of changes to manage COVID and non-COVID demands, as well as structural changes and layout:

- The ED layout was split into COVID-19 and Non-COVID-19 areas
- The minor injuries unit was relocated to the fracture clinic site in the outpatients department for all Non-COVID-19 minor injuries (Supported by the Trauma and Orthopaedics clinical team)
- The creation of a "Respiratory Receiving Unit (RRU)" outside of the ED footprint to fast-track patients clinically suspected as having COVID-19 infection
- Moved from the traditional paper based 'Casualty Card' system to Electronic Patient Record (EPR)
- Extensive physical modifications across the clinical footprint and waiting rooms to provide increased infection protection control (IPC) management

Critical Care

In line with national guidance and modelling, all critical care units were asked to develop surge plans to increase their capacity in response to the expected increase in demand for this level of care.

A surge plan was produced to provide capacity from the unit's capacity of 18 beds up to 42 beds should it be required.

This would be achieved by the expansion of the unit into the main theatre complex, as well as recovery and ophthalmic theatres. Additional equipment requirements were managed via regional incident command and staff were upskilled in theatre environment management to provide care in the event of surge and redeployment to the core critical care beds.

Wave 1: Clinical and Operational Model #3

Assessment areas

The medical and surgical assessment services were combined into a single footprint and purposed for non-COVID patients. Suspected COVID patients were seen and assessed in the Respiratory Receiving Unit area.

Respiratory Medicine

As COVID-19 is primarily a respiratory illness the respiratory physicians were cohorted to provide care on two wards where patients most severely affected outside of critical care were managed. The respiratory physicians continued to provide clinical advice for patients in other ward areas, with particular focus on those with the highest National Early Warning Score (NEWS) scores. A Respiratory Medicine Consultant on-call rota was established to ensure patients had senior specialty cover on a 24/7 basis.

Elective and Emergency Surgery

In line with national guidance:

- Routine elective surgery was suspended
- Urgent and Emergency Service provision was maintained thought designated theatres and wards
- Diagnostic services were maintained to support ED, inpatients, cancer and clinical urgencies
- All patients were clinically reviewed against the new national categories for urgency (Initially a 3 tier rating, later adapted to 4)
- Patients on cancer pathways were clinically reviewed to consider if delay was risk appropriate
- Use of the independent sector was utilised under the new national contract

Wave 1: Clinical and Operational Model #4

Outpatients

Following national guidance, all outpatient activity was initially ceased, whilst clinicians reviewed all lists to determine an outcome of either discharge, reschedule (defer), remote consultation, or face to face consultation.

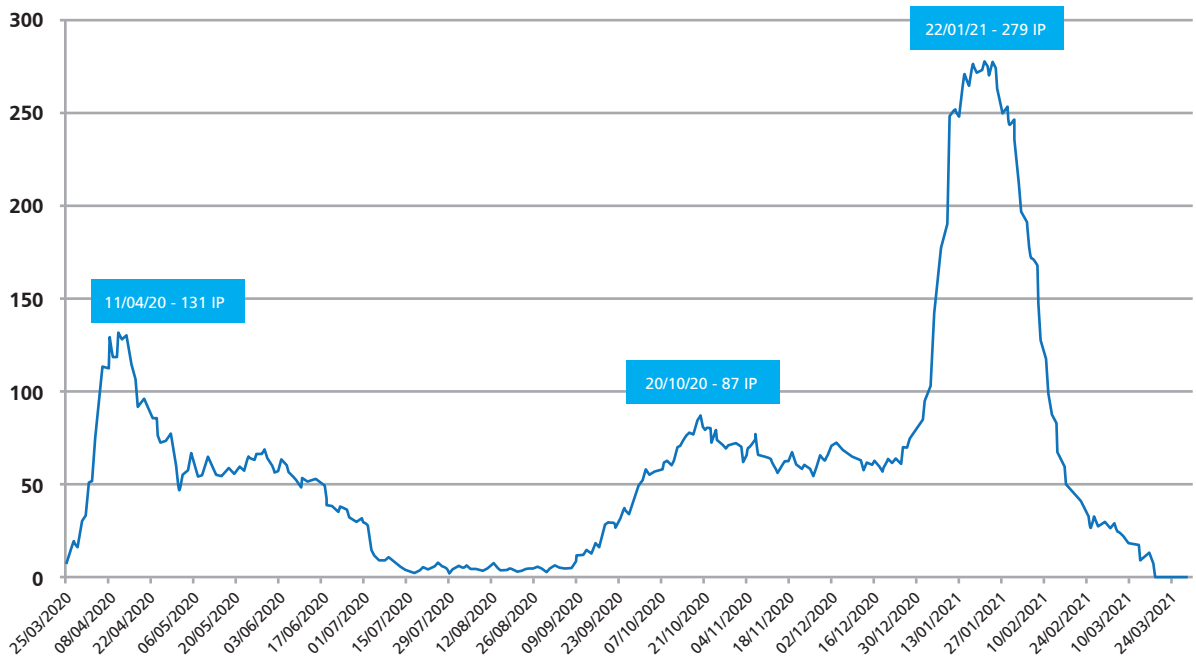
Daily Situation Reporting

The provision of management information was reviewed and prioritised to meet the needs of national, regional and local command, and control structures on a 7 day basis.

Wave 1: Trend analysis

At the peak of wave 1, the Trust had 131 inpatients cared for in red ward settings, although with non-COVID-19 urgent care demands much lower than expected and following the national directive to suspend all non-urgent elective surgery, the Trust did not require its full ward complement

WUTH COVID-19 Inpatients



PLEASE NOTE:
+ve result; patient may not have moved to a red ward at the point of counting

Peaks	No. red beds	No. closed beds (due to lack of demand)
Peak 1 11/04/20	147	141
Peak 2 20/10/20	72	0
Peak 3 2/01/21	274	0

Wave 1 - Restart and Recovery

Following national guidance, in July 2020 the Trust began to plan the restart of non-urgent planned care activities:

- All clinical specialities and functions were risk assessed against:
  - Patient Care / Experience / Harm
  - Workforce
  - Access standards
  - Financial
  - Environmental
  - Strategic Priorities

- Action plans were produced for each specialty and an Executive check and challenge workshop was held to ensure a safe and effective restart to the services

- Recovery trajectories were produced for a return to 100% of pre-COVID-19 activity levels, and timescales for the eradication of backlogs for cancer, clinical urgencies, and long waiters.

Plans were discussed with NHSE/I and system partners and tracking of delivery was achieved through enhanced performance meetings and reporting through to Board of Directors.

By November, Outpatient and Elective activity had returned to 100% of pre – COVID-19 levels with daycase activity (primarily diagnostics) running at 96% by December.

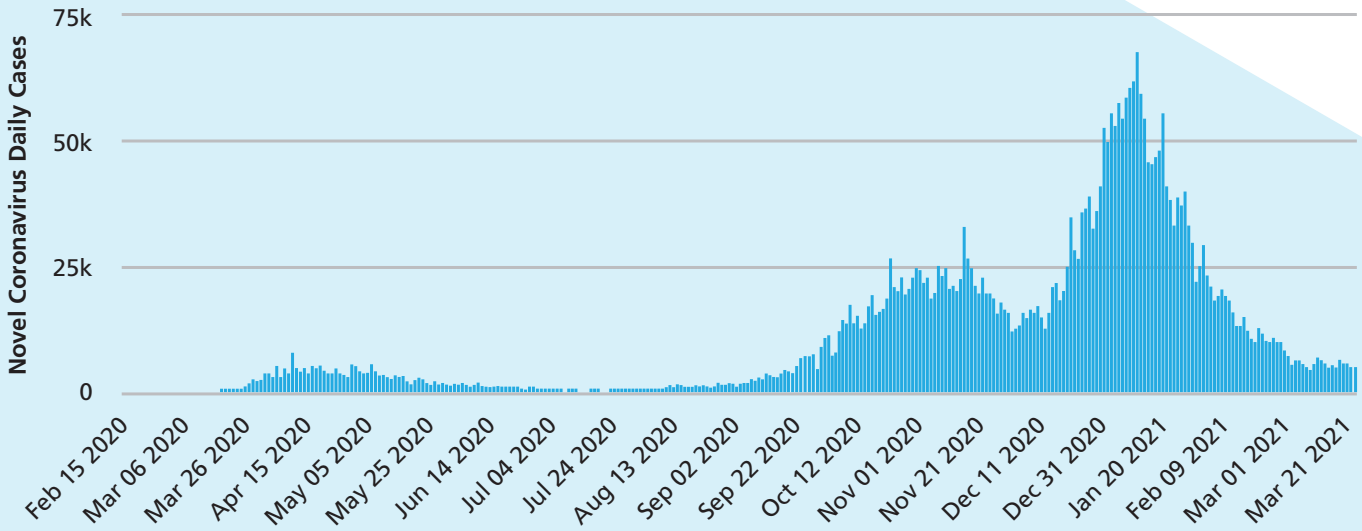
All cancer backlog trajectories were met for both national access and Cancer Alliance standards.

