



Royal Devon and Exeter
NHS Foundation Trust

Patient Safety Investigation

Learning from COVID-19 transmission at the Royal Devon and Exeter Hospital

During the period October 2020 to January 2021

December 2021

Acknowledgements

The Trust extends its sincere condolences to those who lost loved ones and those who contracted COVID-19 while in our care during the COVID-19 pandemic. We recognise that it has been a very difficult time for relatives and friends of those who died, many of whom were unable to visit their loved ones due to the restricted visiting in place to maximise safety, and some never got to say their final goodbyes when those closest to them were approaching their end of life.

The investigation team would like to extend their thanks the RD&E staff, patients and families who assisted with the investigation, providing open and honest accounts of events to support learning and improve patient safety.

In particular we would like to thank the Infection Prevention and Control nurse specialists and Medical Examiner service who supported any request for additional information during the course of the investigation.

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Executive Summary

From the start of the UK's second wave of COVID-19 in October 2020 to the height of the third wave in January 2021, the Royal Devon and Exeter NHS Foundation Trust, hereafter referred to as the Trust, treated 1161 patients with COVID. 361 inpatients tested positive meeting the definition for hospital acquired COVID-19 following a swab taken either because of symptoms or as part of routine surveillance in ward areas.

During this period 39 outbreaks were reported to Public Health England (PHE) by the Trust, 80 patients with hospital acquired COVID died with COVID-19 cited as the cause of death and 27 with COVID-19 identified as contributing to death.

As per NHS England and PHE policy an outbreak control team made up of a wide range of professionals was convened to undertake rapid Root Cause Analysis (RCA) style reviews for each outbreak reported. These identified any immediate learning and ensured actions were put in place to facilitate a safe environment within the Trust and minimise risk to patients and staff.

The volume and timing of outbreaks combined with the number of patients and staff affected by COVID-19 was a significant factor in escalating a staffing crisis that led to a critical incident being declared by the Trust in December 2020. These circumstances met the reporting criteria set out in the [Serious Incident Framework](#) and the Medical Director and Chief Nursing Officer commissioned a serious incident investigation.

At the beginning of January 2021, an investigation team was assembled to report and manage all incidents reported as Hospital Acquired COVID-19 between October 2020 and the end of January 2021; this was later extended to include the review of cases up to May 2021. This report sets out how the team reviewed each case, outbreak outcome and analysed them to respond to the critical questions posed (*see page 3*).

While not able to determine the specific mode of transmission for each individual patient, being open, transparent and saying sorry when things do not go as intended is one of the core values of the Trust. Therefore, all patients identified with hospital acquired COVID-19, irrespective of their level of acquisition or outcome, and/or their families received a written apology with an explanation of the level of acquisition and an outline of the investigation.

