



HEALTH SERVICE EXECUTIVE HEALTH PROTECTION STRATEGY 2022- 2027

Year One Implementation Report



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List of Acronyms

ADPH	Area Director of Public Health
AFP	Acute Flaccid Paralysis
AORP	Acute Operations Response Programme within HSE Public Health: Health Protection
BCG	Bacillus Calmette-Guérin (BCG) vaccination - a vaccine primarily used against tuberculosis
BBV	Blood Borne Virus
BOTP	Beneficiaries of Temporary Protection
CBRN	Chemical, Biological, Radiological And Nuclear (threats)
CCB	Co-ordinating Competent Body
CCT	Covid Care Tracker information system
CIDR	Computerised Infectious Disease Reporting
CMP	Contact Management Programme, HSE
CNM	Clinical Nurse Manager
COVAX	Electronic dataset which records all COVID-19 vaccinations for all residents
CPD	Continuous Professional Development
CT	Contact Tracing
DAFM	Department of Agriculture, Food and the Marine
DNHP	Director of National Health Protection, HSE
ECDC	European Centre for Disease Prevention and Control
EPIET	European Programme for Intervention Epidemiology Training
ePLF/ EUdPLF	digital Passenger Locator Form exchange platform
EWRS	Early Warning and Response Systems
gbMSM	Gay, bisexual and other men-who-have-sex-with-men
GOARN	Global Outbreak Alert and Response Network
HERA	Health Emergency Response Agency
HLIU	High-Level Isolation Unit
HPAI	Highly Pathogenic Avian Influenza
HPSC	Health Protection Surveillance Centre
HPV	Human papillomavirus
HSE	The Health Service Executive (HSE) provides public health and social care services to everyone living in Ireland
HTPP	Health Threats Preparedness Programme
IGAS	invasive Group A Streptococcus
IHR	International Health Regulations 2005
IMT	Incident Management Team
IPAs	International Protection Applicants

MDR/XDR	Multi-drug resistant
MMR	Measles Mumps and Rubella vaccine
NCG	National Coordination Group (Avian Influenza)
NGOs	Non-Governmental Organisations
NIAC	National Immunisation Advisory Committee
NIIS	National Immunisation Intelligence System
NIO	National Immunisation Office, HSE Public Health: Health Protection
NIOC	National Immunisation Oversight Committee
NSIO	National Social Inclusion Office
NSP	National Serosurveillance Programme
NVRL	National Virus Reference Laboratory
OCIMS	National Outbreak Case and Incident Management Surveillance System
PPE	Personal Protective Equipment
PHEIC	Public Health Emergency of International Concern
PHRA	Public Health Risk assessment
PPS	Point Prevalence Surveillance
RPA	Robotic process automation (Bots)
RSV	Respiratory Syncytial Virus
SHCPP	Sexual Health and Crisis Pregnancy Programme
STIs	Sexually Transmitted Infections
TB / LTBI	Tuberculosis / Latent TB Infection
TTEx/TTE/TTX	Tabletop exercise
VHF	Viral Haemorrhagic Fever
VPD	Vaccine Preventable Disease
WGS/ WGS	National Whole Genome Sequencing (WGS) Programme
WHO	World Health Organisation
WSP / NWSP	National Wastewater Surveillance Programme

Foreword

On behalf of HSE Public Health: Health Protection, I am pleased to present this report, which sets out at a high level, health protection activities and achievements spanning October 2022 to September 2023, one year post the launch of the HSE's first Health Protection Strategy 2022-2027.

Our key focus is to **protect and prevent**: protect our population against all health hazards and to prevent harm caused by such health threats.

Over the past year, we have worked as an integrated national health protection service to combat and mitigate risks posed by infectious diseases such as winter respiratory viruses (including seasonal flu, RSV and COVID-19), Mpox, Invasive Group A Streptococcal infection, TB, gastro-intestinal infections, sexually transmitted infections, blood-borne viruses and Highly Pathogenic Avian Influenza (HPAI). Our report describes examples of great work across all of these areas, led by Regional Health Area Health Protection Teams and our National Health Protection Office (including the National Immunisation Office and the Health Protection Surveillance Centre). Our responsibility to develop all hazards approach to health protection is also progressing, with the establishment of a consultant led Environment and Health Programme, and through national and international work to prepare for and respond to radionuclear or chemical threats. We have also been working to prepare Ireland for any future pandemics, learning from the hard-won lessons from the COVID-19 pandemics and working closely with international partners including ECDC, the EU Commission, WHO and the UK Health Security Agency.



This report and our inaugural National Health Protection Conference on the 12th October 2023 provides an opportunity to celebrate and showcase our achievements over the past year. We are also mindful of the work to be done, the challenges we face, and the journey we need to make over the remaining timeline of the National Health Protection Strategy to realise its ambitions.

The theme of our National Health Protection Conference, '*no one is safe until everyone is safe*', speaks to our commitment to safeguard the health of our most vulnerable residents and thereby safeguard the health of all. This includes people experiencing poverty, homelessness, those dependent on drugs or alcohol, those in prisons, and vulnerable migrants. When people come to Ireland, whether seeking refuge from war, political oppression or the impact of climate change, or simply seeking a better life as economic migrants, we have a responsibility not only to protect their health but also to protect the health of the wider population. This has been and will continue to be a key tenet underlying all our health protection endeavours.

The achievements and plans for future work outlined in this report are particularly relevant in the context of the recently published Report of the Public Health Reform Expert Advisory Group (['Brady Report'](#)), which sets out recommendations for a significant strengthening of Ireland's public health system to ensure a system that can best support the health and wellbeing of the people of Ireland.

Notably and aligned with our work in HSE Public Health: Health Protection, that report calls for co-ordinated and clear leadership, strengthened national preparedness for future pandemics and reduction of health inequalities among other core priorities. I welcome the recommendations within the Brady Report and look forward to working with HSE and Department of Health colleagues to strengthen Ireland's health security and wider public health system.

I am deeply grateful for the hard work and dedication of colleagues across HSE Public Health: Health Protection, nationally and regionally. I want to pay tribute to my colleagues in the HSE Public Health Senior Management Team, led by Dr John Cuddihy, National Director of Public Health. In addition, I want to thank our colleagues across the entire health system in Ireland as well as our international partners. Without their expertise and dedication our collective successes outlined in this report could not happen and our shared challenges could not be met. I am looking forward to continuing collaborative working over 2024 and beyond towards full implementation of HSE Health Protection Strategy 2022-2027.



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Stiúrthóir um Chosaint Sláinte Náisiúnta, FSS.

Introduction

One year post the launch of the [HSE Health Protection Strategy 2022-2027](#), this report presents a summary of key health protection activities and achievements that demonstrate the significant progress made over the past year towards implementation of the Strategy.

The HSE Health Protection Strategy 2022-2027 objectives provide the structure for this report. Throughout the report, brief descriptions of the health protection programmes of work are profiled alongside summaries of collaborative key achievements, ongoing and future activities for the coming year. Each chapter concludes with some 'vignettes of success' relevant to the objective. Information presented in the report was provided by health protection Leads and their teams and often illustrates cross-programme and inter-agency collaboration.

All-hazards health protection, by its nature, is a collaborative endeavour involving regional, national and international stakeholders. Much of the achievements and work presented in this report has been undertaken in partnership, not only with health protection colleagues in the HSE Health Regions, but also with other colleagues across HSE service areas, government departments, state agencies and international colleagues. Their expert contribution, leadership and co-operation in this regard must be acknowledged.

This **online** publication purposely coincides with the inaugural [health protection conference](#) on October 12th, 2023 providing an additional opportunity to demonstrate accountability and showcase achievements to date. By providing insights and evidence into how health protection is transforming in Ireland, this report serves the dual purpose of reporting on progress on the implementation of the Health Protection Strategy and how health protection is meeting its public health reform objectives.

It should be noted that the work described in this report is not a comprehensive or exhaustive list of all work undertaken by those working in and with health protection. Rather the report seeks to demonstrate the significant progress made in the first year of this five-year strategy that aims to improve health security and protection for all.

Our Strategic Health Protection Objectives 2022 - 2027

1 Strengthen **surveillance** and epidemiological analysis of health protection threats

2 Ensure standardised public health approaches to prevention, investigation, surveillance, and response to notifiable **infectious diseases**

3 Further develop public health risk assessment of, advice on, and advocacy on non-infectious disease hazards related to the **environment**

4 Enable prevention, early detection and optimal public health **preparedness and response** of major incidents for all hazards

5 Deliver a high level of prevention and control of vaccine-preventable diseases across population groups through **immunisation** programmes

6 Employ evidence-informed approaches to mitigate the impact of **inequities** on prevention and control of infectious diseases and other defined hazards

7 Enhance our understanding of and health protection approaches to **global health** issues and their impact on the population of Ireland

8 Develop a health protection **research strategy** for Ireland that includes both local and international collaboration

9 Expand and enhance the capabilities, education, and training of the **multidisciplinary health protection workforce**

10 Provide direction and support to the development of a **nationally integrated health protection service**, rooted in strong governance

Objective One: Strengthen surveillance and epidemiological analysis of health protection threats

Spotlight on Health Protection Surveillance Centre

The [Health Protection Surveillance Centre](#) (HPSC) is Ireland's specialist agency for the surveillance of communicable diseases. The purpose of HPSC is to protect health and prevent harm using disease surveillance, evidence-based guidance, and applied epidemiology.



[HPSC staff](#) works in partnership with health service providers and organisations in Ireland, the [European Centre for Disease Prevention and Control](#) (ECDC), the World Health Organisation (WHO) and other Member States/international partners/organisations around the world, to provide the best possible information for the control and prevention of infectious diseases.

HPSC has six main areas of responsibility as per **Figure 1**. These are further described [here](#).



Figure 1 HPSC's six main areas of responsibility – www.hpsc.ie/abouthpsc

Work is underway to extend existing surveillance or link with already established surveillance systems external to the HSE to support the delivery of an integrated, all-hazards health protection function.

What we will do (HSE Health Protection Strategy 2022-2027)

Action 1: Determine health protection surveillance requirements for an all-hazards approach.

Action 2: Expand surveillance capacity and capability for an all-hazards approach, as necessary.

Action 3: Modernise or replace information systems to ensure they are fit for purpose, capturing the full scope of data required to inform public health actions and aligned with other HSE client management systems.

Action 4: Strengthen collaboration across national health protection and regional Public Health Areas to enhance surveillance/ epidemiology methodologies and capacity.

Action 5: Ensure timely surveillance data and epidemiological analysis to drive public health action and prioritisation.

Achievements

- Commenced the development of a gap analysis to describe current surveillance activities and to identify areas of health protection activities that are not captured by current surveillance efforts, particularly those related to environment and health. This is due to be published by end of Q4 2023 (**Action 1**).
- Reconvened the Computerised Infectious Disease Reporting (CIDR) [National Steering Committee](#). This Committee meets four times a year to oversee the programme of work of the CIDR system (**Action 3**).
- Expanded the use of robotic process automation (RPA, 'Bots') in CIDR to cover influenza and respiratory syncytial virus (RSV) thereby increasing surveillance capacity in Health Regions and at HPSC. This was completed ahead of an unprecedented winter season in 2022/2023 which saw a record number of notifications of influenza and RSV (**Action 3**).
- Convened a strategy group for data visualisation with representation from Data Visualisation Team, CIDR Team, IT team, Epidemiologists and Communications. Key training objectives have been agreed, with some training already commenced, and discussions are ongoing about additional software needs (**Action 3**).
- Following procurement processes, a vendor has been selected to procure a [Posit Server](#) to enable more robust data analyses across the organisation (**Action 3**).
- HPSC support an interim central clearing house solution until CIDR is reconfigured to reflect the geographical boundaries of the [six HSE Health Regions](#). The East Clearing House, with support from a CIDR business objects interim reporting solution, enables (former HSE-East) area notifications to be processed and available for analysis by relevant Health Region. (**Action 4**).