Long waiting patients over 1 year peaked at September and were falling steadily month on month.

Wave 1 - Restart and Recovery #2

Wave 2

Daily new cases in the United Kingdom



October 12, 2020: The Prime Minister launched a three-tier system of local alert levels for England, with the Liverpool City Region being the only area to be placed in Tier 3 – very high – category.

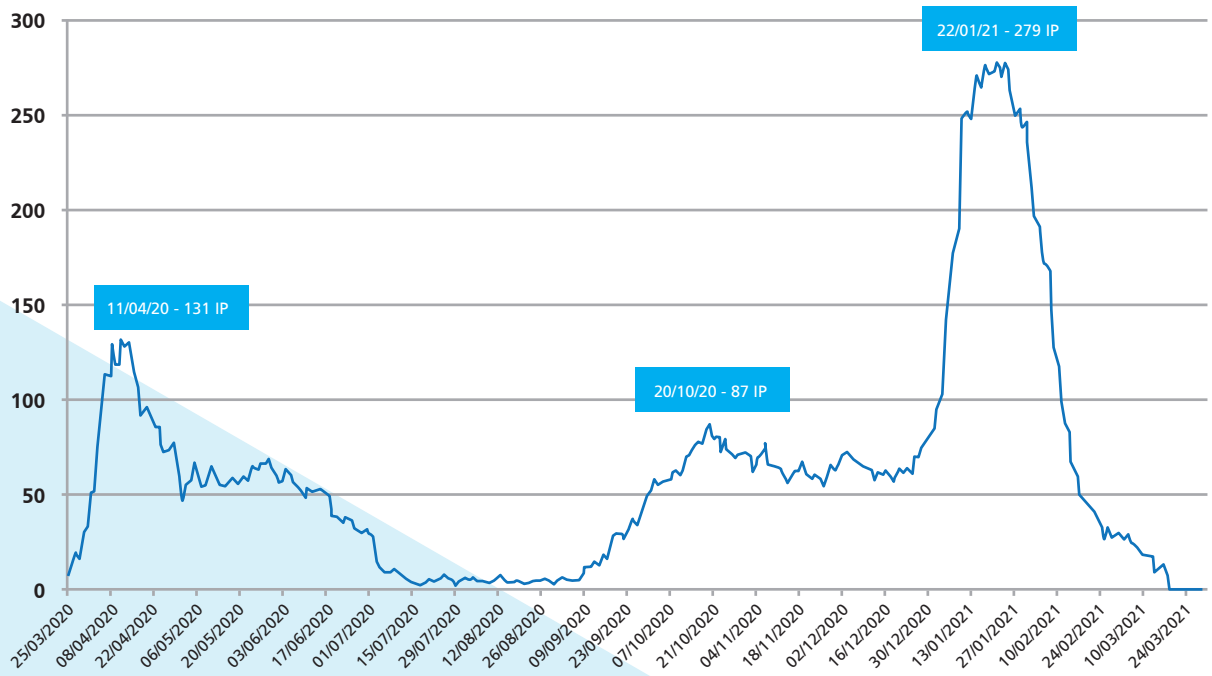
Localised decisions around elective activity programmes were allowed, as opposed to the national directive on elective under wave 1.

Wave 3

At the peak of wave 3, the number of COVID-19 positive inpatients was more than double wave 1 at 279.

To maintain cancer services the ward care for both male and female was re-provided in the Women and Children's hospital with suitable separation.

WUTH COVID-19 Inpatients



Peaks	No. red beds	No. closed beds (due to lack of demand)
Peak 1 11/04/20	147	141
Peak 2 20/10/20	72	0
Peak 3 2/01/21	274	0

Wave 1-3 Analysis

The table below shows how in April 2020 A&E attendances fell to only 56% of 2019 activity levels following the first national lockdown.

By December 2020, demand on A&E services had increased to 93% but then fell once again as the 3rd wave impacted and a further lockdown was enacted.

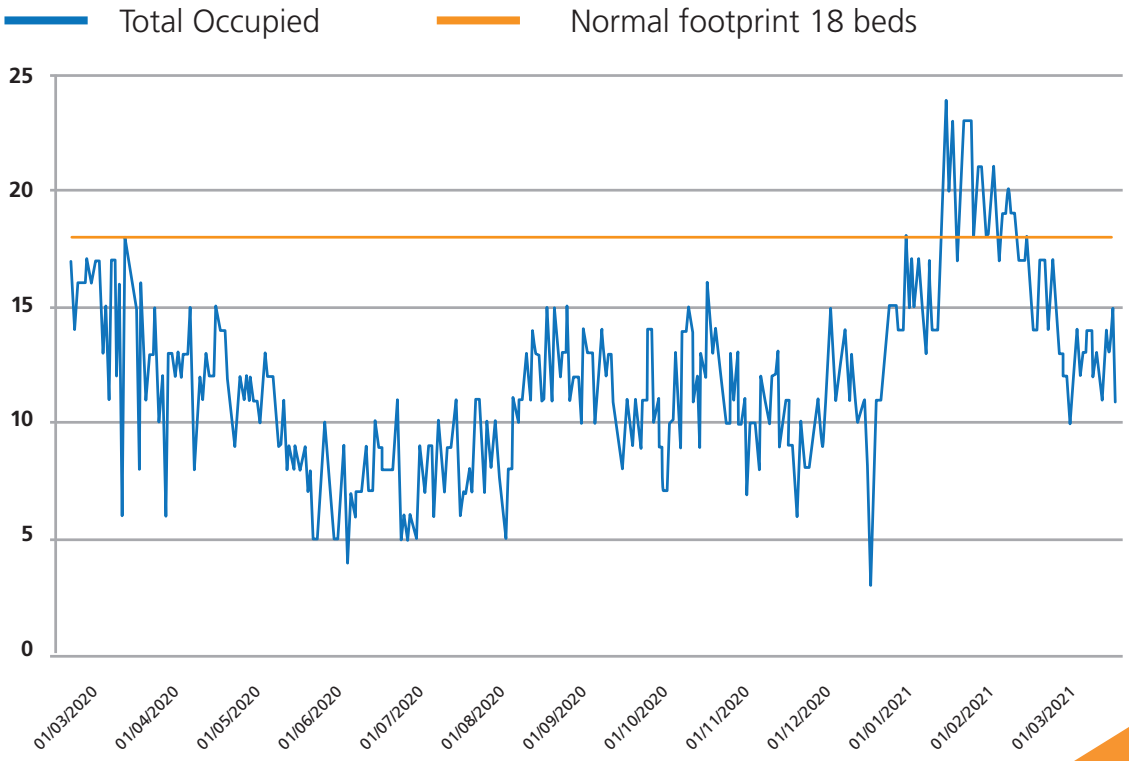
By March 2021 attendances increased and to a level in excess of the same period 2019/20 – The approach to restart and recovery is relevant to urgent care and the Trust is working with the wider Wirral System to restart alternatives to ED as well as the continued development of national initiatives such as NHS 111.