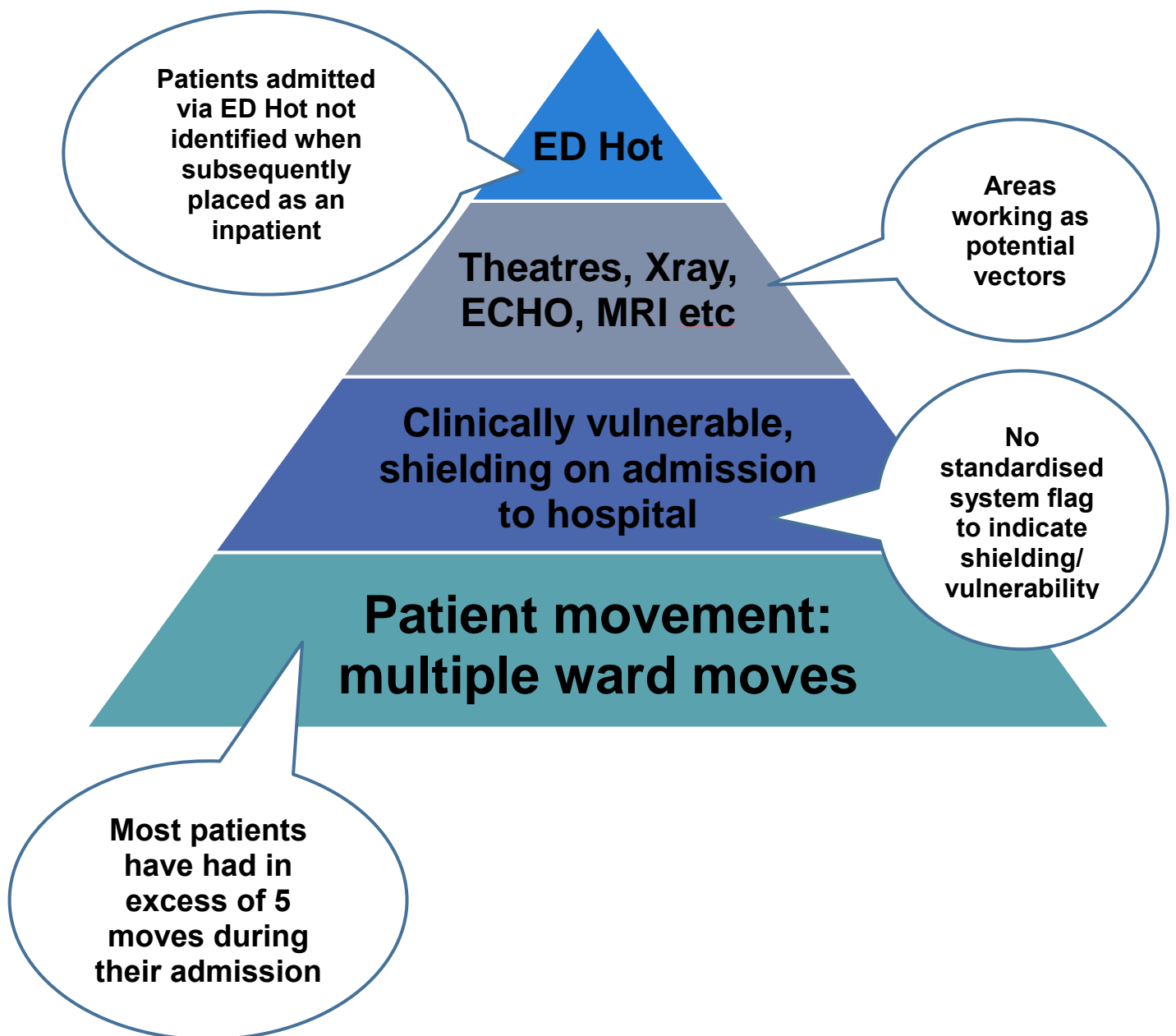
The work undertaken by the team was extensive and made more challenging by the volume of cases, continued operational pressures and changing national policy. However, it was greatly enhanced with the ability to easily access and review information held in the electronic patient records (EPR), Medical Examiner service and Structured Judgement Reviews (SJR) processes that support the scrutiny of all deaths.

Early emergent trends and themes as summarised in Figure 1, from the qualitative analysis were presented to clinical teams in June and on the 5th July 2021 formed the basis of a COVID-19 Reflection and Learning workshop chaired by the Chief Nursing Officer in partnership with the Infection Prevention and Control team.

Although work continues to reflect the ongoing changes in clinical management this enabled an early response to the key issues identified as follows:

- The development of a patient placement policy to minimise bed moves when not clinically indicated.
- A consistent process in place to identify the clinically vulnerable and their 'journey' through their care.
- A flag system in the EPR that highlights risk factors with vector sites and prompts mitigations to reduce the risk of transmission.

Figure 1: Emergent trends and themes



As numbers of cases have again started to increase, the learning from this investigation, the reviews and qualitative analysis of cases, in conjunction with knowledge gained from negotiating the previous waves of COVID-19, will have an enduring impact on future management.

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Background

National Context

Although later reporting indicated that there may have been some cases of COVID-19 dating from late 2019, COVID-19 was confirmed to be spreading in the UK by the end of January 2020. A legally enforced stay-at-home order was introduced and came into force on the 23rd March 2020. Restrictions were steadily eased between May and June 2020.

By the 24th April 2020, the Scientific Advisory Group for Emergencies (SAGE) and the Government Office for Science (GOS) published its [first guidance on testing](#). At that early stage, testing was undertaken for staff and patients who were identified as “symptomatic”.

The definitions for acquisition of COVID were introduced in May 2020 and on the 9th June 2020 a letter from NHS England (NHSE) [Minimising nosocomial infections in the NHS](#), hospitals were asked to include the additional sections on length of time in hospital before a positive test result as part of the daily information uploads.

In July 2020 the concept of local lockdowns was introduced, but by September 2020, COVID-19 cases were again rising. This led to the creation of new regulations and on the 31st October 2020 a second national lockdown was announced.

In part due to a new variant of the virus, cases were still increasing and the NHS was under severe strain by late December 2020. This led to a tightening of restrictions across the UK.

The first COVID-19 vaccines were approved and began rollout in the UK in early December 2020. 15 million vaccine doses had been given to predominantly those most vulnerable to the virus by mid-February 2021. Restrictions began to ease from late February 2021 onwards and almost all had ended by August 2021.

Knowledge and understanding of the disease and its transmission has continued to increase immensely since it first appeared in 2019. The rapid relentless pace of change in national guidance and policy based on the best assessment of the evidence at the time of writing has led to equally rapid responsive change in clinical management, testing and the introduction of vaccination. In combination these changes have ensured that the impact of each wave has been very different.

