Summary of the Nosocomial COVID-19 review: November 2020 to March 2021

Preserve life, protect staff and prevent spread

Introduction

In January 2020 an outbreak of a new coronavirus (COVID-19) was reported and in March 2020 the World Health Organisation declared a global pandemic. As a new virus, the lack of immunity in the population and the absence of an effective vaccine meant that at the start of the pandemic COVID-19 had the potential to spread quickly and widely. Initial data suggested that everyone was at risk, and that the virus would make people very sick, with the risk of death being highest in the elderly and in those with underlying health conditions.

Gloucestershire Hospitals NHS Foundation Trust (GHNHSFT) provides hospital services from two large district general hospitals, Cheltenham General Hospital (CGH) and Gloucestershire Royal Hospital (GRH). Maternity Services are also provided at Stroud Maternity Hospital. Outpatient clinics and some surgical services are provided by Trust staff from community hospitals throughout Gloucestershire.

The Trust quickly recognised COVID-19 to be a significant challenge and agreed three overarching principles to guide all decisions and actions throughout the pandemic:

- To preserve life;
- Protect staff;
- Prevent spread.

The Review

Following discussion with our regional partner organisations and review of national guidance, the Trust undertook two main actions. Firstly to complete a retrospective review of measures taken by the Trust, to reduce the risk of hospital acquired (nosocomial) COVID-19 and manage outbreaks of COVID-19 infection. Secondly to identify patients who met the criteria for Duty of Candour and write to each patient or their next of kin.

The period of review was from November 2020 to 31 March 2021; this being the point in time when nosocomial transmission was noted to increase across the Trust. In addition, staff and patient testing was widely available and initial guidance had been issued by NHS England and Improvement (NHSE/I) in respect of infection prevention and control. This period was during the second wave of COVID-19 in the UK.

In line with regional guidance when a patient in one of our hospitals ‘probably’ or ‘definitely’ caught COVID as a result of being in the hospital (known as nosocomial transmission) we recorded a ‘patient safety incident’.

Classification	Date of positive specimen
Community onset	Less than or equal to 2 days after hospital admission or hospital attendance
Hospital onset-indeterminate	3-7 days after hospital admission

healthcare associated	
Hospital onset-**probable** healthcare associated	8-14 days after hospital admission
Hospital onset-**definite** healthcare associated	15 or more days after hospital admission

Hospital-onset COVID-19 deaths are defined as deaths that have occurred within 28 days of a positive test, where COVID-19 is cited as the cause of death on Part 1 or 2 of the death certificate (with no period of recovery in between) AND where the death falls into the probable or definite categories.

Where a probable or definite hospital-onset healthcare associated COVID-19 infection occurred, the care that was provided was reviewed to identify any aspects of care or treatment that could be improved.

Where the outcome for the patient of a probable or definite hospital-onset healthcare associated COVID-19 infection was thought to be severe harm (permanent or long-term harm, or requires life-saving intervention such as cardiopulmonary resuscitation (CPR) or admission to the Department of Critical Care), or death, then that incident met (and continues to meet) the definition of a serious incident and requires investigation under the Serious Incident Framework.

Where the result of a probable or definite hospital-onset healthcare associated COVID-19 infection is thought to have caused moderate or severe harm, 'Duty of Candour' is triggered. The Trust took steps to identify all patients, testing positive for COVID-19 at day 8+ (probable and definitive categories). The individual records of these patients were then reviewed for harm by a suitably qualified clinician considering the following criteria:

a. Have died within 28 days of a positive test and/or have COVID 19 recorded on their death certificate
b. Have developed symptoms requiring short or long term treatment
c. Have required an extended hospital admission or transfer to specialty care

The Trust wrote to each patient or their next of kin. Apologies, for the patient having contracted COVIs-19 whilst in hospital, were given. The letter also explained the approach to reviewing the circumstances leading to in-hospital transmission and offered support throughout the review process from the Trust's Family Liaison Officer.

Findings of the review:

In summary our review identified;

- The Trust developed a plan to respond to local COVID-19 outbreaks, as part of the wider response in Gloucestershire. The aim was for essential services to be maintained throughout, with as much business as usual as is possible. Community transmission rates and inpatient cases were continually reviewed with escalation and de-escalation of response measures, as required.

- The Trust Infection Prevention and Control Team (IPCT) maintained a strong working relationship with Gloucestershire Clinical Commissioning Group, Gloucestershire County Council, Gloucestershire Health and Care NHS Trust, Public Health England and NHS England/Improvement to ensure measures taken within the Trust were consistent with a healthcare system-wide approach.