WUTH Arrowe Park ED Attendances					
Month	2020/21	2019/20	YoY Variance	% Var	% of 19/20
April	4,311	7,585	-3274	-43.2%	56.8%
May	5,867	7,696	-1829	-23.8%	76.2%
June	6,387	7,455	-1068	-14.3%	85.7%
July	7,164	7,813	-649	-8.3%	91.7%
August	7,074	7,407	-333	-4.5%	95.5%
September	7,042	7,691	-649	-8.4%	91.6%
October	6,689	7,948	-1259	-15.8%	84.2%
November	6,622	7,665	-1043	-13.6%	86.4%
December	6,855	7,345	-490	-6.7%	93.3%
January	6,160	7,187	-1027	-14.3%	85.7%
February	5,697	6,694	-997	-14.9%	85.1%
March	7,316	5,845	1471	25.2%	125.2%
April to March	**77,184**	**88,331**	**11,147**	**12.6%**	**87.4%**

The number of patients requiring critical care during wave 3 exceeded the core capacity of 18 beds for both COVID and non-COVID.

The units were reconfigured to allow the separation and the planned surge capacity of theatre recovery and ophthalmic theatres was utilised.

Number of Critical Care Beds occupied at 8am



Wave 1-3 Analysis #2

Restart and Recovery - Wave 3

- March 8 2021 saw the staged restart of the Planned Care programme
- The national expectations for the first 6 months of restart are able to be met by the Trust's plan
- The Trust is part of wider and collaborative approach to restart across Cheshire and Merseyside which differs from the local approach following wave 1
- The use of the independent sector is included as part of the plan
- The adoption of mutual aid is integral to the Cheshire and Merseyside approach
- Transformational approaches to outpatients will continue to aid recovery of the backlogs created by the pandemic response

From June 2021, the Trust restarted100% of its outpatient activities compared with the 2019 actual.

Activity Type	March	April	May	June	July	August
Outpatient (New)	91%	94%	97%	100%	100%	100%
Outpatient (Follow up)	97%	97%	96%	100%	100%	100%
Total	95%	96%	96%	100%	100%	100%

From August, the Trust expects to restart 100% of its day case and inpatient activities and continues to develop its longer term plan to address the increase in waiting times created by the pandemic response.

Activity Type	March	April	May	June	July	August
Daycase (incl Endoscopy)	83%	94%	94%	96%	98%	100%
Inpatients	62%	67%	77%	86%	95%	100%
Total	79%	90%	92%	95%	97%	100%

Key Timeline #2

19/02/20
WUTH'S NHS111 Coronavirus Staff Testing Pod opens

23/03/20
WUTH approved PHE shielding guidance to be implemented for staff

25/03/20
Guidance published suspending visiting with immediate effect

01/04/20
Personal Protective Equipment (PPE) to be worn by all staff for patient contact and Filtering Face Pieces (FFP3) on red wards

03/04/20
Agreed to follow the national protocol on prioritisation of staff for swabbing

29/04/20
Rapid tests reserved for Maternity

31/04/20
Vacuum insulated evaporator (VIE) oxygen capacity upgraded

11/12/20
Point of care (POC) Testing approved

22/06/20
WUTH published guidance on the use of Dexamethasone

16/12/20
Lateral flow testing (LFT) approved

28/01/21
Clinical Advisory Group (CAG) supports the switch from LFT to LAMP testing

Advances in Clinical Care

Research

From the outset, WUTH embedded research into our clinical pathways with nationally recognised high levels of recruitment to the national REMAP-CAP and RECOVERY trials that led to novel treatments for COVID-19 that have saved many lives such as Dexamethasone and Tocilizumab. This is still ongoing, and our research team have now recruited over 2500 patients to these research trials that not only look at potential treatments but also look at the burden of the disease and how to assess severity such as International Severe Acute Respiratory and emerging Infection Consortium (ISARIC) Clinical Characterisation Protocol (CCP) data. This has been a substantial achievement by all of the research team, especially given the difficulties imposed by the infection control precautions during the pandemic.

Advances in clinical care

As we had an agile and responsive governance system led by the Clinical Advisory Group, we were able to rapidly embed these new treatments into our clinical pathways to benefit our patients as soon as clinical trial results became known.
The respiratory and critical care teams developed a daily multi disciplinary team that ran throughout all waves of the pandemic. This meant that patients at risk of deterioration were identified early, comprehensive treatment plans were developed, and inappropriate interventions avoided.
We rapidly adapted practice, bringing interventions such as proning (patients lying on their front to improve the oxygen levels in their blood) from the intensive care unit to the rest of the hospital. We were one of the first hospitals to do this, and were able to share our pathways and experience with local Trusts.
From the second wave onwards we were able to provide advanced respiratory support (Continuous Positive Airway Pressure and Hi-Flo Nasal oxygen) to patients outside of critical care on the newly developed respiratory support unit on ward 25. We were able to rapidly train up our staff to use these novel therapies and in so doing were able to offer more patients these potentially life saving treatments. This involved ongoing close co-operation between the medical, nursing and critical care outreach team and had excellent outcomes.
Our critical care department rapidly adapted to the changing clinical guidance around forms of ventilation and anticoagulation to provide the best quality treatments to our patients and avoid ineffectual therapies.Our critical care outcomes compare favourably with our regional partners.

Theatres and Critical Care

To support the potential increase in demand for critical care beds during wave one and subsequent waves, mutual aid processes between Theatres and critical care took place in order to identify and support Level 2 and 3 critical care nursing (both in critical care footprint) and also in theatre recovery as a surge area.

Over the pandemic, over 20 core theatre staff moved to critical care for 4 week periods, along with daily allocation of support staff (registered nurses, clinical support workers, educators, medics, anaesthetists) to provide proning teams, intubation teams, and patient care teams.

Working in both COVID-19 and non-COVID-19 areas, the teams brought together a wealth of clinical expertise and skill to care for patients in all areas of surge capacity which included the use of main theatre recovery and at times eye theatre recovery.

Anaesthetists were deployed from anaesthetic duties to critical care duties to support the medical cover.

Training and education provided by both education teams in critical care and perioperative medicine supported the establishment of additional support to tier one, two, and three level workforce in order to cope with demands of the COVID-19 pandemic.

Daily staffing and safety huddles were optimised to ensure close cross divisional and directorate working to deliver the best care to those patients.

During the first wave a maximum of 6 patients were identified in COVID-19 surge capacity, with the third wave escalating to a maximum of 12 patients, at any one time in theatre recovery with plans to escalate into the theatres themselves. Fortunately this wasn't required.

Staff from perioperative medicine including Clatterbridge General Hospital (CGH) theatre staff, Surgical Elective Admissions Lounge (SEAL) staff, Arrowe Park Hospital (APH) theatre staff and Women and Children's (W and C) staff provided critical care support over 24 hour periods during the waves of the pandemic.

Theatres and Critical Care #2

To support management of the COVID-19 pandemic from both an emergency response (ED, Trauma and Resus) and to support urgent and emergency perioperative pathways several processes took place over a relatively short period of time:

- Development of checklists to support safe management of the patient in full COVID-19 protection for both emergency intubation and surgical work
- Development of Red pathways (COVID-19 positive or highly likely), Blue – Medium risk of transmission and green pathway (low risk) for both elective and semi urgent/emergency work
- Education and competency framework for delivery of training in donning and doffing of personal
- protective equipment (PPE), pathways etc Critical Care Escalation, health care workers tier 1 and 2 staffing development

Once developed there was a period of testing and then wider team working.

Theatre teams worked with the Orthopaedic team initially to "test" and tweak pathways for their surgical delivery which was the benchmark for other services to provide wider multi-disciplinary team (MDT) focussed training.