Local Context: Royal Devon and Exeter NHS Foundation Trust

The Trust mobilised a Strategic Incident Control Team (Gold), responsible for the planning and management of the COVID-19 response in March 2020. The scale and pace of change was, and has continued to be, in line with the national picture. By the 4th June 2020, the Trust had received 20 NICE Guidance documents relating to COVID-19, and of these, some had already had as many as three updates during this period. In addition to this there was a myriad of national documents from NHS England/Improvement (NHSE/I), PHE and the various Royal Colleges.

By the end of March 2020, the Trust had implemented its incident framework which outlined the Divisional hub responsibilities in partnership with the Clinical Reference Group (CRG), capacity surge response plans, Infection Control measures and PPE supplies.

In line with national policy in the first wave all elective work was stood down, this was gradually reinstated over the summer of 2020 before being stood down again in December 2020.

From March 2020, the Trust uploaded all required information to the PHE system which ensured that the Trust status as an organisation was and continues to be reflected accurately on the national systems. Numbers of positive tests recorded by the Trust between May and October 2020 were low, with only positive tests recorded as an outcome. The method of recording altered in October 2020 when inpatient testing became routine and the Trust along with other Trusts worked with PHE to develop more robust measurement systems.

Routine staff testing was introduced in three phases between October 2020 and February 2021 as capacity for testing increased.

In addition to responding to the pandemic, over 2020 the Trust implemented two significant service changes, both the culmination of long-term projects which had been paused in the initial response to the first COVID wave:

1. The Medical Examiner (ME) service launched on the 1st July 2020, following a two year project. The service formed part of a national system being rolled out across England and Wales to provide greater scrutiny of all deaths.
2. On the 11th October 2020 the Trust launched Epic, the electronic patient record (EPR), the culmination of a two year MyCare programme of work which has formed part of the Trust's response to meet the NHS Long Term Plan and its commitments to a "paperless" NHS and patient provision to digital access to their health records.

Scope and Terms of Reference

The Trust's Chief Medical Officer and Chief Nursing Officer commissioned a serious incident investigation into all hospital acquired COVID-19 between October 2020 and January 2021 to determine:

- Any significant contributory factors in the spread of hospital acquired COVID-19 at the Trust, and
- Whether there were any missed opportunities in detecting an outbreak at an earlier stage and if so the root cause(s) of this.

These critical questions formed part of broader terms of reference that ensured that where significant concerns were identified in relation to the key elements of the critical questions, the contributory factors for any serious lapse in care management or service weakness will also be identified, and where possible the most significant influencing factors (i.e. root causes) to these lapses.

The investigation team were also tasked to consider whether:

- there are any safeguarding implications arising from its analysis
- there are implications and lessons beyond the Trust and, if so, what these are.

The outcomes of the investigation were set as follows:

1. To establish how recurrence may be reduced or eliminated;
2. To formulate recommendations and an action plan to manage care and service delivery issues;
3. To provide an investigation report as a record of the investigation process that sets out clearly the investigation team's findings, recommendations and conclusions; and
4. To provide a means of sharing learning from the incident.

Methodology

Process and methods used

The investigation team undertook mapping work and qualitative thematic analysis of the information gathered from the Post Infection Reviews (PIRs), Structured Judgment Reviews (SJR) and outbreak control team reviews to establish wider system and process responses to learning.

Identification of affected patients

The investigation team used the “line list” provided by Microbiology in order to identify affected patients. The list provided information including the patient details as well as the classification of hospital acquisition. In line with national guidance the Trust used the [European Centre for Disease Prevention and Control surveillance definitions](#) for healthcare associated transmission to support its decisions on the likely source of transmission. This is based on the number of days until the onset of symptoms, or positive laboratory test, whichever is first, after admission to hospital (on day1). This is informed by current knowledge regarding the distribution of incubation periods and is as follows:

Indeterminate association (IA-COVID-19):

Symptom onset on day 3-7 after admission, with insufficient information on the source of infection to assign to another category.

Probable healthcare-associated COVID-19 (HA-COVID-19):

Symptoms onset on day 8-14 after admission

Symptom onset on day 3-7 and a strong suspicion of healthcare transmission.

Definite (HA-COVID-19):

Symptom onset on or after day14 after admission.

After validating the detail held by Microbiology the below group of patients was identified:

Figure 2: Level of hospital acquisition

Level of hospital acquisition	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Total
Indeterminate	5	56	48	30	2	6	9		156
Probable	6	38	53	24	2	4	3	1	131
Definite	3	39	34	25		2	4	1	108
Total	14	133	135	79	5	12	16	2	414

Post Infection Reviews (PIR)

The NHS England Post Infection Review (PIR) provided to Trusts to facilitate the review of cases was built into Datix, the Trust’s electronic incident reporting system. This permitted greater ability to trend and theme the information gathered during the review process.