- The HSE Contact Management Programme (CMP) data processing and investigations (DPI) team have been trained on the CIDR system by HPSC to carry out specific data validation tasks. To date over 90,000 records have been successfully updated by the CMP DPI team **(Action 4)**.
- 48 epidemiological reports were published monthly on the [HPSC website](#) as of mid-August 2023 **(Action 4, 5)**.
- HPSC's Vaccine Preventable Disease (VPD) Team produced [immunisation uptake data](#) for the national universal children's vaccination programme, the school immunisation programmes, the COVID-19 immunisation programme and the seasonal influenza vaccination programme **(Action 5)**.
- HPSC surveillance teams supported and provided epidemiological data required for outbreak investigations on mpox, hepatitis of unknown aetiology in children, invasive Group A Streptococcus (iGAS), salmonella and shigella clusters **(Action 5)**.
- The [National Wastewater Surveillance Programme](#) (NWSP) implemented as an integral part of COVID-19 surveillance has been expanded to include surveillance for poliovirus. The NWSP is working with a national expert group on the proposed *Urban Wastewater Treatment Directive* to ensure Ireland is prepared for its implementation. The NWSP is also participant in the upcoming EU-WISH joint action supported by [HERA](#). The focus of EU-WISH is to support activities to improve national public health wastewater surveillance capacities by strengthening knowledge exchange and sharing best practices based on scientific evidence **(Action 5)**.
- HPSC successfully established a [National Serosurveillance Programme](#). Activities have been expanded beyond COVID-19 seroprevalence studies to assess prevalence of exposures to other pathogens, such as measles, to inform vaccination strategy. The COVID-19 data are also presented in the Seroepidemiology of COVID-19 Data Hub. See <https://seroepi-hpscireland.hub.arcgis.com/> **(Action 5)**.
- Respiratory virus surveillance in Ireland has been strengthened and expanded, both in community and health and care settings. In line with ECDC and WHO recommendations, a mosaic of sustainable and resilient integrated [respiratory virus](#) surveillance systems has been developed **(Action 5)**.
- The [National Whole Genome Sequencing \(WGS\) Programme](#) has tracked the molecular epidemiology of SARS-CoV-2 in Ireland to inform and enhance the public health response to the COVID-19 pandemic. The national WGS programme continues to build on numerous achievements, including being in the top seven countries globally regarding turn-around time for SARS-CoV-2 WGS over a 90-day period (June-August 2023) **(Action 5)**.

- ECDC used the [FE.1 SARS-CoV-2](#) outbreak in their training material as a good example of a national SARS-CoV-2 WGS programme. EU4 Health funding has been obtained to strengthen the WGS Programme (originally funded by ECDC) enabling integration of WGS into a fundamental component of the national public health system **(Action 5)**.
- HPSC established a respiratory modelling group on an interim basis using support from seconded staff, and has established a Modelling Advisory Group to HPSC, with membership from HPSC and academic institutions **(Action 2, 5)**.
- HPSC co-ordinated the inclusion of Irish hospitals in the ECDC international point prevalence surveillance studies on healthcare associated infection and antimicrobial use (ECDC [HAI PPS and HALT](#) surveys) in 2023, with over 60 acute hospitals participating **(Action 5)**.
- HPSC co-ordinated the [national surveillance programme for C. difficile](#) associated disease in Ireland, for antimicrobial consumption in community and hospitals, for invasive Carbapenemase-producing Enterobacterales (CPE) infections and enhanced bacteraemia surveillance ([EARSS-Net](#)), Candida auris and for emerging pathogens or pathogens with resistance mechanisms that are novel or important for public health **(Action 5)**.

Ongoing Work and Future Activities

- Following the completion of the surveillance gap analysis (mentioned above), HPSC will publish a strategy that outlines gaps in infectious disease surveillance and non-infectious disease hazards to be incorporated into health protection surveillance. This document will include expected outputs and resource requirements needed for all hazards surveillance **(Action 1)**.
- HPSC will work with the *Environment and Health Lead* to include key environmental surveillance indicators in the dashboard of metrics collected, collated, and published as part of gap analysis to deliver an 'all hazards' surveillance programme within *HSE Public Health: Health Protection* to improve surveillance activity in Ireland **(Action 2)**.
- HPSC is implementing an information governance and data management quality improvement programme to ensure robust outputs that inform policy and public health actions **(Action 3)**.
- Working with the office of the National Director for Public Health (NDPH), HPSC will support the launch of a procurement process for an Outbreak and Incident Management Surveillance System (OCIMS), including scoping surveillance requirements for the tender of OCIMS **(Action 3)**.

- Continue to upgrade the products and services of the [Computerised Infectious Disease Reporting \(CIDR\)](#) information system to ensure a robust, secure, and stable platform to manage the surveillance and control of infectious diseases in advance of the reconfiguration of CIDR to include new HSE Regions **(Action 3, 4)**.
- HPSC has initiated the programme of work to migrate standalone surveillance information systems to a unified and structured query language (SQL) infrastructure. This will ensure valuable data is available in a structured format for epidemiological and modelling analysis **(Action 3)**.
- HPSC will complete the programme of work to reconfigure CIDR to include the new HSE Health Regions **(Action 3, 4)**.
- HPSC is strengthening surveillance networks between HPSC and the Area Departments of Public Health to provide surveillance and epidemiological intelligence to health protection teams working in [HSE Health Regions](#) and the health protection programmes nationally **(Action 4)**.
- In response to resource issues (resulting from delays with recruitment for epidemiology staff in HSE Health Regions, HPSC implemented several measures to lessen the surveillance workload. These measures included restricting validation requests to high priority requests, supporting enhanced data uploads to CIDR and CIDR training **(Action 3, 4, 5)**.
- HPSC is developing a contingency plan to address and mitigate the risks associated with gaps in surveillance and epidemiological capacity at HPSC **(Action 5)**.
- HPSC is developing a robust information hub to enable dynamic display of weekly notifiable infectious disease data. The design and technical solution are complete, and consultations have taken place internally in HPSC and with staff in the HSE Health Regions. Over the next two months, the final stages of developing FAQs, instructional notes, standard operating procedures (SOPs), staff training and the communication strategy will occur. Initially the hub will be available internally to ensure smooth running before being made available publicly **(Action 5)**.
- HPSC continues to improve respiratory disease surveillance through the recently funded business cases that includes wastewater surveillance, seroepidemiology, whole genome sequencing, expansion of the GP sentinel surveillance programme and the expansion of the hospital SARI surveillance programme **(Action 5)**.
- HPSC is developing biostatics and modelling capabilities to address existing and future infectious diseases and other threats, as part of an all-hazards health security approach **(Action 5)**.
- Work is underway to create a Programme Manager's Hub which will provide an efficient and coordinated approach to Programme Management support across the many programmes being implemented by HPSC **(Action 5)**.

- HPSC, with Irish and international ([UKHSA](#)/ [ECDC](#)) colleagues continue to investigate outbreaks associated with contaminated products (**Action 5**).
- HPSC continues to disseminate information to clinicians and surveillance networks from colleagues in the UK and ECDC advising colleagues of notifications of microbiological and/ or clinical importance (**Action 5**).
- HPSC will co-ordinate the inclusion of residential care facilities in ECDC international point prevalence surveillance studies on healthcare associated infection and antimicrobial use planned for 2024 (**Action 5**).

Celebrating Success

Prize Winners



RCPI Faculty of Public Health Medicine **Winter Scientific Meeting**, December 7th, 2022: Epidemiologist Laurin Grabowsky (pictured) represented the **Seroepidemiology Unit** and won third prize for her poster: “**Interactive Data Visualisation: Insights gained from developing a new national COVID-19 Seroepidemiology Hub in Ireland 2021-2022**”.

Dr Emer Liddy was long oral runner up for her presentation “**Epidemiology of hepatitis of unknown aetiology in children in Ireland**”.

RCPI Faculty of Public Health [Summer Scientific Meeting](#), May 24th 2023: Dr Catherine (Kate) Timoney was awarded first place in the poster competition for her poster on “**Network Analysis of Mpox cases in Ireland**”, and Charlotte Salgaard Nielsen was a runner-up in the short oral competition for her presentation on “**Salmonella Typhimurium outbreak linked to chocolate products as part of wider international outbreak, a matched case-control study, Ireland, 2022**”.

Jacqueline Horgan Bronze Medal Meeting, November 24th 2022: Medal winner Dr Louise Marron with the following submission “**A National Survey of Parents’ Views on Childhood Vaccinations in Ireland During the COVID-19 Pandemic.**”

National Presentations

Gillian Cullen, Senior Epidemiologist at HPSC joined a panel discussion at the HSE eHealth Automation Conference in Kilkenny Castle on 2nd March 2023. Gillian spoke about the huge time and cost saving benefits the **Robotic Automation Process** has been to HPSC and public health where SARS-CoV-2, influenza and RSV records are automatically processed in the national infectious disease reporting system (CIDR). This has allowed HPSC and public health epidemiologists to focus more on data analysis and the production of reports for more timely public health intervention.

Publications

Principal Epidemiologist, Lisa Domegan and Epidemiologist, Carina Brehony co-authored an article on a **social network and genomic analysis of an OXA-48 carbapenemase-producing Enterobacterales hospital ward outbreak in Ireland** as part of their EPIET and EUPHEM fellowships.

Epidemiology of COVID-19 Data Hub

HPSC's [Epidemiology of COVID-19 Data Hub](#), launched in 2022 was refreshed and relaunched to provides COVID-19 data for Ireland by epi week as well as publishing numbers of hospitalised cases and ICU admissions.

Public Communications

RTÉ News, Sept 15th 2023: Dr Greg Martin, Director HPSC speaking on RTÉ's Six One news regarding an outbreak of botulism in France. HPSC engages with the public on matters where the dissemination of important information can contribute to health protection in Ireland.



Objective Two: Ensure standardized public health approaches to prevention, investigation, surveillance, and response to notifiable infectious disease

Spotlight on Acute Operations Response Programme

During 2022-23, the **Acute Operations Response Programme (AORP)** coordinated and led a national, integrated, all-hazards health protection response, with clear national and regional mandated responsibilities for the provision of that response. The key overarching programme responsibilities were as follows:

- Be responsible and accountable for the end-to-end implementation of responses and performance.
- Design and implement systems and infrastructure to enable agile and dynamic, acute health protection responses to threats from all hazards.
- Operationalise, lead, monitor and evaluate acute operational responses to threats from all hazards.

18 Consultants in Public Health Medicine (CPHMs) in Health Protection lead multidisciplinary teams in the delivery of consultant-led all hazards [health protection services](#) across the [six Departments of Public Health](#) in the HSE Health Regions.

The AORP Clinical Lead changed role in September 2023. Along with the recruitment of new national Consultants in Public Health Medicine in HSE Public Health: Health Protection, this Programme has been realigned under the governance of the Director of National Health Protection. Integrated working in collaboration with the Department of Public Health, Health Protection Teams in HSE Health Region remains a priority.

A **National TB Lead** was appointed in October 2022 for 12 months to establish a TB Elimination Programme for Ireland including:

- Developing a Collaborative TB Strategy for Ireland
- Updating national TB guidelines
- Augmentation of existing TB control programme
- Improve and augment national [surveillance of TB and LTBI](#).

The Clinical Lead of the **HSE Contact Management Programme (CMP)** established to support contact tracing of Covid-19 cases, reported to the Director of National Health Protection in 2022/23. The [Strategic Approach for the Management of COVID-19: Preparedness for Autumn/Winter 2022/2023](#) published by the Department of Health on the 12th October 2022 places a particular emphasis on preparedness and contingency planning. This required CMP to adapt to change in public health guidance where contact tracing would trace and intervene in pathways of transmission in individuals and settings where there is a risk of progression to serious disease.

What we will do (HSE Health Protection Strategy 2022-2027)

Action 1: Develop specific plans for the protection of the population from priority infectious diseases, such as tuberculosis.

Action 2: Develop and resource systems and SOPs to support sustainable, robust, and efficient health protection action.

Action 3: Collaborate with key stakeholders in a One Health approach to notifiable infectious diseases.

Action 4: Continue to provide robust surveillance for pathogens with epidemic/pandemic potential, such as Influenza and SARS CoV-2.

Action 5: Continue to provide comprehensive disease specific surveillance and responses, including, case management, vaccine programmes, prophylaxis/treatment as available.

Action 6: Develop a standardised approach with clear criteria, for the evaluation of public health responses to infectious diseases major incidents.

