National Public Health Emergency Team

Joint Department of Health and HSE Update

Control of Transmission of COVID-19 in Acute Hospitals

17 December 2020

Action required
☒ For noting
☐ For discussion
☐ For decision
Control of Transmission of COVID-19 in Acute Hospitals

Executive Summary
Both the Department and the HSE are concerned in relation to ongoing COVID-19 transmission in the acute hospital sector and the adverse impact on patients and staff. The purpose of this joint paper is to provide a high-level overview of the steps that have been taken to date, to help reduce the risk of nosocomial infection, including the provision of significant additional funding for infection prevention and control in 2020 and 2021. The paper also outlines the current situation with regard to the extent of COVID-19 outbreaks in our acute hospitals and sets out the range of enhanced measures which have been, and will continue to be, implemented, both nationally and across the acute hospital system, to address this issue. These enhanced measures include: the establishment of a National Outbreak Control Oversight Team; the application of national criteria for testing of asymptomatic healthcare workers in the context of hospital outbreaks and, in particular, mass testing where there is a significant hospital outbreak; and a programme of serial testing of healthcare workers in acute hospitals from January 4th next. Both the Department and the HSE are committed to ensuring that these enhanced measures are implemented as a priority and will continue to engage to ensure that the measures are having the anticipated impact to manage and control the transmission of COVID-19 in our acute hospitals.

Background
In the early phase of the pandemic and in light of the high rate of COVID-19 infection amongst healthcare workers (HCWs), the Department and the HSE identified the critical importance of infection prevention and control (IPC) practices to protect both staff and patients. In March, in an effort to reduce the risk of nosocomial infection, NPHET, on foot of a paper submitted by the Acute Hospital Preparedness Subgroup, mandated the implementation of a suite of measures to prevent transmission of the virus in acute hospitals; to slow the demand for specialised healthcare; safeguard risk groups; protect HCWs; and minimise the export of cases to other healthcare facilities and the wider community.

The HSE used its existing overarching governance structure to provide oversight for all issues relating to COVID-19 infection control, and worked with the Hospital Groups to implement the NPHET mandated measures across a number of different areas, namely: governance, risk management, outbreak management, staff symptom declaration, staff segregation and adoption of social distancing guidelines. The Department continues to work with the HSE to ensure consistent implementation of these measures.

It is critical to the understanding and holistic management of transmission and outbreaks in acute hospitals that outbreaks occur in the context of introduction from the community served by the hospital. This is much more similar to the phenomenon observed over many years with Norovirus than with hospital “resident” organisms such as some antimicrobial resistant bacteria. This means that control of transmission in the community and of the human interface between the community and the hospital is fundamental to managing this risk.
Infection Prevention and Control

As mandated by NPHET, HIQA undertook a review of acute hospital IPC preparedness for COVID-19 and a final report was submitted to NPHET in early May. While the report highlighted the progress which has been made in recent times to expand IPC capacity and capability in acute hospitals, deficits in IPC capacity were identified.

Following discussion within the Department, and with the HSE, it was agreed that there was a need to consider an integrated approach to address IPC deficiencies across the acute hospital and community sectors. In August, funding of €3.9m was approved to address immediate IPC requirements, to help minimise and mitigate the risk to staff and patients and facilitate the delivery of safe health services. The funding provides for increased capacity in IPC, Occupational Health and immediate minor capital requirements across both acute and community services. The full year costs of these initiatives are provided for in 2021.

The Department and the HSE continue to engage in relation to the implementation of the IPC initiatives funded during the summer and the HSE has advised that all approvals for new posts, and for minor capital works, have issued. The capital projects to upgrade equipment and facilities are advancing in association with HSE Estates.

The need to continue to incrementally build IPC capacity in a co-ordinated manner over the coming years was also identified by the HSE and this was supported by the Department. In that context, Budget 2021 provided additional funding of €7m for comprehensive integrated IPC developments across acute and community services. This investment will facilitate the expansion of the National Antimicrobial Resistance and Infection Control Team, the extension of infection surveillance, as well as further increased integrated capacity across services.

Outbreaks in Acute Hospitals

Notwithstanding the investment and improvements in IPC, it is evident that acute hospitals continue to represent a specific risk with respect to transmission of infection, and concerns have arisen regarding the increased number of outbreaks within our acute hospitals. In those circumstances, additional efforts are required to prevent COVID 19 exposures and transmissions among and between HCWs and patients, in the acute hospital sector.
**Figure 1. No. of Open Hospital Outbreaks each week since the beginning of October 2020**

*Note: Data from some private hospitals and certain non-acute hospitals such as the Central Mental Hospital is included. The data is provided as at midnight on the Saturday of the week in question.*

Based on information provided by the Health Protection Surveillance Centre, the situation with regard to open COVID-19 outbreaks by Hospital Group, as of midnight on 14th December 2020, is set out in the table below.