The PIR is designed to capture as much information as possible about the circumstances of the care provided. Each review took approximately 1 hour and required information gathered through review of:

- the patient’s EPR,
- infection control surveillance data,
- hand hygiene and ward cleaning audit records,
- staffing rotas, and
- mortality and incident data.

Once completed, each case was put forward for inclusion in the qualitative analysis.

Using the [Qualtrics technology platform](#) to calculate the sample size in order to define the number of PIRs to be included in the investigation analysis, reduced the confidence interval (margin of error) to 5% and increased the confidence level of 98% with an identified the ideal sample size of 196.

Structured Judgment Reviews (SJR)

Learning from Deaths (LfD) is the framework used by NHS Trusts for identifying, reporting, investigating and learning from deaths that occur while patients are receiving care. All deaths that occur in the Trust are scrutinised by the ME Service. Where concerns are identified, cases are subjected to further scrutiny, a Structured Judgment Review (SJR). SJRs are undertaken by a clinician, a trained reviewer not involved with the patient's care.

The SJR methodology was developed by the Royal College of Physicians as part of the National Mortality Case Record Review (NMCRR) programme commissioned by Healthcare Quality Improvement Partnership (HQIP) in order to standardise mortality reviews.

Deaths that occurred with or from Hospital Acquired COVID were, where possible, routinely subjected to an SJR.

Although standardised, the SJR is not rigid and blends traditional, clinical judgement-based, review methods with a standard format.

Explicit Judgment comments:

The reviewer makes explicit judgement comments on the phase/overall care reviewed which allows the reviewer to concisely describe and assess the safety and quality of care provided. Judgement comments can be made on anything the reviewer thinks is pertinent to a particular case, including technical aspects of care such as management plans, whether care meets good practice and the interventions undertaken. More holistic aspects of care such as end-of-life decision-making and involvement of families are also reviewed.

Assessment of problems in care:

Whilst the explicit judgement comments and care scoring are the main two elements of an SJR, reviewers are subsequently asked to make an assessment of problems in healthcare. The reviewer is asked to comment on whether one or more specific types of problems were found and, if so, identify if it is deemed this led to harm.

Analysis – the Framework Method:

The Framework Method sits within a broad family of analysis methods often termed thematic analysis or qualitative content analysis. These approaches identify commonalities and differences in qualitative data, before focusing on relationships between different parts of the data, thereby seeking to draw descriptive and/or explanatory conclusions clustered around themes.

Using the principles of the Framework Method, each SJR was read through providing an opportunity to become immersed in the content and retrieve some initial themes. Each judgment comment was then simplistically coded under a topic heading. Once completed broad themes emerged from the topic headings.