Achievements

- Co-ordinated the public health response to people fleeing war in Ukraine and led the early Public Health response to the arrival of people fleeing war to ensure a standardised regional response to relevant health protection issues **(Actions 1, 2, 5)**.
- Helped prevent the impact of inequities in the international migrant population, which increased ten-fold to almost 100,000 in 2022/2023 **(Actions 1, 2, 5, 6)**.
- Provided advice and materials for residents and managers in congregate settings regarding:
 - Covid-19 infection prevention and control;
 - the management of communicable diseases in congregated settings;
 - immunisation requirements in Ireland;
 - blood borne viruses and referral;
 - TB screening and referral;
 - prevention and management of rabies;
 - recommendations re baseline individual health assessments for migrants.**(Actions 1, 2, 5 and 6)**
- Strongly advocated for the need to offer catch-up vaccination for international migrants from March 2022. Consequently, [CHO vaccination teams](#) were established in December 2022. See also Objective 5. **(Actions 1, 2, 5 and 6)**

- AORP lobbied for and supported the re-establishment and maintaining the services of [HSE National self-isolation facilities](#) in Portrane, Co. Dublin for this population and others who are unable to isolate where they live (**Action 2**).



- Developed public health guidance on preventing and controlling outbreaks of [varicella \(chickenpox\)](#) in congregate settings accommodating vulnerable migrant adults and children (HSE internal publication, July 2023) (**Action 2**).
- Liaised with the voluntary sector, specifically [SafetyNet](#) to provide emergency vaccination services in the event of outbreaks in congregate settings over Christmas and New Year 2022 / 2023 (**Actions 1, 2, 5, 6**).
- Established a collaborative working relationship with the National Ambulance Service ([NAS](#)) culminating in an agreed interim protocol (HSE **unpublished August 2023**). This protocol describes how collaboration with the NAS Emergency Threats Team (ETT) will provide emergency testing, vaccination, and transport to the National Isolation Facility for those living in vulnerable accommodation, in the case of an outbreak of specified infectious diseases (**Actions 1, 2, 5, 6**).
- Completion of **Guidance on the [Public Health Management of Diphtheria in Congregate Settings in Ireland](#)** (August 2023). Developed in collaboration with regional Public Health, the acute hospital and community sectors, the National Ambulance Service, the [National Virus Reference Laboratory](#) (NVRL) and [UKHSA](#) Colindale office (**Actions 1, 2, 6**).
- Led the initial acute HSE response to [mpox, a global Public Health Emergency of International Concern](#) (PHEIC) (May 2022 -October 2022). Led public health input on the HSE National Mpox Crisis Management Team (October 2022-May 2023) and developed a mpox contact database. now leads mpox public health interventions and responses as required, e.g., the occurrence of a small number of recent (August '23) cases (**Actions 1, 2, 6**).
- Co-ordinated the public health/ health protection investigation, control and reporting of a national [Strep A/ iGAS](#) outbreak in collaboration with a range of multidisciplinary, cross sector stakeholders through a National Incident Management Team (NIMT) led a National Incident Director (**Actions 1, 2, 5, 6**). See also Objective 7.

- Led a multi sectoral national response group to respond to increases in [shigella](#), and particularly MDR shigella in gbMSM. MDR shigella is of national and international concern, with clusters of drug-resistant shigella seen in many countries in the EU and in the USA. In conjunction with the Clinical Leads for Sexual Health, AMRIC, Public Health and the Director of the Reference Laboratory, the national treatment guidelines for shigella were reviewed and amended; available [here](#) (**Actions 1, 2, 5, 6**).
- Re-established the HSE National TB Advisory Committee who are:
 - developing a national Collaborative TB Strategy for Ireland 2024- 2030 for publication by World TB Day, March 2024;
 - reviewing and updating [the HSE \(2010\) National Guidelines for the Prevention and Control of Tuberculosis in Ireland](#) last amended in 2014 (**Action 1**).
- **The TB programme** team also have
 - reestablished meeting with the Public Health and Surveillance Teams in the HSE Health Regions to support and ensure standardised data collection;
 - completed a comparative analysis of Department of Public Health Resources in TB Control between 2016 and 2022;
 - supported, advised and/or lead, where necessary incident management or complex TB issues/queries e.g., multidisciplinary and cross sectoral working with pre-XDR TB case, Latent TB Infections (LTBI) in prisons, health and care workers (H&CW) screening, selective BCG strategy (**Actions 1,3**).
- Contact Management Programme (CMP) actively engaged hospital sector and developed a robust Early Warning Alert System to identify an increase in COVID-19 hospitalisation trend. This including development of a Standard Operational Policy (SOP) for the [COVID-care tracker](#) (CCT) for hospitals, along with a training video were developed or updated (**Actions 2, 4, 5**).
- CMP carried out weekly trend analysis of hospitalised cases for COVID-19, resulting in weekly reports being available for individual hospitals (**Action 4**).
- Aligned to HSE Public Health Reform, the AORP team supported the acute operational response regionally providing clinical leadership and support to the 18 CPHM in Health Protection (HP) and SPHMs working in HP and by engaging with and collaborating with HSE Area Directors of Public Health (**Action 6**).

Ongoing Work and Future Activities

- Support development of national Special Interest Groups (see also Objective 9) for Sexually Transmitted Infections (STIs) / Vaccine Preventable Diseases (VPDs) / Food and Water borne diseases, Food Safety Authority Biological Safety Committee, the HSE Drinking Water Groups, HSE Midlands Research Ethics Committee, and the Department of Agriculture, Food and the Marine (DAFM)/HSE Highly Pathogenic Avian Influenza (HPAI) Committee (**Action 1, 2**).

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- Continue to implement TB Elimination/Control Programme for Ireland to include completion of collaborative TB strategy by March 2024; and review of National TB guidance **(Action 1)**.
- Continue to lead the Incident Management Team (IMT) for Invasive Group A Strep (iGAS) as required **(Actions 1, 2, 6)**.
- Collaborate with ECDC re: the investigation of iGAS paediatric cases across ECDC countries **(Action 3)**.
- Complete rapid review and update of the [Guidance on the Public Health Management of Diphtheria in Congregate Settings in Ireland](#) (August 2023) in line with experiential learning and in context of updated international guidance **(Actions 1, 2, 6)**.
- Review of process in relation to clinical assessment of possible [rabies](#) exposure and its management including use of Immunoglobulin and vaccination and development of new guidance **(Actions 2, 3, 6)**.
- Participate in engagement with Occupational Health and the management of Health and Care Worker close contacts **(Action 3)**.
- Continue to engage with Irish Prison Service re: mpox vaccination for prison population **(Action 3)**.
- Support the retention or reduction of a reduced core team of CMP staff to continue the service in case of a COVID-19 surge or other emergency response **(Action 4)**.
- Through collaboration and clinical leadership, enhance the development of acute operational response regionally and nationally In line with public health reform model. This will include development of HSE Health Protection Special Interest Groups (SIGs) and participating in Out of Hours working group **(Action 6)**.

Celebrating Success

Diversity in the workplace

The Contact Management Programme consisted of staff from multiple nationalities who spoke a range of languages. A high proportion of staff were from India, and CMP took this opportunity to celebrate Diwali, an Indian festival of lights. Staff got involved by decorating the office with lights and handmade decorations, cooking traditional dishes to share with colleagues, and sharing their knowledge and stories of the Diwali festival as well as showing off their dance moves with traditional music and dance.



Figure 2 Contact Management Programme staff celebrating the Indian festival of lights, Diwali at Heuston South Quarter

Response to management of cases and outbreaks of infectious diseases

- AORP developed the mpox contact database (July 2022) to capture the vaccination status of contacts electronically and in real time, before the case mpox vaccination database was developed. This allowed early and real time reporting of the vaccination status of contacts to the Department of Health in the summer / autumn of 2022.
- Catch up vaccination for children and adults – CHO vaccination teams established later.
- Vaccination for pregnant women – ante-natal varicella immunity monitoring for this population.
- Rapid emergency Outbreak Response Vaccination in collaboration with National Ambulance Service for vaccine preventable diseases – protocol established.
- General free varicella vaccination for congregate accommodation settings – NIAC recommendation.

Objective Three: Further develop public health risk assessment of, advice on, and advocacy on non-infectious disease hazards related to the environment

Spotlight on Environment and Health

Our environment influences our health in many ways, positively and negatively, and Public Health aims to advocate for and support the positive influences, such as green and blue spaces, biodiversity, sustainability and climate change mitigation. Public Health also aims to protect our population from the negative influences on our health such as health impacts of air and water pollution, climate change and radon gas.



Figure 3 Objectives for HSE Public Health: Health Protection - Environment and Health

The Environment and Health Lead was appointed in July 2023 and reports to the Health Threats Programme Clinical Lead. Environment and Health (E&H) is focusing on protecting the population of Ireland from avoidable environmental threats to our health. Its 2023/24 key objectives (Figure 3) are in line with the Health Protection Strategy 2022-2027 and outlined above.

What we will do (HSE Health Protection Strategy 2022-2027)

Action 1: Collaborate with key stakeholders to develop clear health protection roles and responsibilities for environment and health issues.

Action 2: Expand surveillance of environmental hazards.

Action 3: Develop preparedness plans for health protection hazards which are exacerbated by climate change.

Action 4: Expand the health protection role in advocacy on environment and health issues.

Action 5: Collaborate with key stakeholders (e.g. Environmental Protection Agency) to support public health advocacy submissions to government departments on environmental threats to health.

Action 6: Reduce carbon emissions across the HSE health protection work environment and service delivery.

Achievements (July – September 2023)

- CPHM Environment and Health appointed in post in July 2023
- A review has commenced of the environment and health (E&H) needs across health protection public health, including training needs of staff and the project plan is being developed to examine environment and health needs across the hub and spokes of HSE Public Health: Health Protection, the population of Ireland and key stakeholders. **(Action 3).**
- Continued engagement with key stakeholders and establishing new collaborations to include the following:
 - Climate Change: Department of Health Climate Unit; HSE Climate Unit; Met Eireann Environment and Health including Climate Change: Environmental Protection Agency; Health and Safety Authority; Department of Transport; UK Health Security Agency; Health Protection in Northern Ireland; Department of Environment, Climate and Communications; Department of Housing, Local Government and Heritage; Academia **(Actions 1, 4, 5).**
- Developed and agreed an annual programme of E and H work to anticipate meeting all objectives of this Strategy within the lifetime of the Strategy and to ensure work of Threats programme on areas relating to environment are developed **(Actions 4, 5).**
- By Q4 2023, E and H Lead will develop a public health weather alert system to provide advice to general public, health and care services and other partners on responses to threats from extreme meteorological / climate events including extreme heat, cold snaps and flooding or extreme weather events (e.g. storms). An example of an early achievement was the production of a heat health advisory from HSE Public Health: Health Protection for a short heatwave period in early September 2023 in line with weather forecasts. This resulted in the first environmental messages published on the HPSC website, commencing provision of All-Hazards public health advice on the HPSC website. A project to expand this work is also being developed **(Action 3).**
- E and H Lead contributed to the development of the [HSE Climate Action Strategy 2023-2050](#) and is now leading on the implementation of Strategic Objective 10: *Ongoing implementation of the measures set out in the Department of Health Sectoral Adaptation Plan 2019-24 and all subsequent plans* **(Action 6).**

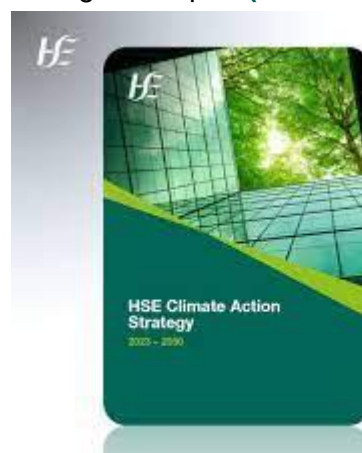


Figure 4 HSE Climate Action Plan

Ongoing Work and Future Activities

- Develop the Special Interest Group with HSE Area Public Health Teams to lead and support threat assessment, planning and preparedness; prevention and early detection; investigation and control; and wider public health management and leadership (including communication to professionals and the public) on issues relating to environment and health (**Action 1**).
- Lead, in collaboration with HPSC, the development of key environmental surveillance indicators so a dashboard of metrics is collected, collated and published as part of an “all hazards” surveillance programme (**Action 2**).
- Work with the HSE OCIMS Lead on including the needs of environment and health surveillance and a comprehensive incident management and surveillance system (**Action 2**).
- Lead on the health protection adaptation and resilience input into the implementation of the HSE’s responsibilities in relation to adaptation outlined in the Department of Health sectoral adaptation plan to ensure there is Public Health Risk assessment PHRA as needed during major incidents during an extreme weather event and development of climate related epidemiological information (**Action 6**).
- Develop in line with the [HSE’s Infrastructure Decarbonisation Roadmap](#) to include a net zero energy related emissions target by 2050 (**Action 6**).