Online resources and a central drive in the first week of the pandemic was set up and maintained to support easy access across specialism. Pathway development required changes in locations including development of a blue pathway recovery (to protect silver pathway patients) and also blue admission area on the Surgical Elective Admissions Lounge (SEAL).

As CGH was identified as a COVID-19 lite site, risk assessments were performed to allow delivery of elective cancer and urgent work through all stages of the pandemic. At APH, an urgent elective session was identified for delivery of P2 urgent cases including cancer across all specialists. A MDT process was set up, consisting of lead clinicians across varying specialisms, including anaesthetics and nursing teams within theatre, to plan and deliver safe perioperative services to patients identified on P2 pathways. P2 being the clinical priortiy of the patients, which are clinical assessed and given a priority number of 1-4. This MDT approach was restarted during the third wave in an attempt to deliver cancer and urgent diagnostics across the organisation. This was also developed further by utilising theatre assets across the estate and delivering care in new ways.

Pharmacy

The Pharmacy workforce was remodelled to support key areas of demand in WUTH and across the Primary Care Networks (PCNs) to maintain patient safety. Staff were deployed across the system to the point of greatest need at critical points in the pandemic.

Medicines e-learning was developed for all clinical staff who required upskilling in the use of critical care, respiratory renal, and palliative care medicines.

24/7 deployment of new medicines stocklists occurred throughout the pandemic to meet the ever changing ward configuration whilst maintaining safety and access.

Oxygen demand and capacity modelling was a significant feature of phase 1 which highlighted the need for additional VIE capacity. This work involving pharmacy, estates, Electronic and Biomedical Engineering (EBME), respiratory and critical care staff and secured a sufficient oxygen supply throughout periods of surge.

The Pharmacy procurement team ensured that national medicines shortages did not impact on the Trust through daily review, robust planning, liaison with clinicians and developing a real time critical medicines dashboard to support the medicines governance framework.

The Aseptics Services Unit prepared new products to enhance

patient safety when staff working in new areas were less familiar with medicines preparation. This also released nursing time and reduced medicines wastage at times of short supply. System-wide meetings were held twice weekly throughout phase 1 and 2 to ensure that required medicines changes transferred across our health economy.

Clinical and medicines supply support was deployed to the primary care hubs to support out of hospital care where possible.

Palliative care guidance and a hospital supply service was implemented for the wider system to support end of life out of hospital care.

Structured medication reviews were undertaken in care homes across the Wirral to reduce admission risk and optimise care in place of residence.

Over 100 pieces of medicines guidance have been developed to date during the pandemic.

Electronic prescriptions services were implemented with system partners to reduce footfall into GPs and community pharmacy. A WUTH hosted system-wide medicines delivery service was established to deliver medicines form the Trust and community pharmacy to support the virtual clinics and stay at homes guidance.

Maternity Services

Throughout the pandemic we contnued to deliver babies and care for mums, partners, birth partners and families

- Hotline set up for women to contact for advice and support.
- Facebook Platform put in place to enhance communications with women, with over >2700 members.
- Parent craft material including videos and virtual tours made available for women via the internet to access in their own homes and at their leisure.
- Live Sessions for women to join twice a month introduced collaboratively with Maternity Voices Partnership and also posted for wider viewing. Routine antenatal and scanning schedule maintained throughout.

- Support person being able to attend 20 week scans introduced Summer 2020 and all scans in December 2020.

- From April 2021, support person to be able to attend all appointments with the appropriate testing in place.

- Supported birth partners to attend labour and through the postnatal period on the ward, including the opportunity to stay throughout.

- All four birth places continued to be offered: Home, Free-standing at Seacombe, Midwifery Led Unit, and Labour Ward.

Infection Prevention and Control

In the context of managing a pandemic, Personal Protection Equipment (PPE) is equipment that protects staff against the risk of infection. The Department of Health and Social Care has released the Technical Specifications of various items of PPE during the COVID-19 outbreak to ensure any procurement met the appropriate specification.

During the COVID-19 outbreak, The World Health Organisation (WHO), Public Health England (PHE) and the Health and Safety Executive (HSE) have given advice of the type of PPE that is required to protect Health Care workers treating COVID-19 or Suspected COVID-19 Patients. These include facial masks, gowns/coveralls, plastic aprons, eye protection and gloves.

In the event of a pandemic, the procurement and distribution of PPE moves under national command. The significant global demand, fixed supply and international constraints on movement, means that the availability of supply to NHS organisations is constrained. To manage this, distribution is being managed on a 'push' basis, where deliveries are determined nationally rather than the usual 'pull' system where Organisations order the levels of stock that they need. The 'Just in Time' approach means that stock is delivered in small quantities based upon projected levels of demand. The Trust has little influence on the levels and nature of stock delivered and no visibility of future distribution until a few hours before delivery. Typically we are receiving 24 to 48 hours of stock in a single delivery.

Some of the clinical and operational issues this is presenting are as follows:

- Stock levels for key items often run very low which needs constant management and contingency planning between procurement, operational and clinical teams on a daily and hourly basis
- Our inability to secure reliable and consistent levels is an understandable source of anxiety for staff who are concerned that supply may run out
- No control over types of equipment being delivered can sometime cause operational difficulties. For example, changing the models of FFP3 masks being delivered means that separate FIT tests for every staff member need to be undertaken before they can be used

Infection Prevention and Control #2

Managing the risks relating to PPE

Given the issues described above, the Trust proactively pursued a number of strategies to ensure that our staff were fully protected at all times. These included:

- Development of a daily stock management dashboard reviewed by Bronze, Silver and Gold Command to ensure risks are visible and mitigation strategies adopted in real time
- The Trust became actively engaged in the daily Cheshire and Merseyside Supply Resilience Cell which coordinated and managed PPE issues across the system, linking in with the Ministry of Defence (MOD) and escalated through Regional command structures as required
- The Trust used the emergency COVID-19 supply chain in place to support critical shortages (where stock <24-48 hours). This supported us on a small number of occasions where gown supply was critically low
- Exploited all non-traditional routes of supply where possible, we were able to source small stocks of items from industry, schools and other volunteer groups (e.g. goggles from high schools and gowns from Vet practices)
- Mutual aid systems were in place across Cheshire and Merseyside (and beyond where necessary) allowing stock to be shared between Trusts when required