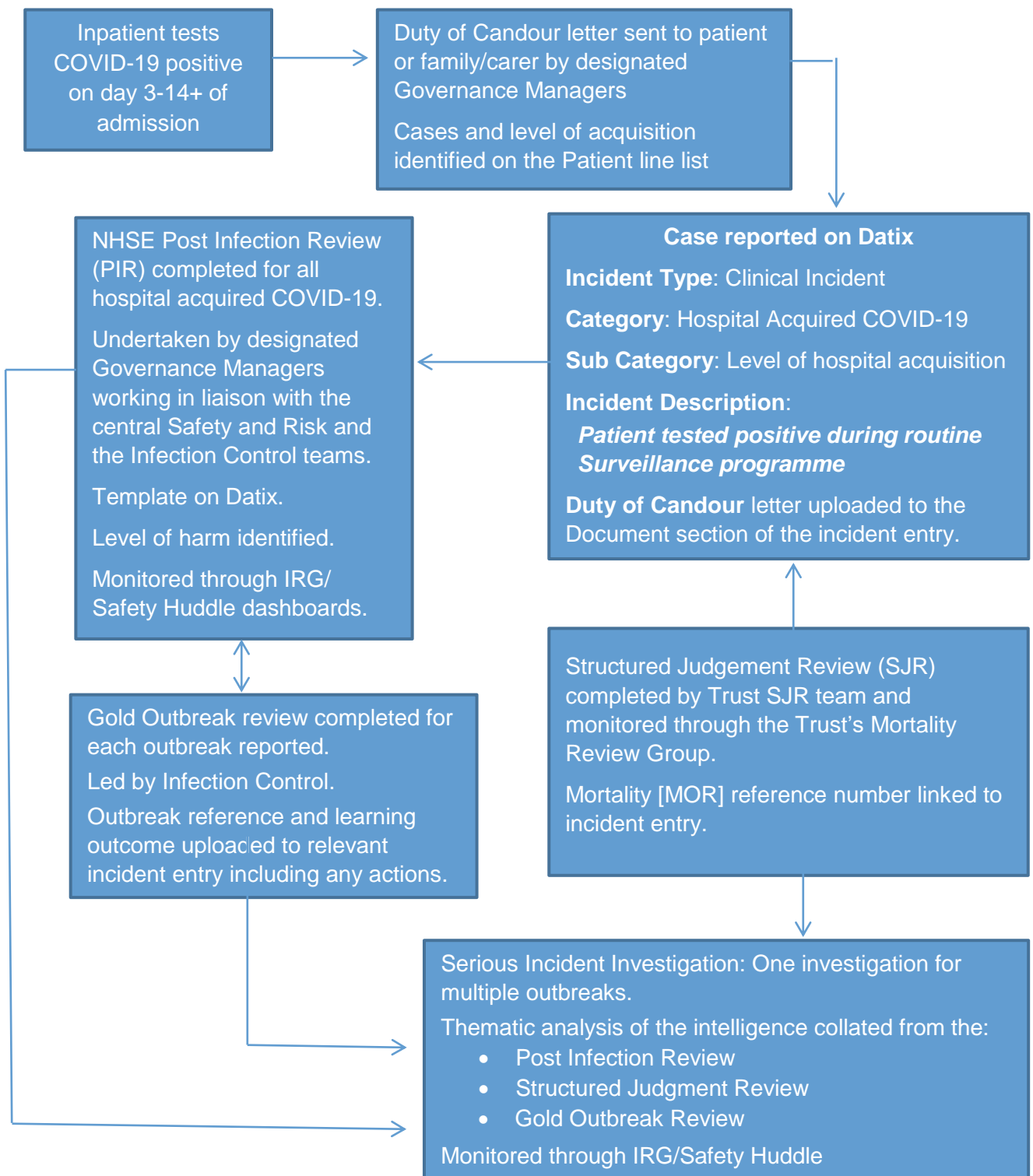
Analysis – Data mapping

In addition to the using the principles of Framework Method times, dates and location data from the PIRs was mapped to look for clusters or patterns of groupings.

Incident Investigation Management

Figure 3 provides an overview of how Hospital acquired incidents were reported and managed during the investigation.

Figure 3: Reporting and Incident Management of Hospital Acquired COVID-19



In addition to the information gathered as part of the methods and processes outlined above, the investigation team reviewed relevant regional and national policy.

Limitations

Limitations of the investigation include the following areas:

Staff Focus Groups

During the pandemic there was daily (at the height, twice daily) communication from the incident response team to all staff through emails and the Trust's internet as well as through the tactical Silver and operational Bronze hubs with the clinical/operational teams. Staff focus groups were initially planned as part of the investigation process to explore the staff perspectives of the operational landscape during surge periods and elicit their views on resource/capacity issues, general communications/decision-making around breaks, ward-based practices and endeavours to support wellbeing, however due to ongoing exceptional operational pressures as a result of the pandemic it was not possible to identify the time and resource to remove staff from their clinical duties at this time.

Bed Activity Area / Social Distancing

This is the area around the bedside in an acute hospital inpatient ward which allows a range of activities that support the treatment of the patient. Because of the nature of records kept and the lack of reported incident data on the bed activity areas, the investigation team were unable to identify whether there was a causative link to infection associated with the bed activity area such as: if patients or staff were moving around spaces and creating communal touch points.