The Consultant in Public Health Medicine – Environment and Health is a long-standing member of the **following committees**:

- [Climate Change Advisory Council – Adaptation Committee](#) (Independent Body)
- National Adaptation Steering Committee (led by Department of Environment, Climate and Communications)
- [National Radon Control Strategy](#)
- EU Urban Waste-water Directive
- EU Drinking Water Directive
- EU Water Framework Directive
- Department of Health Fluoridation Surveillance Working Group
- HSE Drinking Water Group.



L to R, back: Roger Street (University of Oxford) Keith Lambkin (Met Eireann), Professor Peter Thorne (Chair); L-R front: Jillian Mahon (Financial Consultant); Dr Ina Kelly (HSE); John Spink (Teagasc)

Figure 5: Members of the [Climate Council Adaptation Committee](#)

Celebrating Success

Development of the National Health Protection Office Environment and Health webpages and Public Health Advice

Public health Environment and Health advice has previously been provided through the Departments of Public Health webpages. The development of the [Heat Health Alert](#) for a short heatwave in early September 2023 provided the springboard to commence the [Environmental and Health web](#) presence on the HPSC website. A plan for providing more comprehensive environment and public health advice is in place for roll-out over coming months.

Public Health advocacy in line with WHO recommended Health in All Policies

The CPHM Environment and Health met with the Department of Transport to discuss a wide range of issues including road transport related mortality and morbidity and how HSE Public Health: Health Protection might contribute to a better epidemiological understanding of the causes, which may include climate change impacts such as extreme flooding events. More collaborative working is planned, including looking at the epidemiology of a transport related air pollution, and the effectiveness of road traffic legislation (legal epidemiology). Early involvement of the national health protection in the development of the next Department of Transport climate change adaptation plan was agreed.

Objective Four: Enable prevention, early detection and optimal public health preparedness and response of major incidents for all hazards

Spotlight on Health Threats Preparedness Programme

The Health Threats Preparedness Programme (HTPP) is the health security programme of the HSE Public Health: Health Protection. The programme was set up to co-ordinate national health protection preparedness in prevention, preparation for, detection, response to, and recovery from new and emerging health threats and emergencies. The imperative for investment in preparedness and health security is evident following the COVID-19 Public Health Emergency of International Concern. Current health security threats to Ireland include:

Zoonoses

- e.g. Highly Pathogenic Avian Influenza

Re-emerging Diseases

- e.g. Poliomyelitis and Diphtheria

High Consequence Infectious Diseases (HCIDs)

- e.g. Viral Haemorrhagic Fevers (e.g. Ebola), Lassa Fever

Chemical, Biological, Radiological, or Nuclear (CBRN) Threat

- e.g. malign nuclear event, radiation incident

Global Climate Crisis

- e.g. mitigating the health impacts of climate change

The programme is staffed by a small, dedicated team led by the National Clinical Lead. The programme by its nature involves multidisciplinary working and achieves progress together with HSE partners including Departments of Public, HSE Health Regions Health, HSE Emergency Management, [National Ambulance Service](#), Acute Operations, Environmental Health Services as well as Laboratory Services. The programme works closely with the Department of Health on several issues, as well as with other government departments such as Transport/ Environment/Department of Agriculture and Food, Foreign Affairs, and with national agencies such as the Environmental Protection Agency and Uisce Éireann.

The Programme, alongside its partners, runs several workstreams in areas including health security, legislative requirements, preparedness for high consequence infectious disease, avian influenza, poliomyelitis, [IHR revision](#) and new pandemic agreement support, and emergency preparedness training. The Programme continues to advocate and bid for increased funding for essential all-hazard preparedness activities including staffing, infrastructure, equipment, training and exercising capacities within Health Protection, as well as across the National Ambulance Service, National Isolation Unit, Acute Hospitals, UCD National Virus Reference Laboratory ([NVRL](#)) and HSE Emergency Management.

What we will do (HSE Health Protection Strategy 2022-2027)

Action 1: Develop a health threats strategy and implementation framework, including early detection and cross-/intra operational planning for chemical/biological/radiological/nuclear (CBRN) threats.

Action 2: Develop early warning surveillance systems and response plans (e.g., for high consequence infectious diseases (HCIDs))

Action 3: Strengthen capacity at Points of Entry.

Action 4: Work with communities, including vulnerable and marginalised communities to improve prevention of preparedness for and response to health threats.

Action 5: Enhance collaborative working on preparedness and response to major incidents across the HSE and relevant external agencies.

Action 6: Develop health threats/major incident training to contribute to public health staff development.

Action 7: Strengthen Ireland's capacity to detect and report potential public health emergencies.

Achievements

- HTPP continues to foster close working relationships with UKHSA in relation to Chemical, biological, radiological and nuclear (**CBRN**) preparedness and response. This year, HTPP secured an extension of the HSE contract with UKHSA for Chemical Threats with the new additional inclusion of Radiation/Nuclear threats (**Action 1**).
- HTPP National Lead chairs HSE multi-disciplinary group on Radiological/Nuclear preparedness to progress shared understanding of roles, responsibilities, capacities, and capabilities (**Action 1**).
- HTPP National Lead and other public health colleagues are members of the EPA-DOH-HSE Working Group on [Nuclear and Radiological Emergencies](#) involved in reviewing public health aspects of any incident, threat scenarios and contributing to the development of public health risk communication material (**Action 1**).
- HTPP co-leads the HCID Steering Group, a cross-divisional group tasked with HCID preparedness within the HSE. Development of a number of workstreams as per ECDC guidance on [Health emergency preparedness for imported cases of HCID](#) including in-country and out-of-country transport, High-Level Isolation Unit (HLIU), first points of contact, HCID risk register and HCID Clinical Advisory Group. (**Action 2**).
- In conjunction with HSE partners, the HCID Steering Group has made early and significant progress including:
 - Securing remaining capital funding required to complete upgrade of HLIU in Mater Misericordiae University Hospital (MMUH) with an expected commissioning date in 2024.



- International collaboration and agreement with [STAKOB group](#) in Germany and [RescEU NOJAHIP](#) (Norwegian Jet Ambulance for Highly Infectious Patients) regarding contingency planning for out-of-country transport and HLIU access abroad.
- Learning Exchange Visit in April 2023 to Oslo by HSE HCID Steering Group hosted by Norwegian colleagues in RescEU NOJAHIP and Oslo University Hospital High Level Isolation Unit, with recommendations for action arising from same.

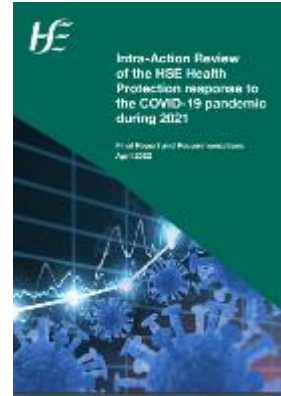


Figure 6: Norwegian epi-shuttle for transport

- Review and update of the [Viral Haemorrhagic Fever \(VHF\) Guidance](#) in December 2022 and the subsequent development of a **VHF Operational Response Manual for HSE partners**.
Leading 'Exercise Dearg', a VHF table-top exercise to review Ireland's health protection emergency preparedness for cases of imported VHF, with key HSE stakeholders, in November 2022.
- Updated the surveillance process for returning humanitarian aid worker.
- Researched, developed and agreed standardised PPE specification for HCID across NAS, Acute Hospitals and HLIU in the Mater Misericordiae University Hospital (MMUH) (**Action 2**).
- Led the HSE Multidisciplinary Port Health Network including development of COVID-customised [HSE response plan for public health events at points of entry](#), collaboration with the Department of Transport on development and revision of [Protocol for Cruise Operations in Irish Waters](#) and determination and discussion around point of entry capacities and Port Health Competent Authority (**Actions 3, 5**).
- CMP contributed to the development of the Covid Recovery Framework through engagement in the Test and Trace Review group meetings chaired by the National Director for Test, Trace and Vaccination (**Actions 4, 7**).



- Aligned implementation of the recommendations of the HTPP published [Intra-action review of the HSE Health Protection response to the COVID-19 pandemic during 2021](#) to the implementation of the: Health Protection Strategy, wider Public Health reform and development of HSE Public Health: Health Protection (**Action 5**).
- HTPP contributed to the preparedness: approach for Winter 22/23 and hosted interagency workshop with HSE Testing, Tracing and Vaccination and Emergency Management (**Action 5**).



- HTPP led a substantial review and update to the HSE [National Polio Preparedness and Response Plan](#) and parallel work to strengthen polio preparedness including:
 - Reconvening of the National Polio Expert Committee: chaired by Director of National Health Protection, to examine and make recommendations on prevention of, preparedness for and response to the [polio virus](#) outbreak within Ireland. The Committee is a key point of contact for WHO regarding polio eradication requirements, submitting a polio annual report for 2022 in mid-2023.

- Working with HPSC to strengthen Acute Flaccid Paralysis (AFP) surveillance, developed ongoing mandatory reporting reminders and presentations to clinicians; updates to AFP surveillance form; communications; and development of contact tracing form and database.



- Working with HPSC to establish wastewater surveillance for polio: Following collaboration between HPSC, University College Dublin (UCD), NVRL and Uisce Eireann, wastewater surveillance for poliovirus testing commenced at the beginning of March from the Ringsend wastewater treatment plant (WWTP). Samples taken from Ringsend WWTP will be screened by digital PCR for PV2 on a weekly basis. Additional catchment areas may be added over the coming months.

(Actions 5, 7)

- A shared, 'One Health' approach between human health, veterinary and environmental health is the most robust approach to health security. HTPP has had a considerable focus on the threat of avian influenza. Global spread of **highly pathogenic avian influenza (HPAI) H5** subtype is of concern, with high mortality in wild birds and poultry, and recent cases in mammals (**Actions 2, 4, 5, 6**).



- A human health – animal health Avian Influenza National Coordination Group (NCG) convened in 2022 delivering updated guidance on risk stratification of exposed persons, PPE and infection prevention and control.

- HTPP and HPSC contributed to a [Joint Action on One Health \(OH\)](#) project proposal led by DAFM (OH-ALLIES) seeking funding through EU to develop and enhance one health one island surveillance across the island of Ireland.
- In February 2023, HTPP and Public Health Area A led a national tabletop on HPAI with presentations, scenario review and recommendations including guidance updating, and risk assessment process.
- The NCG produced a baseline dynamic risk assessment for the new clade: Level 3 Risk level: limited mammalian transmission (excluding human).
- In collaboration with Public Health Agency Northern Ireland, the HTPP co-led and delivered a cross-border one island Highly Pathogenic Avian Influenza Table-top exercise in June 2023.



Figure 7: Organisers of the cross-border one island Highly Pathogenic Avian Influenza Table-top exercise

- **Threat reporting:** HPSC has continued to ensure that stakeholders are informed of health protection threats via multiple platforms - national committees, meetings, conferences, newsletters, social media, HPSC website, email alerts to clinicians, responses to media and other information requests and in communications to international platforms hosted by WHO and ECDC including 102 WHO event alerts, 72 EWRS selective exchanges and initiated 13 selective exchanges relating to infectious diseases contact tracing, and received more than 500 EpiPulse notifications (**Action 7**).

Ongoing Work and Future Activities

- HTPP is leading the development of a HSE cross-disciplinary report on radio-nuclear preparedness, to identify existing gaps and make case for further development including funding (**Action 1**).
- HTPP is also contributing to preparedness work ongoing at Government and EU level including coordinated the HSE response to CBRN preparedness questionnaire and working on a Dept of Health/ Environmental Protection Agency/HSE group on Public Health risk communication and advisories (**Action 1**).