<table>
<thead>
<tr>
<th>Hospital Group</th>
<th>Open Outbreaks in Acute Hospitals</th>
<th>Confirmed Cases Linked to Open Outbreaks in Acute Hospitals</th>
<th>Cases in HCWs Linked to Open Outbreaks in Acute Hospitals</th>
<th>Deaths Linked to Outbreaks in Acute Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCSI</td>
<td>8</td>
<td>72</td>
<td>35</td>
<td>3</td>
</tr>
<tr>
<td>IEHG</td>
<td>13</td>
<td>298</td>
<td>140</td>
<td>20</td>
</tr>
<tr>
<td>Dublin Midlands</td>
<td>11</td>
<td>174</td>
<td>68</td>
<td>9</td>
</tr>
<tr>
<td>ULHG</td>
<td>3</td>
<td>151</td>
<td>92</td>
<td>11</td>
</tr>
<tr>
<td>SSWHG</td>
<td>3</td>
<td>16</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Saolta</td>
<td>9</td>
<td>213</td>
<td>114</td>
<td>12</td>
</tr>
<tr>
<td>CHI</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Overall Total</strong></td>
<td><strong>47</strong></td>
<td><strong>924</strong></td>
<td><strong>455</strong></td>
<td><strong>55</strong></td>
</tr>
</tbody>
</table>

It is clear that the situation in relation to outbreaks in acute hospitals is problematic and is a cause for concern; Appendix 1 provides more detail on trends since 1st October.

Concerns regarding the significant adverse impact of hospitals outbreaks and the need to ensure an enhanced focus on outbreak management and control within the acute hospital sector have been the subject of discussions at NPHET for some time. There has been ongoing engagement between the Department and the HSE in this matter and the HSE has presented a number of papers for consideration by NPHET.
On 3rd December last, the HSE presented the paper “Enhanced measures for the control of spread of COVID-19 in Acute Hospitals”, which discussed the:

- Epidemiological overview of COVID-19 cases among HCWs;
- Measures in place to reduce the risk of virus introduction;
- Measures in place to reduce the risk of virus spread;
- Additional proposed measures to reduce the risk of virus introduction and spread;
- Current testing and outbreak protocols in place;
- Additional proposed testing.

The paper identified additional measures which are designed to reduce the risk of the introduction and spread of COVID-19 in acute hospitals. The measures identified, and subsequently mandated by NPHET, will help to prevent outbreaks and ensure that outbreaks, when they occur, are brought under control as quickly as possible, such that staff, patients and the continued provision of non-COVID care are protected to the greatest extent possible.

Testing of HCWs

The evidence shows that a significant proportion of infections detected are asymptomatic, or minimally symptomatic when initially detected. In addition, it is evident that infection spreads rapidly once introduced. In that context, concerns in relation to the rate of transmission of infection amongst HCWs has been the subject of discussion at NPHET throughout the pandemic. On 5th May last, NPHET requested the HPSC to prepare a paper regarding RNA/PCR for COVID-19, to form part of a strategic approach to testing, and how testing capacity should be best utilised and targeted. In a paper presented to NPHET on 3rd June, it was indicated that after a series of meetings with the Testing Strategy Group there was no consensus among the group as to the optimum PCR/RNA COVID-19 testing strategy in HCWs, outside of testing symptomatic HCWs and testing in the context of outbreak investigation and management.

Since then, the question of a testing regime for HCWs has been under ongoing consideration and a number of papers have been presented to NPHET and thinking has evolved. It is noted, in particular, that the new measures proposed by the HSE in the paper Enhanced measures for the control of spread of COVID-19 in Acute Hospitals, and endorsed by the NPHET, establish national criteria for testing asymptomatic staff in response to certain signals, including the testing of all staff where a significant outbreak occurs in a hospital, as well as the periodic testing of asymptomatic staff in absence of a signal. The HSE is developing a plan to implement mass testing of all HCWs in the acute hospital sector. The role of testing by antigen detection in addition to testing by detection nucleic acid may assist in implementation of mass testing in this sector. When available, results from Rapid Antigen Detection Test Validation Exercises and the sero-prevalence study among HCWs in two large acute hospital sites (PRECISE study) may provide additional information in relation to planning this process. It may be appropriate to target more frequent scheduled testing of asymptomatic staff groups towards those who may pose additional risk due to frequent movement between hospitals/wards/patients, for example pool or agency staff and certain healthcare students on placement. This will be informed by learning from initial testing of asymptomatic HCWs in the acute hospital sector. The enhanced measures will be implemented throughout the acute hospital sector.
Proposed Additional Testing Measures

1. Agreed national criteria for testing of asymptomatic staff in response to signals as follows:
   a) Single case of hospital acquired COVID-19, in addition to identified contacts tested on day 0 and day 7, all staff based on the ward in the previous 14 days and testing of all patients on the ward at the time;
   b) Additional testing of contacts who are hospital inpatient at intervals between day 0 and day 7 may be valuable in early identification of potentially infectious patients;
   c) Two or more linked cases on a ward or unit - testing of all staff based on the ward in the previous 14 days on day 0 and day 7, and testing of all patients on the ward at the time on day 0 and day 7 (if still inpatients);
   d) Outbreaks on multiple wards in one hospital - testing of all patients and all staff in the hospital (typically this would apply when 2 or more wards are affected in a model 3 hospital and 3 or more wards in a level 4 hospital).