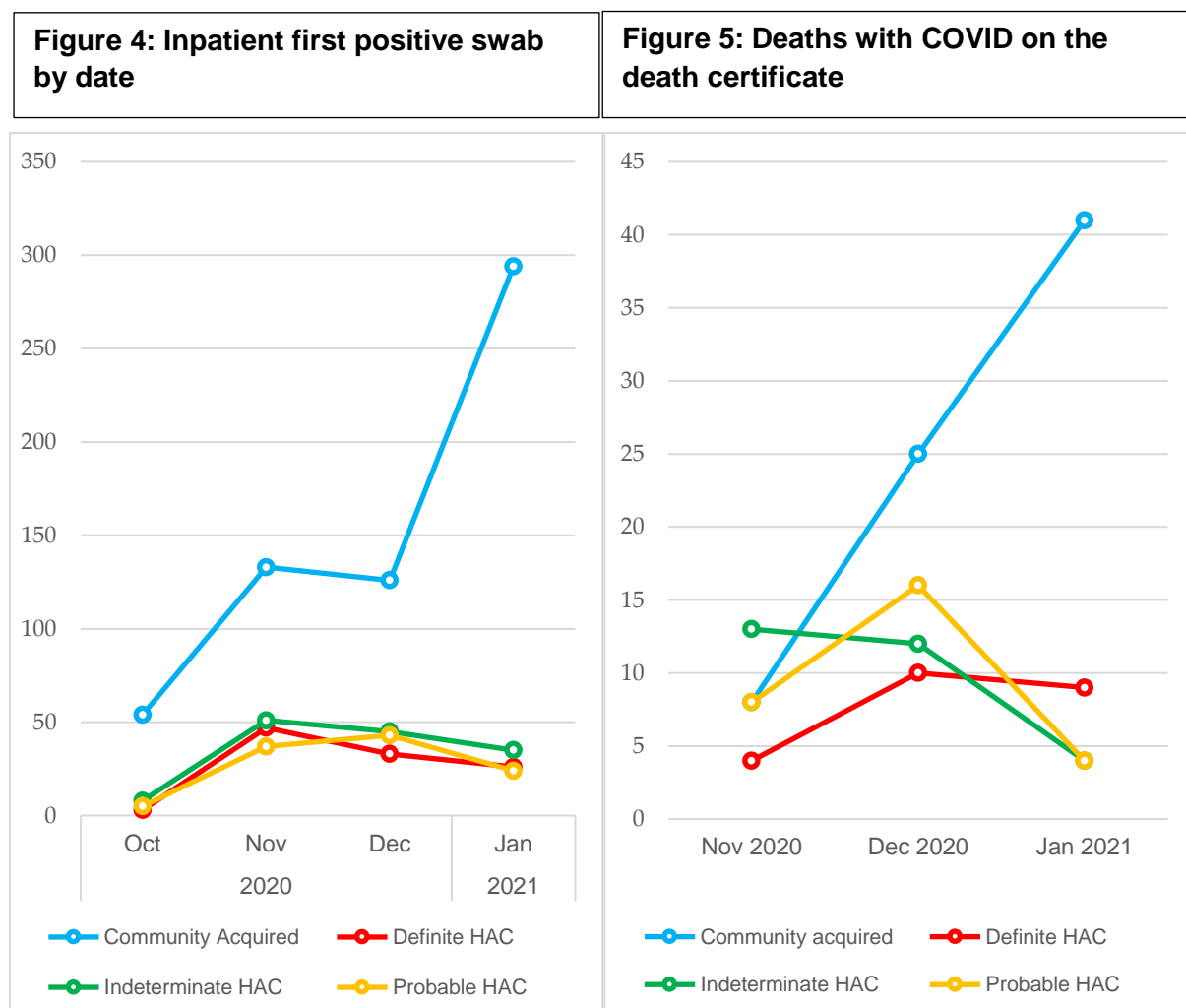
Although the creation of 1.8 metre distancing was created with the bed, chair, locker, locker, chair, bed model, it was not possible to determine if a lack of social distancing between beds without screens had an impact for individual patients.

Personal Protective Equipment (PPE) use

The Trust had adequate stocks of PPE in place in line with Infection Prevention and Control guidance. A programme of continual fit testing was in place. Throughout the timeframe investigated all staff had access to and were issued with appropriate PPE. However the lack of incident or audit data made it difficult for the investigation team to determine any issues in respect of individual patients or specific ward areas.

Learning

Initial analysis of deaths during November/December 2020 suggested that a raft of rapidly instituted measures to reduce the incidence of hospital disease transmission were largely effective. Figures 4 and 5 reflect that the number of inpatient positive swabs and deaths following hospital-onset COVID fell in January as Community-onset cases were still rising.



Family Involvement

Arranging family visits to COVID positive patients was challenging with restricted visiting. Where effective communication was established via telephone or video software, it was felt to contribute significantly to agreement around the patient’s wishes for treatment, establishing realistic goals and providing compassionate care for dying patients and their families.

Consultant-delivered care

Early and frequent Consultant-delivered care was often associated with meaningful decision-making, tangible action in relation to treatment, the establishment of realistic goals for treatment and timely palliation where appropriate. However, there were several examples in which delayed or infrequent Consultant review prompted negative judgements from reviewers about the quality of care.

Symptom control and multidisciplinary involvement

Many of the patients reviewed presented with multiple health needs and a mixture of treatable and non-treatable conditions. Under these conditions, the effort required to coordinate appropriate medical care can be significant and may displace attention to the symptoms experienced by the patient during their admission. It was evident that teams were able to maintain focus on symptom control and manage symptoms effectively as they evolved. Additionally, the effective coordination of care from different disciplines was frequently mentioned as indicative of excellent care. There were a small number of cases where there was evidence of 'siloed' multidisciplinary involvement in care that resulted in a suboptimal continuity of care.

Advanced Care/ Treatment Escalation Plans

An overwhelming majority of negative comments identified in the SJRs related to the lack of timely advanced care or treatment escalation plans (ACP/TEP). In many cases this was felt to contribute to poor end-of-life care and a delay in the timely provision of palliative care focussed entirely on symptom control.

Bed Moves

The thematic analysis of the PIRs identified that 55% of patients reviewed were moved five or more times while recognising there is a need to move patients at least twice to effectively manage a clinical pathway on admission. Following removal of the admitting area and initial ward, the overall average number of moves for patients reviewed was three.