- Through the NCG, A review and update of the HPAI Guidelines is underway, expected to be completed by Q4 2023 **(Action 2, 3, 5)**.
- Review underway of the role port health competent authority under International Health Regulations **(Action 3)**.
- HTPP is leading a cross-divisional HSE group to review proposed amendments to IHR 2005, and contributing to ongoing drafting of the WHO Pandemic Agreement **(Action 5)**.
- The HCID Steering Group is drafting and seeking agreement on operational protocol for out-of-country transport and HLIU access abroad for a HCID case with STAKOB group in Germany and RescEU NOJAHIP partners **(Action 5)**.
- The changing epidemiology of HPAI is under assessment at European level. Health Protection representatives have attended a series of meetings with the Dept of Health and remain up to date with latest European international response of the EU Health Security Committee on this topic. Through the Avian Influenza National Coordination Group (NCG), a subgroup of the One Health Consultative Committee, HTPP is ensuring a One Health and cross-border partnership approach to interoperable preparedness and response to the threat of HPA I **(Action 5, 6, 7)**.
- The NCG is also working with Department of Health colleagues and ECDC to scope the feasibility of a Strategic level cross-organisational and cross-border HPAI simulation exercise, potentially in Q4 2023 **(Action 6)**.

Celebrating Success

Cross-border One Island Highly Pathogenic Avian Influenza Table-top exercise

Cross programme and interagency coordination was evident during a recent HPAI incident in Dublin where National Public Health, Regional Public Health and DAFM collaborated on the joint response involving human health exposures, human surveillance, mitigation and control.

A multidisciplinary cross-border tabletop exercise (TTE) organised jointly by the HSE Public Health: Health Protection, Republic of Ireland, and the Health and Social Care Public Health Agency (PHA), Northern Ireland was held in June 2023. Over 60 experts from disciplines across health, veterinary science, agriculture, laboratory services and the food sector took part in planning exercises and discussions on optimising cross-border communication, co-ordination and disease control in the case of avian influenza in birds and/ or humans. The TTE included four scenarios based on fictitious accounts of plausible cross-border outbreak scenarios of HPAI.

Delegates welcomed the opportunity to meet and collaborate with partners from both sides of the border in Ireland, recognising that effective professional networks and shared understanding was an important health security asset. A common approach with as much consistency as possible was advocated for between ROI and NI, which would lead to a uniform response for any cross-border event- recognised as important in maintaining confidence of public in border communities who can be otherwise exposed to potentially conflicting, or at least differing, advice.

Some operational challenges were identified and discussed with resolution amongst stakeholders. Clear communication pathways with other Government departments need to be established. Missing resources required such as translated materials were identified and actioned. Key learnings and recommendations for action were distilled and disseminated. Cross-discipline, cross health protection programmes and cross-border collaborative work is ongoing to implement the recommendations from this exercise.



Avian Influenza Incident, Dublin Zoo, July 2023



High pathogenic avian influenza (HPAI) H5N1 was confirmed in a flamingo at Dublin Zoo on Thursday, 6th July 2023. Following consultation with the Department of Agriculture, Food and the Marine (DAFM) and the HSE, and in line with current animal health and infectious diseases legislation, immediate initiation of quarantine measures was introduced. One of the measures was to close the affected habitat to the general public. The process also began of taking samples from all the flamingos in the habitat for HPAI. The good news was that no other positive cases were detected after two rounds of testing.

The human health control measures put in place by HSE Public Health included:

- Prompt identification of all staff working in the flamingo habitat;
- Provision of up-to-date information verbally and in writing;
- Provision of chemoprophylaxis with oseltamivir to the staff linked to the flamingo habitat;
- Arrangements for asymptomatic testing of staff linked to the habitat with the National Virus Reference Laboratory;
- Arrangements with the National Ambulance Service to support response if any of those staff members developed symptoms during their period of observation; and
- Recommendation that all staff in Dublin Zoo working with avian species avail of annual seasonal influenza vaccine when available.

The animal health control measures put in place by DAFM included:

- Closure of the flamingo habitat until further notice to members of the public; with the habitat only accessible to authorised personnel whose presence is required, for example, to feed and take care of the animals;
- The staff members working in Dublin Zoo were advised to have refresher courses on wearing personal protective equipment (PPE) to prevent the spread of infection;
- Arrangements for testing of all species in Dublin Zoo for avian influenza virus (AIV) if they developed symptoms within 30 days from onset of detection of HPAI H5N1; and
- Support Dublin Zoo to undertake a risk assessment of the control measures for spread of zoonotic diseases.



The overall multi-stakeholder response to this HPAI incident in Dublin Zoo, has highlighted the importance of adopting a collaborative and inclusive approach to continually improve our readiness, resilience, and response to HPAI in Ireland.

Objective Five: Deliver a high level of prevention and control of vaccine-preventable diseases across population groups through Immunisation programmes

Spotlight on National Immunisation Office

Immunisations (Figure 6) are second only to clean water as the most cost-effective health intervention saving millions of lives worldwide each year.

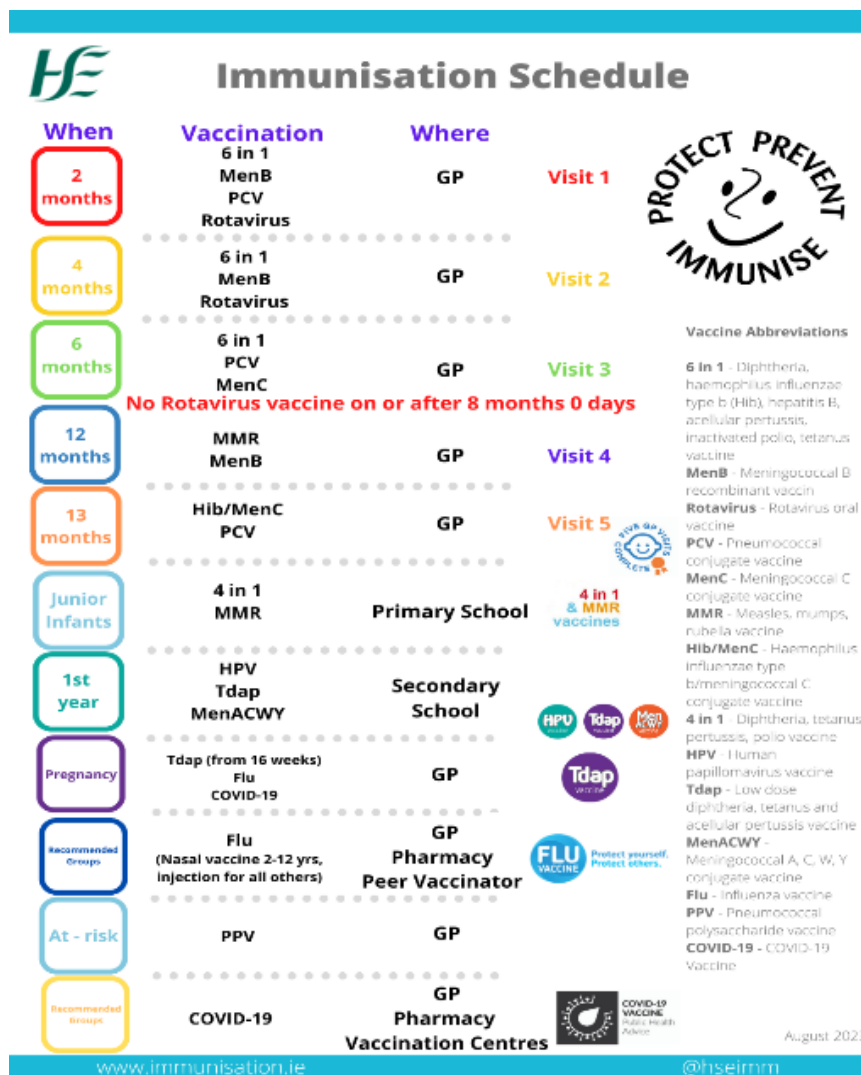


Figure 8: HSE national immunisations programmes

The HSE National Immunisation Office (NIO) is responsible for:

- vaccine procurement, storage and distribution;
- development of standards; and delivery of training for HCPs;
- production of information resources on all national immunisation programmes;
- data quality and national immunisation information systems.

The **vision** for NIO is: *The entire population of Ireland is protected from vaccine preventable diseases across the life course, through the delivery of high quality, person-centered and equitable immunisation programmes.* There are several cross-functional teams within the NIO who work together to fulfil its roles:



Figure 9 HSE National Immunisation Programme Staff

What we will do (HSE Health Protection Strategy 2022-2027)

Action One: Develop a national immunisation end-to-end information system

Action Two: Ensure robust and timely monitoring of uptake and enable estimate of vaccine effectiveness at population level and in defined risk populations.

Action Three: Review and make recommendations for future service delivery of national immunisation programmes

Action Four: Collaborate with all immunisation providers, promoting collective responsibility to increase vaccine uptake

Action Five: Identify groups within the population with low vaccine uptake and develop tailored immunisation programmes for them

Action Six: Continue to integrate the COVID-19 vaccine programme into the same governance structure as other routine vaccination programmes within the HSE

Action Seven: Develop processes for administration of vaccines in outbreak situations

Achievements

- Established the National Immunisation Oversight Group with stakeholders from across the HSE to ensure appropriate oversight of all national immunisation programmes (figure 2) (**Actions 1, 4**).
- Operated a digital campaign to highlight the importance of the [Primary Childhood Immunisation \(PCI\) programme](#). The NIO worked with Practice Nurses and the ICGP Vaccine Lead to develop bespoke videos to share information with parents to make vaccination appointments an easy process for everyone (**Actions 2, 4**).



Figure 10 example of Video clips available on immunisations.ie and social media channels

- Supported the HSE National Immunisation Oversight Committee (NIOC) hold an extraordinary meeting where an action plan was developed to improve uptake of [Primary Childhood Immunisations \(PCI\)](#) and schools' vaccines to include re-establishing or strengthening regional immunisation committees and teams; and working with senior managers to increase vaccine uptake (**Actions 3, 4**).
- The NIO led on eight **national communication campaigns** to support immunisations. This includes the provision of clinical spokes people for TV, radio, and print media; the development of media packs to ensure HSE key messages are readily available for national and regional spokespeople (**Actions 3, 4**).
- This year the www.immunisation.ie website underwent reaccreditation with the WHO vaccine safety network and remains a credible source of vaccine information (**Actions 3, 4**). Worked with stakeholders across the country to have one of our most successful European Immunisation Week. The World Health Organisation (WHO) asked to use the NDPH video as an example of good practice for other countries (**Action 5**).
- Circulated over 450,000 pieces of flu merchandise to support the Health and Care Workers (HCW) Flu programme. Over 500,000 flu and 1m COVID information leaflets were printed and distributed. Flu, Pertussis, Covid vaccines and PCI immunisations are promoted in the Maternity Guide for pregnant women and thorough online information campaigns targeting at pregnant women and parents of children under 4. NIO also produce annually, 100,000 54-page immunisation books for parents of newborn children in Ireland, including a very popular fridge magnet to remind parents that five visits are required to complete the PCI schedule (**Actions 3, 4**).
- For the 2022-23 academic year the programme was changed to include only one dose of Human papillomavirus (HPV) vaccine, in line with National Immunisation Advisory Committee ([NIAC](#)) recommendation. This was successfully implemented, and Ireland was one of the first countries in the world to make this change (**Action 4**).
- The Minister for Health announced the launch of the **Laura Brennan HPV Catch-up Vaccination Programme** in December 2022. The programme offers [catch-up HPV vaccination](#) to eligible individuals who have not previously received the HPV vaccine. NIO staff continue to enable the delivery of the programme by producing and updating all healthcare worker and public facing materials to support the programme. In collaboration with HSE E-Health colleagues, NIO staff have worked to stand up an online booking portal where members of the public can book HPV vaccine appointments in HSE clinics. This portal has an innovative function where it can check a persons' vaccine status and age and only offer them an appointment if they are the correct age and have not been previously vaccinated by the HSE (**Action 5**).
- The NIO led on market research into HPV vaccine uptake in the catch-up programme and utilising results to inform the subsequent media campaign to promote the programme over the autumn and winter 2023 (**Action 5**).
-

- On August 29th 2023, a new phase of the programme was launched, with unvaccinated males up to the age of 22, and age and gender equivalent international students ordinarily resident in Ireland now also eligible for catch-up HPV vaccination.