2. Periodic testing of asymptomatic staff in the absence of a signal.

In a separate paper presented to the NPHET on 3rd December last on “Serial Testing of Healthcare Workers in Acute Hospitals”, the HSE indicated that a serial testing programme for HCWs will be trialled from January 4th next on three sites selected; the HSE is assessing the role of antigen testing in this regard. The serial testing approach is welcomed and will be particularly important as it will provide a mechanism for the early identification of cases amongst asymptomatic HCWs to allow self-isolation and prevention of the further spread of the virus. The detailed approach to serial testing will be subject to consideration in a separate document.

National Outbreak Control Oversight Team

At its meeting on the 10th of December the NPHET further discussed the issue of hospital outbreaks and it was recommended that the HSE establish a National Outbreak Control Oversight Team to focus on outbreaks in acute hospitals. The Team will ensure a consistent and appropriate national approach; to ensure the highest level of effectiveness in the response in the prevention of and response to any outbreaks; to monitor and provide weekly reports on the current situation; and to disseminate evolving learning and best practice. This should include a particular focus on ensuring a close to real-time understanding of the settings of infection, the scope of practice of cases in HCWs, the mode of, and risk factors associated with, transmission, and the preventive measures in place to prevent secondary and tertiary spread of infection among healthcare staff.

In light of the potential adverse impact that extensive hospital outbreaks could have on the acute hospital system, it is also intended that the Department and the HSE will engage with HIQA to explore potential approaches to the management and/or prevention of transmission and outbreaks in acute hospitals.
**Next Steps**

The Department and the HSE are engaging in relation to the implementation of the enhanced measures to control the spread of the virus in the acute hospital sector. The Department is keen to support the HSE to ensure that the agreed testing criteria, as endorsed by NPHET on 3rd December last, is enforced across the hospital system. The Department and HSE are agreed as to the urgency of the situation and the need to proactively mass test where a significant hospital outbreak occurs in order to protect staff and patients, and to minimise the risk of further community transmission. We are also agreed on the need to ensure that the proposed serial testing programme is carefully planned and implemented on a consistent basis across the acute hospital sector. An update on the progress made to commence serial testing of HCWs in acute hospitals will be presented to NPHET separately.

**National Oversight**

The HSE has now established a National Team to oversee the response to COVID-19 across all acute hospitals, addressing hospital acquired COVID-19 in hospital patients, COVID-19 in acute hospital staff, and the prevention, detection and control of outbreaks. The *National Management Team for Acute Hospital Acquired COVID-19*, has been constituted as a working group of the AMRIC Oversight Group. The Team will be chaired by the National Director Acute Operations and this will ensure that agreed actions are implemented within the established HSE accountability framework for acute hospitals. Weekly updates will include:

- the incidence of hospital acquired COVID-19 in hospital patients (by hospital)
- the incidence of COVID-19 in acute hospital staff (by hospital)
- the number of active COVID-19 outbreaks in the acute hospital system (by hospital)
- the impact of outbreaks on patients, staff and operation of services
- learning from experience in individual hospitals with wider application.

Membership will include the HSE Clinical Lead for AMRIC, the National Clinical Director for Health Protection (or nominee), National Lead Occupational Health, NCAGL Acute Hospitals, Representative of NAS, Lead Integrated Care, Niamh O’Beirne, Damien McCallion, Nominee OCIO, CEO (or nominee) from some acute hospital groups.

**Conclusion**

Both the Department and the HSE remain concerned in relation to ongoing COVID-19 transmission and outbreaks in our acute hospitals. In that regard, a range of enhanced measures, have been, and will continue to be, implemented both at a national level, and across the acute hospital system, to help prevent outbreaks occurring and to ensure that, where outbreaks occur, a robust and consistent response is applied to manage and control these outbreaks.

The Department and the HSE are committed to ensuring that the measures are implemented as a priority. We will continue to engage bilaterally to ensure that the situation is kept under ongoing review, and to confirm that the measures are having the anticipated impact.

*16th December 2020*
Appendix 1
The following data covers the period from 1\textsuperscript{st} October to midnight on 14\textsuperscript{th} December 2020.

Figure 2. No. of New Hospital Outbreaks created each day since 1\textsuperscript{st} October 2020 by the date the outbreak was created.
Figure 3. Line Chart of Confirmed COVID-19 Cases linked to Hospital Outbreaks

Note: This graph includes both currently open and closed outbreaks

The 7-day moving average of new cases is shown (to smooth out daily fluctuations and show trend). A separate line for HCW cases is also shown (blue line).
Figure 4. No. of Deaths per week linked to Hospital Outbreaks.
Note: These are the Epi weeks used by HPSC, i.e. Sun-Sat.
The data is based on date of death.