Guidance to reduce inpatient moves was updated at the end of January 2021. A comparison of the number of average ward moves from subsequent Hospital Acquired COVID-19 cases reviewed demonstrated a reduction during February and March 2021 from five to an average of three.

When positive test results were returned there was often a record stating the move related to the need for a COVID-19 cohort ward. However, it was also noted there was often no rationale recorded for ward moves that were not COVID-19 related. There is an opportunity to improve the care and decision-making documentation regarding the rationale for ward moves going forward.

Ward moves also appeared to affect the consistency of nursing documentation and it was evident from the narrative in nursing records that there were occasional issues in the continuity of care.

Clinically vulnerable patients

On the 23rd March 2020 the Government identified those at increased risk of COVID-19 to shield at home for an initial period of 12 weeks. The Trust undertook an exercise to identify all patients with chronic long-term conditions meeting the guidance and sent a letter to this patient group requesting them to shield. Approximately 10,000 letters were sent to patients.

As part of this exercise, patients were flagged on the ward whiteboard, an electronic system used by wards, to ensure that where possible patients were placed in a side room or in a low risk bay. During the transition to Epic and the EPR the use of the ward whiteboard was discontinued with the assumption that its function had been transferred in its entirety to EPIC and consequently the flag was no longer visible to the ward teams. GP surgeries use a different electronic system for medical records and these are not linked to secondary care electronic medical records, therefore patients in receipt of a "shielding" letter were not automatically flagged on the Trust system.

The investigation identified patients who had received a letter from the Trust advising them they were considered to be at increased risk. There is now a process in place to hold letters and clinical reviews of vulnerable patients on Epic and a system for flagging patients is now in place, with questions forming part of the admission Infection Control assessment on EPIC and the flag is available to add. Now as shielding letters are sent out the administration teams routinely add the flag to the patient record.

All patients are triaged and tested on admission in line with the Trust's testing strategy. This is now recorded on admission as part of the infection control assessment on Epic.

Vector Areas

It was evident the vast majority of patients were required to visit other areas within the Trust for clinical interventions or diagnostic procedures such as MRI, CT or X-ray. Visits to other departments are required to aid the patient's diagnosis and recovery. It was not always clear if the COVID-19 test result was available prior to transfer to CT or other diagnostic areas. It was however evident that when COVID-19 status was unknown staff often requested more information from microbiology and no unnecessary procedures were identified.

Infection Prevention and Control precautions were adhered to during transfer and the receiving department were informed of the patient's COVID status. Patients are taken straight to the area/department for the procedure/investigation and straight back to the ward to ensure they are not waiting unnecessarily in other departments. Patients wear an FRS mask while travelling to and from their procedure. Staff transferring the patient and staff in the receiving department wear PPE.

While it has not been possible to test this process during the investigation it was evident from the cases reviewed that there is possibly a high probability of COVID-19 transmission during visits to other clinical areas.

ED Hot

ED Hot is a 6 bedded bay created in the Emergency Department (ED) to care for patients known to be or suspected to be COVID-19 positive. There are also a finite number of additional side rooms within the ED that have continued to provide additional capacity for this cohort of patients. The area was created within the footprint available and constructed quickly to respond to manage the increasing COVID-19.

The investigation found that patients extremely clinically vulnerable to COVID-19 were nursed in the ED Hot area if their symptoms were indicative of COVID 19, however patients were not routinely asked or flagged if they were vulnerable, had been shielding or had been asked to shield by their GP.

Because of the demands on the hospital patients often appeared to be nursed in ED Hot for longer time periods than the one-hour set out in the internal standard for suspected or positive COVID-19 patients.

Patients admitted to ED Hot were moved into HAM and LAM (High/Low acuity majors) for ongoing treatment if required or in some instances due to lack of availability of side rooms were transferred to open bays/wards.

The work being undertaken to continue the development of the flagging system and the risk assessment process will support the rapid identification and management of clinically vulnerable patients in ED Hot.

Improvement within the ED Hot environment has also continued and a feasibility study is currently being developed which addresses improving ventilation in the cubicles within the ED Hot area.

Hand hygiene

Hand hygiene audits usually undertaken on a regular basis to identify areas that may require targeted interventions were suspended during the second pandemic surge due to additional pressures on ward nursing teams. However, some teams continued to submit audit results and where these were available and while they were considered within the PIR process the data was insufficient to draw conclusions on the impact of hand hygiene in relation to healthcare acquired COVID-19. It was also not possible to determine compliance for individual patients or each clinical area.

Admission avoidance

From the investigation team's analysis, it was evident that a number of patients could have avoided admission if there had been capacity to support their care at home with care teams such as Urgent Community Response, Primary Care and family/social networks, however it is recognised that these are finite resources and therefore during high volumes of patient demand they were not always available.