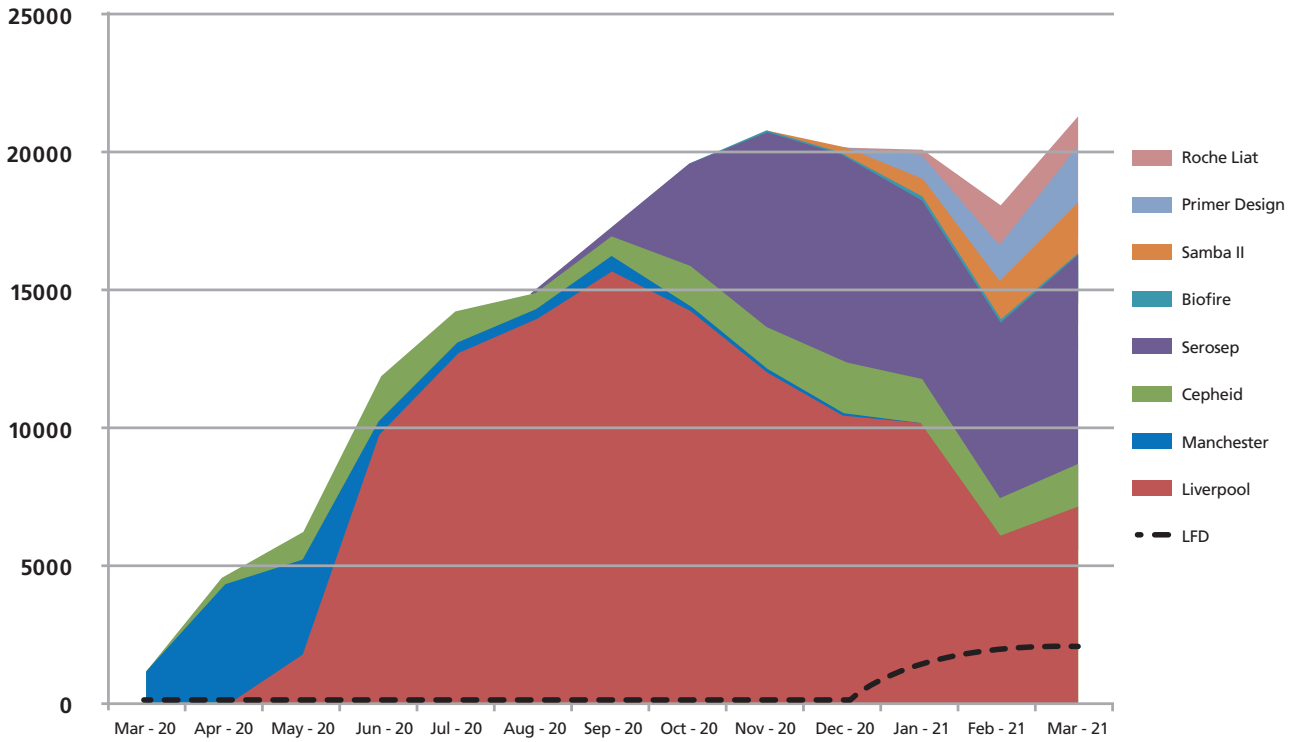
- Participated in a number of bulk orders placed outside national processes which were coordinated via C and M Supply Resilience group, this included bulk orders being placed for gowns and surgical masks. Scope to do this was limited as orders were coming from overseas and often fell through as the supply was diverted to other government agencies
- The Infection Prevention Control Team worked closely with operational and procurement teams to enact new guidance published where alternative items were approved for substitution when stocks were limited. For example, use of coveralls in place of gowns when used with waterproof apron

Infection Prevention and Control #3

The Microbiology service has processed >200,000 COVID-19 PCR test samples received since the beginning of the pandemic. This was in response to a rapid requirement for high volumes of timely COVID-19 tests for patients and staff, to support patient treatment as well as staff and patient isolation and patient flow.

The need for rapid adoption of new testing methodologies, changing working practices, and accommodation of an entirely new workload required a flexible approach from the Laboratory Service and staff. This included adoption of 24/7 working within the Microbiology Laboratory in March 2020, ahead of planned date of October 2020.

The graph shows testing monthly volumes by testing platform. It reflects the high volume of testing along with the range of testing platforms validated and implemented to meet the Trust's testing needs from point of care solutions to high volumes laboratory based tests.



Infection Prevention and Control #4

Other developments by the Pathology Service to support COVID-19 testing include:

- Regionally validated the use of Lateral Flow Device, first Region in country to use
- Local validation for Department of Health and Social Care procured PCR assay (testing method) included in national instruction roll out
- Stood up IT links (National Pathology Exchange) and physical transport routes with Public Health England (PHE Manchester and Liverpool Clinical Laboratories in a matter of weeks to enable the electronic flow of COVID-19 PCR reports
- Set up mobile phone messaging result notification for staff and community antibody and PCR testing.
- Daily reporting to Pathology Laboratory Activity and Capacity Electronic Returns System (PLACERS) for COVID-19 testing 365 days a year, feeds in to Ministerial brief
- 24 hour email notification to our hospital and System partners including the Countess of Chester Hospital
- Enabled mandatory reporting of Lateral Flow Tests (LFT) and Point of Care Rests (POCT) (COVID-19 testing) diagnosed COVID-19 notifiable disease to PHE via
- Telepath lab system.
- Stood up 5 methods of COVID-19 PCR testing locally, 3 to provide 'Rapid' (giving result
- within 2 hours) testing capacity.
- Supporting two SIREN studies (COVID-19 research) now given
- 1A urgent public health status
- Upskilled workforce to process
- complex PCR assays
- Contribution to Cheshire and Merseyside Pathology Network
- Weekly COVID-19 Meeting.
- Service has responded to ever changing demand, prevalence rates, variable supply of kits and staff shortages

The COVID-19 swabbing service was developed to support the timely screening of patients initially to the division of surgery but increased to organisation wide.

Initially absorbed into pre-operative assessment activity it was soon expanded to deliver a wider service to allow patients to attend the CGH site for swabbing for elective and urgent surgery across the organisation (Medicine and Endoscopy) followed by their requirement to isolate prior to their surgery.

March 2021 saw the implementation of a standard operating procedure and external Portakabin™ to support an increase in demand for the swabbing of patients. The swabbing service was also supported by SEAL staff to support the demands on urgent and semi-urgent swabbing across the organisation. Run as a seven day service at the time, the COVID-19 temporary staff swabbing pod provided up to 200 swabbing slots a month.

Due to the ongoing requirement to provide pre-operative COVID-19 screening swabs, further work is being developed to support the continued screening of these patients including home swabbing, providing a better perioperative patient journey and experience.

Infection Prevention and Control #5

Infection Prevention and Control #6

COVID-19 Testing

Further infection prevention and control measures included:

- Managed the Arrowe Park swabbing pod, which performed over 6,000 PCR tests, around 23% of which were positive
- Tests were available for Trust staff or members of their households with symptoms, and also for agency and NHS Professionals' staff working on our sites.
- We also swabbed the entire staff of several wards and departments at short notice when there were local outbreaks, sometimes testing over 70 people in one session
- Co-ordinated the initial distribution of over 5,000 lateral flow kits for routine self-testing by asymptomatic staff

Contact Tracing

- Established an internal contact tracing process and team at a week's notice, to manage exposures to COVID-19 among staff in the workplace
- Risk-assessed over 1,000 positive cases among staff and household members
- Identified and managed 1,500 contacts of positive cases, instructing over 400 high-risk contacts to self-isolate
- Responded to 40 local outbreaks within the Trust
- Worked with the local authority, Public Health and NHS partners, through daily intelligence hub meetings
- Supported contact tracing of COVID-19 positive inpatients in the hospital

Shielding

- Completed individual occupational health assessments for over 350 staff who had been shielding and gave individual specific advice regarding their safe return to work
- Worked with Workforce colleagues to develop and implement the Individual Health Risk Assessment process that all employees are required to complete

Wellbeing

- Set up Drop-in Wellbeing Hubs for staff at Arrowe Park and Clatterbridge, with approximately 1,000 staff visits between November 2020 and the start of April 2021
- Provided targeted psychotherapy support for Critical Care staff
- Provided Psychological Wellbeing Practitioner based at Arrowe Park

Providing advice and information

- Responded to over 500 information requests and queries about COVID-19 from managers and employees

Infection Control and Infection #7

Nosocomial Infections

Effective monitoring and surveillance is central to understanding COVID-19 transmission within our hospital, providing transparency on performance and supporting a focus on continuous improvement.
Definitions for Nosocomial COVID-19 infections were released within the 'North West Hospital Onset COVID-19 Infection Standard Operating Procedure' on 5th June 2020

There are three categories for determining Hospital Onset COVID-19 infections:

- Hospital-Onset Indeterminate Healthcare-Associated (HO-iHA) – First positive specimen date 3-7 days after admission to trust
- Hospital-Onset Probable Healthcare-Associated (HO-pHA) – First positive specimen date 8-14 days after admission to trust
- Hospital-Onset Definite Healthcare-Associated (HO-dHA) – First positive specimen date 15 or more days after admission to trust
- From 5th June onwards probable (HO-pHA) and definite (HO-dHA) cases were to undergo a rapid Root Cause
- Analysis (RCA) to establish how the transmission has occurred and whether there are any other linked cases that might indicate ongoing transmission within an area

Infection Prevention and Control #8

The Trust's Environmental Matron and Environmental Group ensured that national guidance was in place to keep staff and patients safe on the wards. This included:

- All wards measure >2m between bed centre
- Clear curtains in all assessment areas and wards
- Signage, floor markers, room responsibility posters, face mask posters
- All patient-facing staff to be fit tested
- Safe ventilation in place supported by the Ventilation Group

Infection Prevention and Control #9

Goods Distribution Centre

The stores across both sites were manned 7 days per week throughout lockdown due to:

- Clipper deliveries at CGH (ended March 2021) the procurement distribution system
- PPE deliveries (24/7)
- NHS Supply Chain delivery change in schedules
- Extended opening from 4pm to 6pm

Scrubs

59% increase in scrub usage and an additional 4600 pairs of scrubs purchased to deal with increased demands. £17,868 spent in 2020 against £8,845 spent in 2019.