(Action 5)

Figure 11 The HPV catch-up campaign website

- Supported the roll out of the COVID-19 autumn and spring booster vaccine campaigns, including provision of clinical advice, public facing materials and vaccine supply chain management. Planning and implementing the autumn booster campaign 2023 at present (Action 6).
- On boarded 20 new staff members as part of improving resilience of the NIO and taking on additional tasks as part of HSE plan to incorporate COVID-19 vaccine programme into business-as-usual functions. (Action 6)
- Worked with National Social Inclusion Office and Pavee Point to develop videos and a leaflet for the travelling community to address their concerns about MMR vaccine (Action 7).
- Supported national immunisation programmes (figure 6) and the public health response to outbreaks of vaccine preventable diseases including mpox response and vaccinations for Refugees and Applicants Seeking Protection (Action 7).
- The NIO contributed to the national polio outbreak plan and the diphtheria response plan (Action 7).
- Implementation of “Lunch and Learn” series to provide clinical and programme updates to vaccinators and vaccine advocates. Topics have included HPV move to 1 dose, School Programme, addressing vaccine hesitancy and supporting catch up vaccination for migrant populations (Action 7).

Ongoing Work and Future Activities

- Progressing the development of a National Immunisation Information System (NIIS), working in collaboration with e-Health and other stakeholders on the national steering group and working group. This includes development of an options appraisal, requirements specification and learning from the experiences of other countries. This will then progress into a procurement and implementation process (Action 1).

- Implement changes to the primary childhood immunisation schedule, as directed by the Department of Health and recommended by the National Immunisation Advisory Committee (NIAC) for babies born from October 2024. Also implement a selective BCG immunisation programme as directed by the Department of Health and recommended by the National Immunisation Advisory Committee (NIAC) (**Actions 2, 3**).
- The NIO continue to provide support and clinical guidance to **the primary childhood immunisation programme**. Through NIOC, work is ongoing to improve data reporting and to identify and address issues associated with the fall in uptake over recent years (**Action 4**).
- Provide clinical, ICT, communications, pharmacy and project management support to the **annual influenza vaccine programme**. Insights into the attitudes of healthcare workers to the flu vaccine have been sought and an action plan to improve uptake in health and care workers has been formulated (**Actions 2, 3, 4**).
- Supports operational alignment between COVID-19 and flu to ensure there is no wrong door for vaccine recipients to support winter resilience (**Actions 3, 4**).
- Continue to work with primary care services, CHOs and HSE Health Regions to implement a new standardised model of school-based immunisation delivery and drive improvements in uptake across all School Immunisation Programmes (**Actions 3, 4**).
- Carry out research on attitudes to vaccines in Ireland to allow insights into current sentiment on vaccines to enable appropriate interventions to improve vaccine confidence and uptake (**Actions 3, 5**).
- Focusing on uptake of vaccine in health and care workers, including a recent survey on attitudes, barriers and enablers to vaccination, to include provision of the flu and COVID-19 vaccines together where possible and development of an e-learning module (**Actions 4, 6**).
- Provide clinical guidance and support to the CHO school immunisation teams and promotion and information to the public. In 2022-23 the NIO advocated that all school immunisations should return to on school premises where possible to ensure the highest possible uptake (**Action 4**).
- The NIO continues to work with the Department of Health, Department of Education and school boards of management to promote and support the school immunisation programme. Work is ongoing on the provision of electronic class lists to further enhance efforts to reach those where consent forms are not returned (**Action 4**).
- Provide ongoing support to the delivery of the **Catch-up Vaccination Programme for Refugees and Applicants Seeking Protection in Ireland**, approved in February 2023. The immunisation programme is administered by HSE staff in CHOs and is the first time primary childhood immunisations that has been administered by HSE Community Services. The NIO supports this programme training and education activities. [Public facing materials](#) have also been translated into several different languages (**Action 4**).

- Work to improve our understanding of the Schools Immunisation Programme (SIP) Programme cohort using existing Health Data /IHI dataset for school-going ages † and explore vaccine hesitancy as a geographical response (**Action 2, 5**).
- Support the provision of the nasal flu vaccine into one year group in primary schools and all primary age special schools. It is hoped that this will expand out to other years in primary school over time (**Action 5**).
- Review MMR uptake to consider what more can be achieved for those who have missed the routine programme (**Action 5**).
- Develops promotional campaign to support vaccines in pregnancy to improve knowledge and uptake (**Action 5**).
- Over 2023 and 2024 the NIO will continue to support the transition of the COVID-19 vaccine programme towards business as usual and adapt to any further changes to NIAC guidance and additional booster doses as required. (**Action 6**).
- The National Immunisation Office continues to support the rollout of the COVID-19 vaccination programme in Ireland, with an Autumn/Winter booster programme in 2022, and Spring and Autumn campaigns in 2023. It also leads management of vaccine storage and distribution of COVID-19 vaccines including Trackvax system to track and trace vaccines used within HSE sites (**Action 6**).
- Working with e-health on provision of clinical and technical information for COVAX updates for example incorporating NIAC updates to the programme (**Action 6**).
- Leading data quality work to improve accuracy of data on COVAX system and automate updates where possible. Supporting HSE leadership to move COVID-19 vaccine programme into business as usual (**Action 6**).
- At the start of the identification of cases of mpox in Europe, the NIO became part of the HSE team involved in control and management. This included procurement of the vaccine both via direct negotiation and EU joint procurement, development of a national ICT system to record vaccines given, patient facing advice and healthcare worker training to support the vaccination programme. The NIO continue to support the programmes move to delivery via sexual health clinics (**Action 7**).
- The NIO has also been involved in a number of national outbreak response teams ensuring that medicine protocols are available to cover administration of the vaccines most likely to be needed to control a **Vaccine preventable disease outbreak** and that there are sufficient stocks of vaccines and antitoxins are available (**Action 7**).



Celebrating Success

Collaboration to increase vaccine uptake

To ensure the population of Ireland is protected from vaccine preventable diseases across the life course, the NIO collaborate with a wide range of stakeholders to achieve a multi-pronged approach to promoting and increasing vaccine uptake. For example, NIO:

- Led development of the Laura Brennan HPV vaccine catch-up programme and making access to information and registering easy. When the webpage went live, it included a link for eligible people to book an appointment. This portal could check a persons' vaccine status and age and only offer them an appointment if they are the correct age and have not been previously vaccinated by the HSE. The HSE Land education modules for HPV were updated and promoted via [immunisations website](#). And the following materials shared with the school vaccination teams:
 - Supporting Information for Staff The Laura Brennan HPV Catch-up Vaccination Programme 2022 - December 2023
 - Frequently Asked Questions
 - Information for patient's booklet - English and Irish
 - Consent Form English and Irish
 - Post vaccination advice (including record card) English and Irish.

Although not delivering the programme we have asked ICGP, IPU and Community Primary Care colleagues to share the following correspondence with their colleagues today so they can support with queries and hopefully also raise awareness that this programme will be HSE delivered only. This correspondence has also issued through the National Cold Chain Service (NCCS) to all GP practice and pharmacy customers.

Prizes

Winner of Best Case Study at the GS1 Conference November 2022 for Trackvax for "Use of barcode scanning and embedding traceability standards in the National Vaccination Programme"

Integration of Schools Immunisation System with Laura Brennan Programme to improve access to the Programme (*Nominated for CIO and IT Leaders Award*)

Outbreak response

The NIO has expanded the work it does as part of the HSE Public Health: Health Protection to provide immunisation advice and guidance to several national outbreaks and emergency responses including mpox and catch-up vaccination to refugees and applicants seeking protection.

Objective Six: Employ evidence-informed approaches to mitigate the impact of inequities on prevention and control of infectious diseases and other defined hazards.

Spotlight on Health Inequities

Rather than a stand-alone programme, addressing health inequalities and inequities is a key component of all programmes across health protection. During the past year, HSE Health Protection including the Health Threats Programme (HTTP), Health Protection Surveillance Centre (HPSC), National Immunisation Office (NIO) and the Acute Operations Response Programme (AORP) incorporating regional Health Protection Teams, collaborated with a wide range of stakeholders e.g., [National Social Inclusion Office](#) (NSIO), on a variety of activities to reduce health inequalities and inequities.

We believe that “No One is Safe Until Everyone is Safe” and we must ensure **all** our population have access to preventive, diagnostic, screening, therapeutic and vaccine services if we are to enhance our collective health protection.

What we will do (HSE Health Protection Strategy 2022-2027)

Action One: Ensure data collection systems for surveillance and immunisation include ethnicity and other variables to capture at risk groups.

Action Two: Proactively engage with at risk groups on health protection issues affecting them.

Action Three: Work collaboratively with HSE Social Inclusion, communities, and their advocates in responding to health protection incidents.

Action Four: Act as strong public health advocates for at risk populations within the HSE and externally.

Action Five: Support further development of the migrant health protection programme including infectious disease screening and treatment and catch-up vaccination.

Achievements

- HPSC developed enhanced surveillance forms and appropriate questions for specific infectious diseases in response to an emerging threat in an at-risk group e.g. Shigella sexual exposure investigative form (**Action 1**).
- The HTTP led a substantial review and update to the National Polio Preparedness and Response Plan and parallel work to strengthen polio preparedness including strengthening Acute Flaccid Paralysis (AFP) surveillance by updating AFP surveillance forms and developing contact tracing form and database (**Action 1**).
- The [National Social Inclusion Office](#) (NSIO) and NIO collaborated with [Pavee Point Traveller and Roma Centre](#) in development of a video and information leaflet for Irish Travellers on measles and to address their concerns regarding Measles Mumps and Rubella (**MMR**) [vaccination](#). Following on from this work, NSIO and NIO developed a similar information leaflet for the Roma population (**Action 2**).

- The Shigella Incident Management Team was established and included membership from on-governmental organisations (NGOs) representing at risk groups in response to an increased incidence in an at-risk group, as well as growing international concern regarding anti-microbial resistance **(Action 2)**.
- Public health resources and clinical and operational guidance were developed on the infection prevention and control, as well as the management of communicable diseases, for congregate settings for people fleeing war in Ukraine, designated [Beneficiaries of Temporary Protection \(BOTP\)](#), and other people applying for Protection (refugee or asylum), designated [International Protection Applicants](#) (IPAs) **(Action 3)**.
- Translation of guidance, letters, and posters to warn and inform vulnerable migrants accommodated in congregate settings of infectious diseases and promoting vaccination **(Action 3)**.
- In collaboration with the National Ambulance Service, an outbreak response protocol was agreed in the event of a case or outbreak of specified infectious diseases in congregate accommodation settings **(Action 3)**.
- The NSIO has provided input into outbreak response of vaccine preventable diseases as part of national health protection including mpox response and vaccinations for BOTP and IPAs **(Action 3)**.
- Collaboration between NSIO and key stakeholders led to the establishment of the Refugee and Applicants Seeking Protection Blood Borne Virus (BBV)/Tuberculosis (TB) Screening Implementation Advisory Group, to advise on the implementation of BBV and TB screening in refugee and BOTP populations. Pilot underway with SafetyNet **(Action 3)**.
- Lead and participate the reconvened National Polio Expert Committee which recommends on the prevention of, preparedness for and response to polio **(Action 3)**.
- In collaboration with the NSIO, developed a briefing paper for the HSE Chief Clinical Officer advocating for a Migrant Population Health Needs Assessment to inform the development of a Migrant Health Strategy for Ireland **(Action 4)**.
- Engagement with HSE Clinical and Operational Senior Management as part of the HSE UKR Health Response Planning and Implementation Group to ensure a shared understanding and to coordinate an effective response to individuals fleeing the war in Ukraine **(Action 4)**.
- Developed [resources](#) for public health and clinical priorities for displaced people fleeing the war in Ukraine **(Action 4)**.
- As part of the public health response to mpox, a mpox vaccination sub-group for prisons was established to ensure prisoners could avail of mpox advice and vaccination as recommended **(Action 4)**.
- Collaborated on the development of [Guidance on the Public Health Management of Diphtheria in Congregate Settings in Ireland](#) and TB in migrant populations and in other vulnerable populations **(Action 5)**.