Clinical Governance

Governance in healthcare relates to the systems and processes used to continuously improve the quality of services and safeguard high standards of care. It involves monitoring systems and processes to provide assurance of patient safety and quality of care. From March 2020 the Trust had to plan, operate, manage their resources, and govern differently to deal with the unparalleled challenges and pressures presented by the pandemic. The Trust adjusted its governance arrangements effectively to cope with the unprecedented challenges presented by the pandemic.

However, during the investigation, the way in which information was collated made it challenging to track individual patients to outbreaks and although decisions were logged as required during Gold, Silver and Bronze hubs, the fast-paced changing operational landscape made it difficult for the investigation team to establish links between decisions, actions taken and their subsequent impact.

As COVID-19 numbers again increase, it is likely that there will continue to be a need for immediate review and response initiated through the infection control outbreak meetings. Governance support has been identified to enhance the triangulation of information and capture learning.

Duty of Candour

The Trust takes openness and transparency with patients and their families very seriously. As part of its commitment to candour, a letter was sent to every patient who contracted COVID-19 while receiving care, or the next-of-kin for those patients who died, to ensure that they were aware that their loved one was believed to have caught COVID-19 in hospital and provide an outline of the investigation to be undertaken.

In response to this a number of patients contacted the Trust and while the majority expressed gratitude to receive acknowledgement and offered to help the investigation with providing their accounts of good care. Some spoke very negatively about the multiple moves they experienced during their or their loved ones admission and there were some other common themes in the commentary received, as follows:

- The need to continually recount the same information to different staff in the same area and on transfer to a new area.
- Families were not always made aware of where the patient was on transfer.

- Patients were not always informed they were a positive contact of COVID-19 during their hospital stay.
- Observations of poor hand hygiene practice.

At the Trust we are committed to listening to patient and carer feedback at every opportunity and actively encourage people to share their experience, whether this be positive or negative. More people than ever have been entering our hospital, largely due to the COVID-19 pandemic, therefore listening to patient feedback has never been so important. The experiences and observations from patients and their families play a vital part in shaping our services and maintaining high standards of quality care. While the investigation team has been able to use the accounts of these patients and families that contacted the hospital during the course of this investigation, it is recognised that there is more work to do in eliciting the views and opinions of those that have used our services during times of extreme pressure.

Recommendations

The Trust is committed to its responses to the findings of this investigation while it continues to provide care for patients with COVID-19. This and the current rise in COVID-19 cases significantly increases the challenges faced by the Trust as it continues to support the roll-out of the vaccination programme and address the considerable backlogs in elective work that have unfortunately been exacerbated by the pandemic.

The investigation team has identified some clear recommendations and learning, particularly:

1. The Trust has more work to do to ensure patients receive care on the ward that best meets their individual needs first time, thereby preventing multiple and unnecessary ward moves which too often result in a poor patient experience and leads to a breakdown in communication between the hospital, patients and their families.
2. Communication must be further strengthened between patients, their loved ones and those delivering care.
3. Improvement in communication and documentation is required to ensure that it supports greater continuity of care, this includes ensuring the rationale for ward moves is clear and recorded.
4. The management of Infection Prevention and Control must continue to be everybody's business with PPE, distancing and other safety requirements still necessary to prevent the spread of the virus.
5. The involvement of patients, their families and staff are vital to ensuring their insights are used to identify care or service delivery for improvement.
6. Additional work may be required to understand the impact of the bed activity areas in multiple occupancy bays, but this work will need to consider the implications any action may have on the restoration of elective work.

Conclusions

The investigation team were in a position to retrospectively review care provided during a prolonged period of extreme crisis. There were occasions where this care fell short and was not what the Trust would have wished for its patients and their families, however, there were also many examples of good practice that should not go unrecognised.

One of the biggest insights the team gained from COVID-19 was that like many other organisations the Trust has proven its capacity to adapt, learn quickly and demonstrated agility in dealing with complexity. While the investigation did identify factors that possibly contributed in the spread of hospital acquired COVID-19, due to the intensity and volume the outbreaks that occurred could not have been detected any earlier. These were responded to swiftly and actions immediately implemented from the learning gained by the outbreak reviews.

Service delivery has changed rapidly, staff have worked differently and more flexibly, and have gone above and beyond expectations to care for patients and to maximise safety. Decision-making has been accelerated and doing what is right for patients, their families and staff has always guided decision-making, even in the most difficult of circumstances. However, the human element has been expressed through the feedback from the patients and families who have received apologies from the Trust. This learning will endure as part of the organisational memory, and the Trust is absolutely determined to reflect and learn, and to make and embed the necessary changes in memory of all those who have had their lives changed by the acquisition of COVID-19 whilst under our care in hospital.

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[Infection Prevention and Control Policy](#): RDE May 2019

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[Guidance for imaging referrals for **Suspected** COVID-19 cases](#): v1.1 16 March 2020

[COVID-19 Empiric Guidance in Adult patients](#): V2.3. 4 December 2020