Porters and domestic services provision

30 extra staff provided per week to support the COVID pandemic, we operated 24/7 across both sites 45 red wards and areas requiring enhanced cleaning.
IC and HPV cleans we used 5,259 hours above our base line or 8 staff covering both supervisory and the team.
Used more 240 tubs more than we usually use of "Chlor-Clean" usage 100 tablets in a tub – 1 tablet diluted per litre.

Vaccine roll out

Recruited, trained the team of porters and domestics to support the creation and service provision to CGH/APH Vaccination Centres within 4 weeks.
10 porter chairs purchased to support the vaccine centre at CGH.

Transport

Additional lab runs from Blood Sciences to Microbiology for COVID swabs.
Collections of PPE and other items from ECHO arena.
Deliver collect mutual aid items to other Trusts in the region.

Catering

- 70K additional catering for staff, patients and unexpected guests (Wuhan) over the pandemic period
- 3.7K free vending for Critical Care staff
- 100K on continental breakfasts provided free of charge to ward based staff in December
- Provision of 1000 snacks items for patients and staff in January
- Provision of 1000 snacks items distributed by the Charity office
- 58K of patient treats whilst patients did not get visitors – chocolate bars and cakes

Clinical Waste

27% increase from 19/20 to 20/21

Workforce

The Trust took a very focused approach to COVID-19 in relation to our workforce, ensuring that staff were supported and looked after during the pandemic. This approach concentrated on the following areas:

- Training and upskilling existing and new workforce
- Health and Wellbeing
- Workforce supply
- Sickness absence
- Communication and Engagement

A significant amount of training was undertaken, ensuring that our Medical, Nursing, and Allied Health Professional workforce had the necessary skills to deliver care to patients suffering from COVID-19. The training was cross referenced with the frameworks in the secondary care preparedness, to identify any gaps

The Trust also developed and deployed a robust and comprehensive health risk assessment to ensure that vulnerable staff in the 'very high risk' and 'high risk' groups, as defined by Public Health England, were identified, and mitigation plans implemented with immediate effect. The risk assessment tool was adapted to take account of recent guidance on splenectomy and employees from a BAME background.

In addition, the Trust has created a wide range of Health and Wellbeing support which includes:

- Counselling
- Physical activity webinars
- Access to food and drinks
- Access to accommodation to protect staff member's family or to allow them to continue working
- Debriefing
- Bike hire

Campaigns to attract volunteers, temporary staff and retire and return have been undertaken. The workforce supply also included the receipt of 40 medical students and 30 third year student nurses. High volume recruitment campaigns for international registered nurses, healthcare clinical support workers, SAMBA testing support staff, vaccination hub and estates and facilities staff have all been invaluable to support the COVID-19 response In addition, a skills questionnaire that assists in the re-assignment of the existing workforce has been developed

A robust approach was taken to capture and capture and track staff sickness absence, as well as ensuring strong links with the staff swabbing team and Occupational Health to ensure swift support. A Pandemic Incident Workforce Procedure held rapidly changing national, regional and local guidance for staff and managers in one document to ensure a fair and consistent approach to management of staff during this unprecedented time. Partnership working has been maintained via regular staff side and workforce meetings and alignment to regional partnership memorandum of understanding working.

Occupational Health support has been enhanced throughout the pandemic, including access to in-house test and trace, on-site counselling support, and access to wellbeing and psychology support locally and regionally. Additionally, specialist support was made available for staff supporting from post traumatic stress disorder (PTSD) via Red Poppy.

The Trust has ensured that it continues to engage and inform the workforce through daily bulletins, which include good news stories as well as operational information. There has been work to improve our social media and to build positive relations with our local media through the use of our charity funds. Learning from feedback from communications and support mechanisms has been implemented following intelligence from floor walkers and staff debrief exercises.

Workforce #2

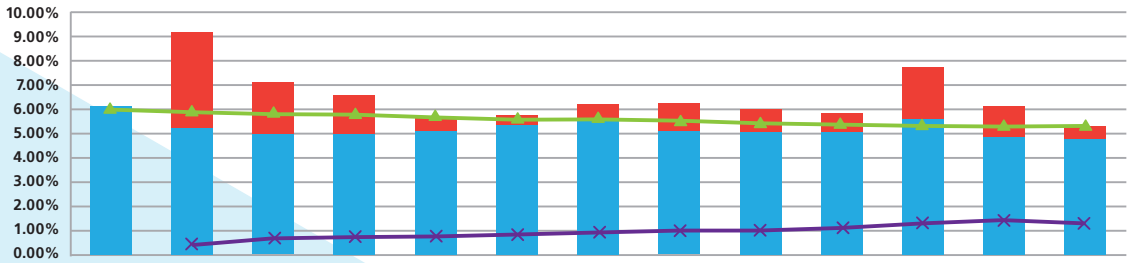
Workforce #3

This graph illustrates sickness absence over the last 12 months – March 2020-21. It splits out COVID sickness absence each month (red bar) from non-COVID sickness (blue bar). It reflects the sweep of the pandemic across the Trust and highlights the peaks in April'2020 and January'2021.

Sickness absence levels over the last few years have been an outlier at WUTH (over 5%) and above the target set by the Trust. This graph highlights the challenges of COVID-19, high abstraction rates, alongside winter pressures which has exacerbated our efforts but equally it showcases the improvements that have been made each month (green rolling sickness line) and that non-COVID sickness absence has reduced (5.95% in March 2020 to 5.24% in March 2021). This graph shows that back in April 2020 during the first wave of COVID-19 pandemic WUTH was hit hard with 3.89% COVID and we experienced high abstractions rate over 9% due to sickness and COVID sickness combined. It's clear from the graph that last year was far from ordinary.

The graph also shows a rise in absences covering the second wave of the pandemic in January 2021, when the Trust and its staff were under considerable pressure and fatigue from the first wave. However, it suggests that some lessons from the first wave, more access to effective personal protective equipment and better infection control have helped keep staff safer. This was also supported by key workforce decisions such as the introduction of the new staff reassignment process and Workforce Information Tool in February 2021 which helped bolster and best utilise staff.

The current strategic and operational approach to sickness absence which includes the new Attendance Management Strategy and associated work streams is helping to drive down sickness and support our people. The new Attendance Management Policy, which strikes the balance between providing support to help employees stay in and return to work and taking firm action is taking effect. Sickness absence levels continue to be above 5% over the rolling 12 month period however, this is reducing 5.95% in March 2020 to 5.24% in March'21. The graph showcases the epic journey and improved trajectory. In-month sickness has reduced from 6.08% in March 2020 to 4.78% in March 2021. We need to continue our focus on effective sickness management and timely, quality return to work Interviews.