- Collaborated with HSE partners to establish a catch-up Primary Childhood Immunisation (PCI) vaccination programme for all adults and children from IPAs and BOTP populations (**Action 5**).

Ongoing Work and Future Activities

- Health Protection teams involved in the development of the planned National Immunisation Information System and Outbreak Case and Incident Management Surveillance Systems (OCIMS) will engage and collaborate with Leads to ensure that these new information systems include ethnicity and other variables to capture risk groups (**Action 1**).
- HPSC is currently undertaking an evaluation of the capacity of the HPSC surveillance systems to describe and report on infectious disease incidence in underserved populations in Ireland (**Action 1**).
- The NSIO continues to work collaboratively with NIO, representative organisations and NGOs to increase vaccination uptake in vulnerable and underserved populations (**Action 1**).
- Continued engagement with the prison service to support the provision of mpox vaccination for the prison population (**Action 2**).
- The NSIO in collaboration with HIV/STI team at HPSC continue to work with the Sexual Health and Crisis Pregnancy Programme (SHCPP), statutory and non-governmental organisations (NGOs) to prevent transmission of HIV/STIs among vulnerable groups who are disproportionately affected by HIV/STIs (including gbMSM, trans gender people, migrants) (**Action 2**).
- The NSIO will continue to work with all key stakeholders to prevent, investigate and manage health protection outbreaks and incidents occurring in vulnerable populations (**Action 3**).
- In response to the identification of a cluster of TB cases in homeless individuals, multiple stakeholders including regional CPHMs, national TB lead, NSIO, HSE SI and Safetynet collaborated to screen the homeless population frequenting four homeless hostels to identify further possible cases. A second round of screening will be undertaken in six months (**Action 3**).
- Regional Health Protection team established an incident management team to support and co-ordinate the clinical care of a vulnerable family with multiple medical issues including pre-XRD TB, to ensure all family members receive appropriate medical and social care (**Action 3**).
- In line with a recent recommendation from National Immunisation Advisory Committee (NIAC), NSIO supports and advocates for the provision of varicella vaccination for vulnerable migrants living in congregate settings (**Action 4**).

- HSE Health Protection and NSIO are collaborating with Safetynet to pilot the implementation of recommendations from the Refugee and Applicants Seeking Protection Blood Borne Virus/Tuberculosis Screening Implementation Advisory Group **(Action 5)**.
- Health Service Executive – Health Protection Conference 2023 is centred on the theme that “No One is Safe until Everyone is Safe”. This signals both our ongoing strategic commitment to addressing health inequities and inequalities, as well as showcasing specific work we are doing in this space **(Action 5)**.
- Collaborative TB Strategy for Ireland March 2024 will seek to address gaps in our current programme to engage with higher-risk people **(Action 5)**.
- In collaboration with the **Irish Prison Service**, HSE Health Protection is developing a programme to enhance active case finding and treatment of TB/LTBI, and treatment of Hepatitis C for people in prison, employing new specialist nurse to work in further prisons to expand the programme **(Action 5)**.
- Ongoing partnership work with HSE’s National Social Inclusion Office and HSE Area Public Health teams to support vulnerable people especially vulnerable migrants and those in congregate settings. This work includes ongoing engagement with community advocacy groups and peer-leaders to inform our programmes, communication strategies and prioritisation **(Action 5)**.

Celebrating Success/Vignettes of Success:

Public Health response to people fleeing war in Ukraine.

The HSE National Planning and Coordination Group included the Public Health Response Workstream, under the leadership of Health Protection Acute Operations Response Programme. At that time the known health needs of the population fleeing Ukraine included:

- Low vaccination rate against COVID-19
- Different childhood and adult immunisation schedules had been interrupted.
- Recent polio outbreak in Ukraine and vaccination programme which had been interrupted.
- Increase risk of other vaccine preventable disease outbreaks including diphtheria, measles.
- Higher incidence of chronic infectious disease such as TB, MDR TB and co-infection TB/HIV and BBVs
- Risk of rabies as family pets were permitted entry into Ireland.

The Public Health Workstream produced a list of Public Health Priorities for the HSE Chief Clinical Officer in April 2022 and a report in June 2022 with advice and recommendations from the following subgroups: COVID-19; Congregate Settings; Immunisation; Blood Borne Viruses; Tuberculosis; Rabies; and an Individual Health Assessment. The recommendations from the Public Health Workstream prompted the initiation of several pieces of work in collaboration with the wider HSE. Some of these were immediate and completed at the time but other more detailed work was required during 2022 / 2023. Approximately 70,000 migrants now live in congregate settings in Ireland, and this presents challenges for the investigation and control of usual, re-emerging, and new infectious diseases.

Objective Seven: Enhance our understanding of and health protection approaches to global health issues and their impact on the population of Ireland

Spotlight on Global Health

Public Health emergencies do not recognise borders therefore threats to health protection must be prepared for and tackled collaboratively, with shared intelligence and approaches to enable rapid and agile joined-up response to protect national and international health protection.

Understanding global health issues and their impact on the population of Ireland is a core principle across all programmes within Health Protection. This is achieved through close collaborative relationships with our nearest neighbours, Northern Ireland Public Health Agency and United Kingdom Health Security Agency (UKHSA) as well as the European Centre for Disease Prevention and Control (ECDC), Global Outbreak Alert and Response Network (GOARN) and the World Health Organisation (WHO).

National health protection posts act as an international liaison point for the International Health Regulations (IHR), Early Warning and Response systems (EWRS), WHO and ECDC focal points, including the [Co-ordinating Competent Body](#) (CCB). This function is currently discharged through Health Protection Surveillance Centre reporting to the Director of National Health Protection. In addition, all programmes work in partnership with international partner organisations to garner the best possible information for the prevention and control of threats from all-hazards.

What we will do (HSE Health Protection Strategy 2022-2027)

Action 1: Maintain an awareness of current global health issues, including changes in global health policies and information on emerging and novel pathogens.

Action 2: Develop collaborative relationships with existing global health structures in the HSE and externally.

Action 3: Strengthen connections with other States to support global health security.

Action 4: Advocate for and support actions to reduce global health inequities, including vaccine inequity.

Achievements

- HPSC has maintained and strengthened capacity and communication channels for reporting of serious infectious disease events under International Health Regulations (IHR) and the European Early Warning and Response System (EWRS). HPSC continues as the IHR national focal point and has monitored and provided epidemic intelligence on health protection threats at national and international level (**Actions 1, 2, 3**).

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- Developed and implemented a [research and evaluation programme for mpox](#) in collaboration with webinars with European research colleagues and ECDC/[EACS](#) **(Action 1)**.
- ECDC National Focal Point for Preparedness presented at ECDC workshop on COVID-19 pandemic: lessons learned reflecting on learning from the [Intra-action review of the HSE Health Protection response to the COVID-19 pandemic during 2021](#) **(Actions 1, 2)**.
- Initiated a Public Health investigation into paediatric iGAS cases and collaborated with the ECDC European Union Health Task Force to initiate a similar review across Member States **(Actions 1, 3)**.
- Presented to, and was a panel member, at a meeting with HERA Board members in September 2023, hosted by the Department of Health, focusing on Ireland's emergency preparedness **(Actions 2)**.
- Participated in the WHO European Health Observatory workshop in July 2023 focusing on 'Health Security: from public health to strengthening health systems' **(Action 2)**.
- As a participating member in 'EU EPIC:11' project aiming to develop an EU training programme for preparedness planners at national, intermediate and front-line level, HTPP contributed to a training needs analysis through completion of a preparedness survey and attendance at workshop in Lisbon September 2023 alongside other Member States **(Actions 2, 4)**.
- Responding to threats from Highly Pathogenic Avian Influenza (HPAI): HTPP have worked with national and international partners (including ECDC and UKHSA) to prepare for threats from HPAI through delivery of two exercises in 2023 (including one in June in partnership with counter-parts from Northern Ireland as part of a 'one island' health security approach) and learning from a specific incident linked to Dublin Zoo in July 2023 which informs new guidance being developed for publication in October 2023 **(Actions 2, 3)**.
- HTPP continues to foster close working relationships with UKHSA in relation to CBRN preparedness and response. This year, HTPP secured an extension of the HSE contract with UKHSA for Chemical Threats with the new additional inclusion of Radiation/Nuclear threats **(Action 3)**.
- Director of National Health Protection and National Lead for Surveillance are members of the ECDC Advisory Forum **(Action 3)**.
- HTPP also participated in [SHARP Joint Action](#) which aims to strengthen preparedness in the EU against serious cross-border threats to health and support the implementation of International Health Regulations (2005) **(Action 3)**.

- HPSC co-ordinated the Ireland's contribution to ECDC international Point Prevalence Surveillance (PPS) studies on healthcare associated infection and antimicrobial use (ECDC HAI PPS and HALT surveys) **(Action 3)**.
- HTPP collaborated and secured agreement with [STAKOB Group](#) in Germany and [RescEU NOJAHIP](#) (Norwegian Jet Ambulance for High Infectious Patients) regarding out-of-country transport and High Level Isolation Unit access abroad for High Consequence Infectious Disease cases. Operational planning is ongoing in this regard **(Action 3)**.
- Contributed to the EU Medical Countermeasures Stockpile Technical Working Group' which provided clinical expertise and insight into the EU's plans to develop stockpiles of crisis relevant medical countermeasures in 2023 **(Actions 3, 4)**.
- Contact Management Programme provided expert contribution and coordinated input from Irish stakeholders to an EU feasibility study on contact tracing (CT) tools and applications used at national and EU level and integration within Early Warning and Response System (EWRS). The aim of this survey was to collect information on national and cross-border Contact Tracing (CT) practices, experiences, digitalization, and legal frameworks. The results of this survey will be used to assess the feasibility of a linkage between the CT applications data (national CT applications, digital Passenger Locator Form exchange platform (ePLF) and (EUdPLF) with the Early Warning and Response System (EWRS) **(Action 3)**.



Figure 12: On 30th and 31st March 2023, Dr Augustine Pereira CMP and Dr Patricia Garvey HPSC presented the Irish experience of contact tracing and outbreak management at the Outbreak Investigation and Contact Tracing in the European Region workshop organised by ECDC.

- Working with EU Health Emergency Response Agency (HERA), participated in the relevant Specific Procurement Procedure Steering Committees (SPPSCs) to secure access to mpox vaccines and therapeutics through donation and joint procurement agreements **(Action 4)**.

Ongoing Work and Future Activities

- Continue to participate in European and Global networks for epidemic intelligence, response and preparedness coordinated by ECDC, WHO EURO and others. HPSC are members of all ECDC disease specific networks (**Actions 1, 3**).
- Remain an active partner institution in Global Outbreak Alert and Response Network (GOARN) and support HSE staff to deploy with GOARN with one HPSC epidemiologist deployed to support a GOARN mission to the Ukraine, and one EPIET fellow deployed to Kenya also (**Actions 1, 3**).
- Expressed interest in a proposed exchange on preparedness with international colleagues (ECDC sponsored) over 2023/2024 (**Actions 1, 3**).
- A key focus of the HTPP programme is to ensure national compliance with the [EU 2022/2371 Regulation on Serious Cross Border Threats to Health \(SCBTH\)](#). Member States submit reporting on broad national health emergency preparedness capacities/capabilities with the first national reports to be returned by end December 2023 – and every three years thereafter. Submissions will be assessed by the ECDC, who will revert with recommendations. The HTPP is currently coordinating national reporting in line with this regulation through cross-divisional group with key stakeholders. HTPP is working closely with the Department of Health in this regard (**Action 1, 3**).
- The [Organisation for the Prohibition of Chemical Weapons](#) is preparing a table-top exercise to be held by its Open-Ended Working Group on Terrorism on 20-21 November 2023. Health Protection are involved in planning this exercise in collaboration with the Office of Emergency Planning, Department of Defence (**Action 1, 2**).
- As a member of the HERA Advisory Forum, contribute to achieving priority goals including on pandemic planning on an ongoing basis (**Action 2, 3**).
- Collaborate with UKHSA in relation to CBRN preparedness. HTPP is currently working with them to scope, design and deliver a radiological/nuclear exercise on Public Health response in Ireland in 2024 (**Action 2, 3**).
- Ireland will be a collaborator in the Organisation for Economic Co-operation and Development led Sixth International Nuclear Emergency Exercise (INEX-6) due to take place in quarter one 2024 (**Action 2,3**).
-
- Act in conjunction with colleagues in Ireland and international (UK HSA/ ECDC) to investigate outbreaks associated with contaminated products (**Action 3**).
- Co-ordinate the inclusion of residential care facilities in ECDC international point prevalence surveillance studies on healthcare associated infection and antimicrobial use planned for 2024 (**Action 3**).