- Existing command and control structures were expanded to manage unprecedented levels of demand, communicate and receive internal situation and IPCT updates and co-ordinate actions.

- The Trust Health and Safety Team conducted COVID-19 secure risk assessments of all communal areas and oversaw completion of COVID-19 secure risk assessments in all wards and departments.

- The Trust launched a ward based COVID-19 Assurance Framework (CAF) which is a simple list of standard prevention measures/strategies, based on national guidance, which must be adopted to reduce the risk of spread of infection;

    - Hand hygiene and decontamination of surfaces and equipment
    - Social distancing in the workplace and when travelling to work
    - Correct use of personal protective equipment (PPE)
    - Patient and staff testing in line with national guidance

- There were measures in place to separate admission areas for patients with COVID to minimise contact between patients being admitted for other clinical reasons. A COVID-19 triage assessment was conducted at all points of direct admission to the hospital and patients were not moved until COVID-19 test results were available. Green areas were designated for patients who were unlikely to have COVID-19 and Red pathways for those at high risk of having COVID-19.

- The Trust was selected as one of three pilot sites in the South West to commence twice weekly Lateral Flow Device Testing and this was available from 16 November 2020. Testing kits were available in patient facing, clinical areas such as wards, out-patient departments and theatres.

- The Trust adopted a number of measures to reduce the amount of movement within the wards. This included the implementation of restrictions on visiting in accordance with national guidance. However, the review identified factors such as staff sickness and the requirement to provide specialist input, resulted in movement of staff to maintain patient care.

- The Trust had robust processes and procedures in place to identify and manage outbreaks of infection in line with regional guidance. These measures were described in a Board Assurance Framework for Infection Prevention and Control report.

- During the second wave, a more advanced COVID-19 antibody test that allows the detection of an immune response to vaccines as well as to previous infection was introduced for patient testing on admission 24/7. This novel approach maintained low nosocomial infection rates and helped manage patient flow through both hospital sites at the peak of the second wave.

- In response to a significant post-Christmas rise in hospitalised case the Trust took urgent action to disrupt the spread of COVID-19 on wards by removing around 150 beds to create social distancing. Prior to this Perspex screens were used to create a two metre distance between patient bed and chair areas. However, the decision to reduce the bed base across the Trust led to a clear reduction in nosocomial rates of infection despite an increase in community cases nationally. The Trust's approach was presented to the Scientific Advisory Group for Emergencies (SAGE) as an exemplar of successful action taken at the height of the pandemic.

- The Trust collaborated with NHS and social care partners in Gloucestershire to roll out the COVID-19 vaccination programme to nationally agreed priority and eligible groups, including people over the age of 80, care home staff and NHS workers across Gloucestershire. The Trust acted as Management and Co-ordination Organisation (MCO) leading the programme for the county and managing the vaccination programme, as well as being responsible for the recruitment and training of all staff required to implement the campaign.

- Staff were supported by a comprehensive range of measures to protect their welfare and personal risk assessment. These recognise both the immediate and longer-term impact that the pandemic may have on both individual and collective wellbeing and resilience.

Conclusion-lessons learnt:

The Trust recognises the impact that the COVID-19 pandemic has had and continues to have on the whole community. The review heard evidence of the significant organisational and personal impact of COVID-19 and the exceptional efforts that have been necessary to manage the Trust's response.

The review identified a culture of proactive learning and improvement with a lessons learned' exercise at the end of the initial wave of the pandemic. The resulting presentation incorporated direct feedback from teams within all divisions on measures taken during the initial wave. Many teams reported changes in practice, taken as a direct result of the pandemic, which have led to improvements in services and therefore will remain in place during the recovery wave of the pandemic.

The Board Assurance Report in combination with the COVID-19 Assurance Framework provides structures to continually assess whether measures are in line with current national guidance.

Our review has concluded that from experience and from the lessons learnt in the second wave of the pandemic, there should be strict adherence to COVID-19 patient pathways. If required, specialist care should be provided to a patient who has tested positive in a red area and not within a green pathway.

Also, the Trust Executive Team would support removal of beds (in older buildings) as a measure to reduce exposure in a scenario of increased hospital admissions from a vaccine escaped, emergent strain of COVID-19.

Next steps

The Trust will;

1. Review the continued use of screens between beds.
2. Collaborate and support a region wide learning event to consider the findings of the reviews completed by individual organisations;
    - To identify best practice and support the embedding of IPC practice for future waves
    - To give an opportunity for wider comment from countywide representative and experts through experience (patients & family)
    - To share areas of innovation and excellence (including measures taken to support staff).

Author: Patient Information and Learning Team - November 2021