	Mar - 20	Apr - 20	May - 20	Jun - 20	Jul - 20	Aug - 20	Sep - 20	Oct - 20	Nov - 20	Dec - 20	Jan - 21	Feb - 21	Mar - 21
In Month Covid Sickness		3.89%	2.17%	1.53%	0.59%	0.36%	0.59%	1.11%	0.88%	0.80%	2.09%	1.20%	0.51
In Month Sickness	6.08%	5.22%	4.96%	4.99%	5.08%	5.37%	5.59%	5.14%	5.08%	5.06%	5.62%	4.89%	4.78
Rolling Sickness	5.95%	5.86%	5.80%	5.75%	5.65%	5.59%	5.60%	5.51%	5.41%	5.28%	5.29%	5.24%	5.24%
Rolling Covid Sickness		0.43%	0.62%	0.72%	0.75%	0.77%	0.82%	0.91%	0.98%	1.06%	1.24%	1.34%	1.28%

Bereavement

The mortuary has had considerable surges due to COVID-19 and at these times of the surges in Spring 2020 and Winter 2021 the department was 75% busier than normal, which put significant pressure on capacity and staff.

The department responded by increasing the staff in the mortuary by redeploying additional staff from histopathology to assist the mortuary staff.

The mortuary, in conjunction with the bereavement service, funeral directors and the crematorium, put in place a 7 day service at times of increased pressure to ensure the flow of the management of deceased patients was maintained to ensure the mortuaries capacity was not breached.

Additional support was arranged from the Merseyside Resilience forum in terms of surge capacity to ensure we had the facilities to care for every deceased person who required the service of the mortuary during the pandemic.

Communication during this time was critical, and as well as the Merseyside Resilience forum death management cell, an additional group was set up and met regularly for the Wirral which included all council elements of death management on the Wirral to ensure the system was working effectively and all contingencies were in place.

All staff during the pandemic worked tirelessly to ensure the service could deal with the demand during this time and that every deceased patient had the highest level of service and dignity.

The department responded by increasing their hours covering weekends and late finishes (sometimes 12 hour days).

The Bereavement Services Office had an increase in deaths due to COVID-19. The department was 75% busier than normal.

The Bereavement Services Office, in conjunction with the mortuary, funeral directors, and the crematorium, put in place a 7 day service at times of increased pressure to ensure the flow of the management of deceased patients was maintained to ensure the mortuaries capacity was not breached.

All patient property from the wards was brought to the office, this included property from COVID wards and special consideration was given to the property which may have been contaminated. The property had to be stored and organised and distributed to our families. In 2021 a delivery service was set up to people's homes across the Wirral and this is now streamlined and continues to be used.

Dealing with all families who had lost a loved one and not been able to see them before death, and not being able to come into the office for further help. This was a very distressing time for all concerned.

New processes were put in place for registration of deaths with the Registrars in Birkenhead Town Hall as they were closed to the public.

The team had to complete a pro-forma for families with all details so they were able to register over the telephone.

COVID-19 positive test results within the last 28 days of life had to be reported to CPNS (National database) on a daily basis which meant staff had to cover a 7 day period.

Chaplaincy and Spiritual care Department

The chaplaincy department providing multi-faith support is small in numbers with 4 chaplains and a team of volunteers.

All volunteers were unable to attend and two of the chaplains were also forced to refrain from attending and to self-isolate. One chaplain was based at Arrowe Park Hospital, providing the cover for all patient and staff support at Arrowe Park and one chaplain was based at Clatterbridge Hospital, providing support at the staff hub.

Our on call support chaplains were not able to attend.

We continued to provide 24 hour chaplaincy cover 7 days a week, at APH.

The amount of funerals conducted increased significantly, as did the need to support staff and families.

Our annual pattern of memorial services and Christmas Carol services were also suspended. However, we were able to provide on line services for these, noted below, to provide those important milestones for the hospitals. We also observed the annual multi-faith calendar of commemorative and festival events for colleagues and patients.

- Neo Natal memorial service
- Critical Care service
- Macmillan service
- Remembrance service
- Christmas Carol service

We also conducted several staff memorial services and supported a service for the National Day of Reflection on March 23 2021.

As external visiting was suspended, we received many requests from church leaders and family members to visit patients.

Staff support was, and remains, very much a two-way street as whilst we did have staff calling at the chaplaincy offices for support, we also had many staff calling just ask after the welfare of the chaplains and to reassure them of their support, which was very heartening in these challenging times.

Family Support Team

The Family Support Team has played a vital role in helping to keep patients connected with their families throughout the pandemic.

It was set up in April 2020 to ensure patients could keep in contact with their loved ones when important visiting restrictions were put in place.

The team was set up to be a liaison between the family and the next of kin. Team members also acted as a case worker to keep families informed about a patient.

Duties included passing on belongings for patients; they also provided mobile phones and tablets for patients who didn't have them, to keep in touch with their families.

Information Technology

Information technology and digital developments were substantially accelerated and were critical to the pandemic response.

- Networking and Wi-Fi provision for Wuhan visitors in accommodation block and setup of Command centre both on site and for the boardroom for multi organisation approach including use of secure data sharing storage – (Jan / Feb 20)
- Installation of 180 TV's connected to Trust network (Jan / Feb 20)
- Over 100 clinical changes made to the Trust Electronic Patient Record (EPR) to improve clinical care for COVID patients. (From March 2020)
- Over 500 laptops and desktops rolled out to the organisation and provision of the Always on VPN solution to 1500 users to enable home working. (March / April 20)
- Over 120 iPads and iPhones rolled out enabling relatives to talk to patients remotely over video calling (April / May) Installation of 80+ secure networked camera's to allow remote monitoring of patients and PPE utilisation (March – May 20)
- Roll out of Microsoft Teams – including video conferencing facility to facilitate remote meetings. (currently over 2500 active users) – (March to May 20 – rollout of over 1000 headsets and over 500 additional monitors and webcams)
- Roll out of Attend Anywhere solution allowing remote patient consultations for essential OP appointments during the pandemic – (April – September 20) Upgrade of HSCN infrastructure datalinks and core firewalls to support the increased network estate (Jun – July 20)
- Rollout of over 1000 additional IP telephony handsets and Jabber soft clients to support remote and socially distanced working in clinical areas. (April – October 20)
- Deployed network provision to Spire Murrayfield – remote desktop services to enable remote location connectivity to the Trust. (Jun 20)
- Setup of socially distanced training room capability in education centre – board room / dining room (Apr 20)
- Roll out of over 600 infection control keyboards (Apr – May 20)
- Roll out of over 50 blood label printers and 150 + scanners to support blood transfusion services. (Jun – Oct)
- Upgrade of over 600 Wi-Fi access points to support bedside monitoring and point of care delivery. (May 20)
- Hardware / network provision for Cedar House Vaccination Centre. (December 2020)
- Deployment of Vaccination appointment booking software and Immunisation Management System to help manage COVID-19 vaccination provision. (December 2020)

Finance

Finance played a key role is ensuring the effective response to the pandemic. The local and national health and care response to COVID-19 was supported through a package of measures, announced in the March 2020 budget, to support public services, individuals and businesses through the pandemic.

Within this, was a COVID-19 response fund, which was created for:

- The NHS to treat Coronavirus patients, including maintaining staffing levels
- Local Authority actions to support social care services and vulnerable people
- Ensuring funding was available so other public services were prepared and protected

The Trust was required to make significant changes to its infrastructure over a very short timeframe (days rather than weeks) and it was critical that our clinical and operational teams were able to respond quickly in situations where decisions had to be made, such as the need to increase our critical care capacity to five times its previous capacity within 2 weeks.

The Trust had to balance this need for speed and flexibility alongside the need to ensure that our financial decisions were robust and met external audit and public scrutiny and therefore a revised set of governance arrangements were implemented in March 2020 and approved by the Board on April 1 2020.

All COVID-19 related expenditure at the Trust was tracked separately and regularly reported to NHS Improvement for review and reimbursement. There were clear guidelines which set out the types of expenditure which are eligible for reimbursement and the Trust was ensuring that we were able to supply appropriate information to support any claims.

It is important that the Trust was able to respond quickly and flexibly to the changing requirements of our services whilst also ensuring that we maintain strong financial control during this time. All COVID-19 related expenditure was approved through the Trust's incident command structures and reviewed by the Executive Team on a regular basis, as set out in the Trust's interim financial governance arrangements. Finance reports for 2020/21 included a separate analysis on COVID-19 related expenditure to ensure that the Board of Directors was fully sighted.

