Western Health and Social Care Trust

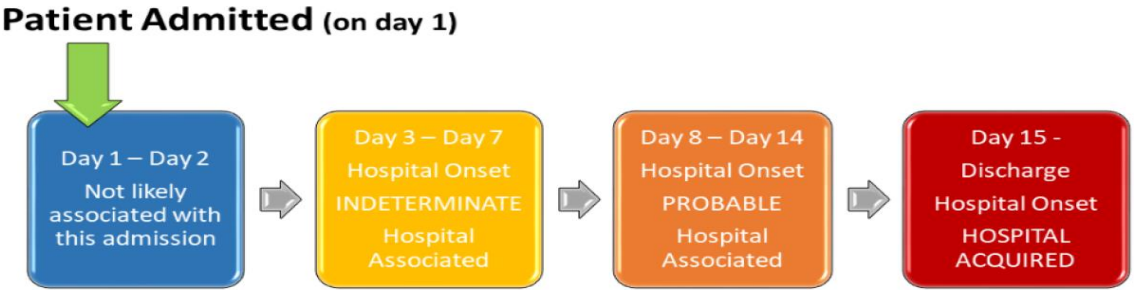
COVID-19 Nosocomial Infections Report to Trust Board

Meeting Date – 3rd November 2022

The Public Health Agency (PHA) introduced a new surveillance programme for healthcare-associated (also referred to as nosocomial) COVID-19 cases in Northern Ireland (NI) in early 2020. All laboratory-confirmed cases reported to the NI regional data warehouse (via local Health Protection Teams) from 26th February 2020 onwards are included. Duplicates (second positive <= 42 days after first positive) and second episodes (positive > 42 days after first positive) are removed. Each positive case is then linked by health and care number to a hospital admission, extracted from the Patient Administration System (PAS).

Cases are assigned to one of three healthcare-associated categories according to the number of days between the patient's admission date and test date, where the date of admission is defined as Day 1. The categories are defined as follows:

- **Hospital-onset, indeterminate hospital-associated COVID infection:** COVID-positive sample taken >2 days and <=7 days after admission.
- **Hospital-onset, probable hospital-associated COVID infection:** COVID-positive sample taken >7 days and <=14 days after admission.
- **Hospital-onset, healthcare-acquired COVID infection:** COVID-positive sample taken >14 days after admission.



In mid-August 2020 the PHA began issuing a weekly surveillance bulletin to each Trust reporting the number of healthcare-associated COVID-19 cases. These bulletins ceased in May 2021 and the PHA now advises Trusts to utilise the new online NI Nosocomial COVID-19 Dashboard instead. Below are tables, taken from the Dashboard, which show data at the Trust and NI level as of 21st October 2022.

Table 1. Cumulative number and proportion (%) of Hospital Onset COVID-19 cases out of all positive cases reported, Western Trust and Northern Ireland

Category	Total to Date			
	Western Trust		NI	
Hospital-Onset Indeterminate Healthcare-Associated	210	4.79%	2333	6.99%
Hospital-Onset Probable Healthcare-Associated	106	2.42%	1554	4.66%
Hospital-Onset Healthcare-Acquired	177	4.04%	1796	5.38%

Table 2. Cumulative number and proportion (%) of Hospital Onset COVID-19 cases linked to COVID-19 related deaths, Western Trust and Northern Ireland

Category	Total to Date			
	Western Trust		NI	
Hospital-Onset Indeterminate Healthcare-Associated	29	13.81%	389	16.67%
Hospital-Onset Probable Healthcare-Associated	8	7.55%	331	21.30%
Hospital-Onset Healthcare-Acquired	21	11.86%	362	20.16%

The Western Trust has the lowest rates of healthcare-associated COVID-19 cases and COVID-19 related deaths in the region for all three infection categories. In order to understand the reasons behind this performance the Infection Prevention & Control (IP&C) Team asked the PHA to interrogate the Dashboard in more depth to see if there were any factors which might be contributing, such as patient demographics. The PHA responded as follows:

- The Western Trust has had the lowest admissions over the course of the pandemic. When admissions is applied as a denominator, the Western Trust still has the lowest rates.
- The age demographics of COVID-19 cases are similar in all five Trusts.
- The positivity rate in the Western Trust is not particularly low or particularly high.
- The data suggests that the Western Trust has not benefitted from a younger patient population, nor is it under-testing.

The PHA's data review, therefore, supports the Western Trust having the lowest rates but is unable to explain it. This means the performance must be due to environmental features and actions specific to the Trust. For example, the newness of some of the hospital estate, the availability of single rooms, good IP&C practices by staff, early adoption of COVID-19 patient pathways and cohorting and maintaining these for longer, prompt decision-making by multidisciplinary care teams, early treatment intervention by the Respiratory Team, the maintenance of an audit assurance programme during the pandemic, managerial structures and communication processes.