

Dynamic Public Health Risk Assessment (DPHRA): advice for hospitals, care settings and Public Health Area Teams.

21 December 2023

Context:

- **The respiratory virus season** in the Northern Hemisphere runs from October (Week 40) of one calendar year to May (Week 20) of the next calendar year (for instance from week 40 2023 to week 20 2024). Based on historical surveillance data, we know that respiratory viruses are most likely to circulate at detectable levels during this time.
- **Modelling predictions** estimate that for **2023-24 season**, the winter pressures due to Influenza wave is likely to **peak between weeks 1-3 2024**, although the Influenza season extends into Q2 2024.
- At this time, COVID-19 levels of infection have started to rise, driven in part by a new variant, JN.1 – a sublineage of the COVID-19 Omicron variant. We have detected this variant in clinical and laboratory samples with significant levels in waste water sampling too.
- During the winter period, especially around the time surge plans are activated within the HSE, we are likely to see **health & care settings experience outbreaks of respiratory and other infections**. Large settings like hospitals will quite possibly also experience multiple outbreaks during periods of high community levels of infection.
- **This document outlines the framework that Institutions can take whilst assessing these organisation level risks.**
- Please note that this document must be read in **conjunction with published national guidelines**. Follow the link below for **relevant guidance for Acute Respiratory Infections**: <https://www.hpsc.ie/a-z/respiratory/acuterespiratoryinfection/>

Framework for Dynamic Public Health Risk Assessments:

Declaring an **organisation wide outbreak** of COVID or influenza at a healthcare setting should be based on an institutional risk assessment.

A dynamic Public Health Risk Assessment at institutional level (hospital or care home) is undertaken by an Outbreak Control Team (OCT) or an Incident Management Team (IMT) involving senior decision makers from the setting and Public Health. In a hospital, this will incorporate advice and expertise from microbiology, IPC, Occupational Health and Public Health.

It should be done a case-by-case basis with guiding parameters such as those outlined below:

AREA/ Health Region factors:

- Level of disease circulating in the community, with evidence of **community transmission**. High levels of disease rate per 100,000 at county or Local Electoral Area (LEA), waste water surveillance etc provide evidence.
- Frequency or rate of **outbreaks** recorded- within health and care settings and other settings including congregate residential settings.
- Severity of illness** and impact of outbreaks on patients i.e. hospitalisations, ICU admissions, deaths etc.

- ❑ The **pathogen**: Transmissibility of the pathogen usually viruses as new evidence suggests. Evidence of mixed pathogens- a multi-pathogen outbreak.

Setting factors:

- ❑ **Vulnerability** of patients on the site and in areas affected or likely to be affected by outbreaks e.g. immunosuppressed, cancer centre, dialysis units etc.
 - ❑ Configuration/ layout of the **setting** - in a hospital, its layout and proximity of wards to each other e.g. is it an entire wing affected or a number of wings and is it possible to closing off a wing;
 - ❑ Availability of isolation wards/capacity to cohort patients.
 - ❑ Level of flu and covid **vaccine coverage amongst staff**.
 - ❑ Staff absenteeism and the **staffing levels** available to work.
- When the Area/ Health Region factors highlight raised risk in itself, that could trigger an Area level response.

Institution and Health region dynamic Public Health Risk Assessments

The implementation of the framework is set within the context of certain broad guiding principles. When the risk levels are high – usually indicated by several factors as outlined above demonstrating concerning trends, additional mitigation measures as outlined below may be considered by the Institutional IMT. When there are several institutions where institutional DPHRA is giving rise to escalated measures, the Regional Health Public Health Department would consider an overall Area or Regional Health DPHRA, in consultation with system partners including CHO, Hospital group and other key stakeholders.

Guiding principles and additional measures:

Institutional DPHRA

Principles to guide decision making:

- Usually initiated by any member of the OCT or senior manager within the setting.
- Public Health involvement is a requirement and the MOH is a required member of the OCT or IMT.
- Specific Public Health Intelligence from national and regional health protection may be sought to inform the dPHRA.
- Laboratory evidence of a WHO Variant of Interest or Variant of Concern.

Additional measures:

- Enhanced IPC measures
- Non pharmaceutical measures within settings - Visiting restrictions, wider use of facemasks in health/ health and social care settings, managed patient flow.
- Vaccination drive to improve uptake amongst staff.

Health Region DPHRA

Principles to guide decision making:

- Usually initiated by the Public Health department in the Health Region/ Area on identifying unusual patterns in surveillance signals.
- The ADPH or MOH initiates and chairs the OCT or IMT.
- Specific Public Health Intelligence from national and regional health protection may be sought to inform the DPHRA.
- Laboratory evidence of a WHO Variant of Interest or Variant of Concern.

Additional measures:

- Enhanced public messaging.
- Non pharmaceutical measures within settings - Visiting restrictions, wider use of masks in health/ health and social care settings, managed patient flow.
- Emphasise importance of antivirals.
- Vaccination drive to improve uptake in the population.