Charity Support

Our WUTH Charity played a huge role in supporting staff and patients during the pandemic

COVID-19 Appeal

- Stewardship of donations generated through continued Wirral Globe support
- Supporting fundraisers in their personal challenges (over 200 people) e.g. Will Ritchie and his family. Will Ritchie, aged 6, has complex health conditions and was WUTH Charity's top fundraiser, raising £14,000. In autumn of 2020, Will featured as an 'NHS Hero' at the Blackpool Illuminations .
- Charity Team personally raised over £1000 by completing the Virtual London Marathon

Staff support

- Co-ordinated the Salute the NHS meal scheme (Over £500,000 in value)
- Gifts in Kind (sourcing and distributing £115,00) of items at Christmas 2020
  - 7000 gifts to staff
  - 800 inpatient gifts distributed
  - 220 staffroom hampers sourced and delivered
  - 2 x free breakfasts delivered to all wards
- Virtual magic show and bingo organised
- Second Wave - Regular supply of refreshments to all wards, the
- Emergency Department and Critical Care

Corporate Volunteering (improved outdoor spaces)

- **£150,000** raised locally via Wirral Globe partnership and continued support

- Charity Team activity including
  - Supporting 200 individual challenges
  - Wirral Rainbow Flower / Challenge 100
- Grants from Freemasons, Trusts funds and corporates
- Team completed Virtual London Marathon

- **£182,000** in successful grants from National COVID-19 urgent appeal ,followed by a further £143,000

Nightingale Hospitals

The NHS Nightingale Hospitals are seven critical care temporary hospitals established by NHS England as part of the response to the COVID-19 pandemic in England.

On 27 March, Simon Stevens announced that a 1,000-bed hospital was to be provided in the Manchester Central Convention Complex.

The hospital was ready to receive patients on Easter Sunday, 13 April 2020. The official opening, by Duchess of Cornwall in a recorded speech, took place on 17 April 2020.

On 12 October 2020, amidst a rise in cases in Northern England, the hospital was placed on standby to admit COVID-19 patients.

In the event, almost all of the increased demand for critical care was met by expanding capacity in existing hospitals. By June 2020, all the temporary hospitals had been placed on standby. Only two had admitted patients: 54 were treated at NHS Nightingale Hospital London (all of them in April 2020) and just over 100 at Manchester.

During wave 3 a number of patients requiring step down from the Trust were identified but were unable to be accepted at the Nightingale after clinical review.

The Wirral economy commissioned its own solution for COVID patients as an alternative.

Vaccination Programme

The Clatterbridge Vaccination Centre opened on the 8th December 2020 and worked closely with GPs within the local Primary Care Networks and other secondary and tertiary care organisations across the system to ensure that our local population was vaccinated at the earliest opportunity. This programme of work was coordinated by Wirral Health and Social Care Commissioning Group (WHCCG) and was managed in line with national Joint Committee for Vaccination and Immunisation (JCVI) guidance.

The first vaccine made available to the Trust was the Pfizer BioNTech vaccine which was complemented with the provision Oxford Astra Zeneca (AZ) vaccine from February 2021.

In addition to staff vaccination, the programme was extended to include the vaccination of hospital inpatients with the AZ vaccine and accelerated courses of vaccination required for patients who were immunocompromised or commenced on immunosuppressive treatments.

Specialist allergy sessions were facilitated by the team with on hand anaesthetic support for patients who had suffered an allergic response to their first dose of the COVID-19 vaccine or had experienced other vaccine allergies.

The ambition from the Secretary of State for Health to offer all over 16s a vaccination by July 2021 followed by the need for second doses and possible future boosters meant that it likely that the vaccination centre will continue.

Fundraising in the community – over 2000 people donated

Marathons in many ways

Salute the NHS – 76,000 meals delivered May-July 2020

Local businesses responded in force with over £115,000 of donated items for staff

Improved outdoor spaces from Scottish Power Energy Networks (SPEN) and Magenta Living corporate volunteering

You said, we did – post COVID debrief

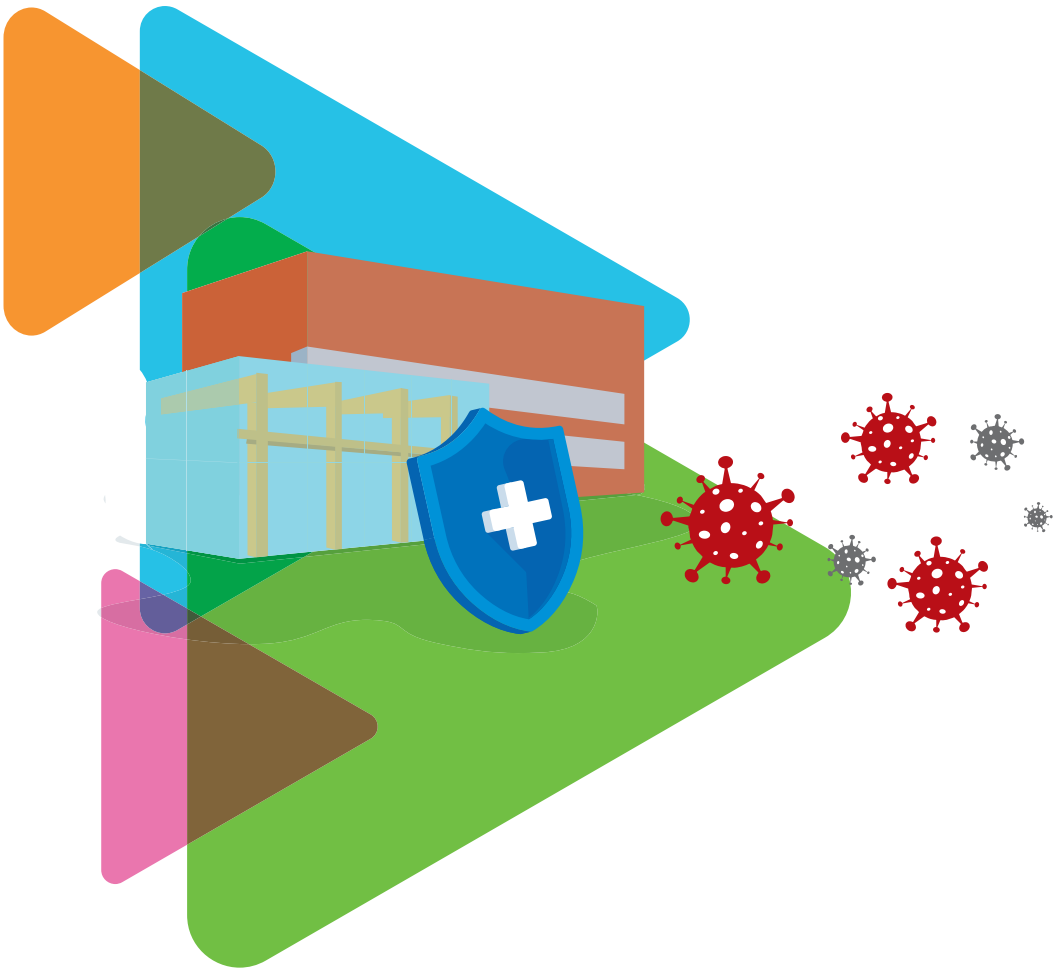
A series of staff COVID-19 debriefing sessions were held during the months of Autumn 2020.

Staff were consulted and they provided feedback on WUTH's response to the COVID-19 pandemic and what they would like to see improved moving forward.

A booklet was produced highlighting the key themes discussed and how we as a Trust have acted on the comments made by staff, including staff support and wellbeing, processes, communications, environment and resources, teamwork, leadership, behaviours, quality and safety and training.

23 March 2021 Day of reflection lighting

NOTES:



together
we will

COVID-19
RESPONSE