Celebrating Success

Between October 2022 and May 2023, Ireland, alongside other EU member states, experienced an upsurge of invasive group A streptococcal (iGAS) infection, three to four times the usual rates seen pre- COVID-19. The reasons for these increasing case numbers were not fully understood, but peak iGAS activity corresponded to peak activity in winter respiratory viral illness and with increased chicken pox activity. High rates of iGAS were particularly pronounced in children in Ireland with an associated increase in paediatric ICU admissions and deaths.

Identifying and understanding the risk factors which increase the likelihood of a severe clinical course or adverse outcome is essential to put measures in place to prevent them if possible. To that end, a retrospective chart review is currently underway looking at the pathway and clinical course of children who were hospitalised with iGAS in Ireland over the last number of months.

Given that Ireland has a small population, with relatively small numbers of iGAS cases, and given the need to understand the underlying reasons for this upsurge, and factors that may prevent spread and improve clinical outcome, National Health Protection and the EU Health Task Force are a leading collaboration with ECDC on a EU-wide project to undertake an expanded review of paediatric illness, collating iGAS surveillance data across other participating member states. Data collection is ongoing, and this work is expected to conclude and be reported early next year. Results from the Irish and EU project will enhance our understanding of this recent iGAS upsurge, help to identify risk factors associated with poorer outcomes and inform Public Health prevention and response activities for the benefit of our collective populations.

Objective Eight: Develop a health protection research strategy for Ireland that includes both local and international collaboration

Spotlight on Research and Guideline Development Unit

An effective [Research and Guideline Development Unit](#) (RGDU) supports a culture of research in health protection and is working towards development of a health protection research strategy for Ireland that includes both national and international collaboration. The [RGDU](#) is also committed to making guidance available that incorporates current evidence informed guideline methodologies and reflects the values and priorities of the HSE and of Government. This is achieved through collaborative partnership, shared resources, and expertise. The development and implementation of evidence informed health protection guidance enhances health outcomes for patients/public, diminishes variation in practice and supports and improves the quality of clinical decisions. The Health Threats Preparedness Programme (HTPP) National Lead currently provides oversight to the work of the health protection Research and Guideline Development Unit.

What we will do (HSE Health Protection Strategy 2022-2027)

Action 1: Support a culture of research in health protection.

Action 2: Resource evidence generation and synthesis capacity.

Action 3: Engage with Higher Education Institutions (HEIs) to provide continuing professional development programmes on health protection research for staff in line with service need.

Action 4: Collaborate with academic and strategic partners to develop a health protection research strategy.

Action 5: Develop multidisciplinary joint health protection/academic posts with academic partners.

Action 6: Facilitate multisectoral working and protected time for publication.

Action 7: Promote Ireland as a partner for European research studies relevant to health protection.

Achievements

- The publication of an RGDU *Rapid Review on the effectiveness/efficacy of antivirals for treatment and/or prophylaxis of seasonal flu and antivirals for treatment and/or prophylaxis of COVID-19*, in congregate settings, available [here](#) (**Action 1**).
- Completion of the RGDU Scoping Review on 'Efficacy of facemasks in preventing transmission of COVID-19 in non-healthcare settings', due to be published in the Journal of Infection Prevention in October 2023 (**Action 2**).
-

- In order to deliver improved health protection guidelines across the HSE, in April 2023 the RGDU completed a **12-month pilot programme with [MAGICapp software](#)**. This application will enable health protection teams to author, publish and update digitally structured guidelines based on best current evidence, enabling clinicians and patients/public to make well-informed healthcare decisions at the point of care. The insights gained from this collaboration with [MAGIC Evidence Ecosystem Foundation](#) and learning will also contribute significantly to improved research and guideline development programmes in the future (**Actions 1, 2**).
- Established **strong links and networks across other key guideline development organisations and evidence synthesis hubs** inclusive of [HSE Research and Development Unit](#); [Evidence Synthesis Ireland](#); Cochrane Ireland; UK Health Security Agency ([UKHSA](#)); Living Evidence Consortium (Australia); Cochrane Australia; MAGIC Evidence Ecosystem Foundation; ECDC (**Actions 1, 2, 6 7**).
- The RGDU are currently delivering a research project to **Determine Health Protection Research Priorities for Ireland**. Participants within this programme comprise public health professionals and academics working in the field of public health service delivery in the Republic of Ireland and the UK and with an interest in establishing a research agenda (**Action 4**).
- Presentation of an abstract *Determining Health Protection Research Priorities* at the HSE Health Protection Conference on 12th October 2023 (**Action 4**).
- The [National Research and Evaluation Programme \(RandE\) for Mpox](#) oversaw and managed, in collaboration with European research partners, the development and implementation of an RandE programme associated with mpox in the context of a [public health emergency of international concern \(PHEIC\)](#). The RandE Programme led and coordinated mpox research and evaluation and its integration within the delivery programmes responding to mpox. This included the RandE programme attending bi-weekly ECDC and [EACS](#) webinars when mpox was categorised as a PHEIC (**Actions 2, 7**).
- NIO and HPSC hosted international visits contributing to developing international evidence base in their respective areas (**Action 7**).

Ongoing Work and Future Activities

- Provide scientific leadership nationally and internationally through research activities, active participation in scientific conferences and production of peer-reviewed papers, supporting production of international health protection guidance, and engagement through ECDC and WHO structures including Advisory and Working Groups on various aspects of health security and health protection (**Actions 1, 2**).
- HPSC and NIO respectively maintains a record of published scientific papers, other publications and presentations by their staff; and have had multiple peer-reviewed papers published, and conference abstracts presented (nationally and internationally) during the year one of the implementation of the strategy (**Actions 1, 2**).

- Many research projects are currently underway and continuing, including a [COVID-19 vaccine](#) impact study, the [PRECISE](#) health and care worker seroprevalence study and various research projects conducted under the European Programme for Intervention Epidemiology Training ([EPIET](#)) training programme. (**Actions 2, 4, 6, 7**).
- RGDU conducts weekly evidence surveillance of identified national and international websites and databases to identify if relevant research and/or guidelines have been published; and disseminate updates to health protection teams to ensure a prompt awareness of new evidence that may directly impact Irish guidelines and response to new and emerging evidence (**Actions 2, 6**).

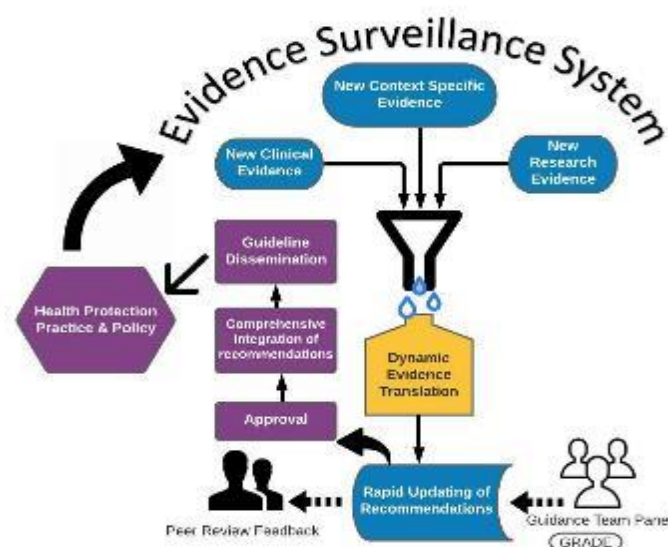


Figure 13; Living Guidelines Approach adapted from the strokefoundation.org.au .

- Evidence requests may arise from a number of sources, including actions from key strategic meetings: National Crisis Management Teams (NCMT), Health Protection Advisory Committee for Infectious Disease (HPAC-ID), Outbreak Control Teams (OCT), weekly evidence surveillance outputs and/or other sources. The RGDU ensures that appropriate [evidence review requests](#) are received, screened, and processed in a timely and efficient manner and that the appropriate evidence-based methodology is followed when conducting any review format. Different types of evidence reviews conducted by the RGDU and approximate time frames for completion are available on the [RGU website](#) (**Actions 1, 2 6**).
- In response to a request from the Chief Medical Officer, the Research and Guideline Development Unit (RGDU) are currently conducting a **rapid review relating to efficacy of antivirals for treatment and/or prophylaxis of Influenza and COVID-19** in congregate setting (Sept-Oct 2023). The Cochrane Rapid Review methodology was followed to conduct this review, in accordance with the Preferred Reporting Items for Systematic Reviews (PRISMA) statement and it's extension, Synthesis Without Meta-analysis (SWiM). Selected studies were quality assessed using the Critical Appraisal Tools (CASP). In addition to the CASP tool, the Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) approach will be used to rate the certainty of the body of evidence identified. It is anticipated this review will be complete in Q3, 2023 (**Action 2**).

- HPSC is a consortium member of the ECDC Vaccine effectiveness, burden, and impact studies ([VEBIS](#)) network, which includes studies in primary care, [SARI](#) and hospital health and care worker (H&CW) studies (**Actions 2, 6, 7**).
- Conclude the ***Determining Health Protection Research Priorities for Ireland*** study. The primary purpose of this study is to further develop a framework for health protection research that supports a culture of best practice and is based on scientific knowledge, data, and evidence. This study utilises a modified e-Delphi approach and the Nominal Group Technique (NGT) to identify health protection research priorities in Ireland. This study is guided by the [Reporting Guideline for Priority Setting of Health Research](#) (REPRISE). This study commenced in April 2023 and will conclude during October 2023. This study will also inform the development of a national health protection research strategy that includes both local and international collaboration as outlined in the National Health Protection Strategy 2022-2027 (**Actions 1, 2, 4**).
- The RGDU utilises the [GIN-McMaster GDC](#) process of developing evidence-based guidelines. It is an evidence-informed, standardised, rigorous, and transparent checklist that provides direction to guideline developers and supports the development, implementation, and evaluation of guidelines. The comprehensive items in the checklist also serve as a minimum set of standards required to plan and track the progress of guideline development as a complementary tool or a manual for [guideline development](#) (**Actions 1 and 2**).
- Current evidence-based guideline development activity in health protection is focused upon the following, invasive group A streptococcus (iGAS), [EMI](#); HPAI, Rabies, TB, Diphtheria (**Action 2**).
- During Q4 2023, RGDU will explore the potential for multidisciplinary joint health protection/academic posts and academic/operational secondments between RGDU and academic institutions (**Action 5**).
- Submit proposals to develop a research collaborative to undertake a population health and social care needs assessment for vulnerable migrants to inform a comprehensive Migrant Health Strategy (**Action 5**).
- Continue to liaise with National Director for Public Health to develop CPMH joint academic posts including within domain of health protection (**Action 5**).
- Participate in various VEBIS contracts (ECDC Vaccine effectiveness, burden, and impact studies) in primary care, SARI, and hospital HCW studies (**Action 7**).
- Continue to participate in the [EU Joint Action UNITED4Surveillance: Union and National Capacity Building 4 IntegraTED](#) Surveillance research projects (**Action 7**)
- During 2023, the Whole Genome Sequencing (WGS) Programme will seek EU4 Health funding to strengthen the WGS Programme (originally funded by ECDC), which enables research to take place (**Action 7**).

- HPSC will continue to participate in the PRECISE study (seroprevalence of Covid-19 study amongst hospital HCWs) (**Action 7**).

Celebrating Success

Research planning as part of emergency response preparation

Including research as part of mpox emergency planning promoted development of a toolkit and resources such as prepared statements on what public health law enables as regards data collection, systems to allow rapid translation etc. Consistent with [ECDC TECHNICAL REPORT Public health considerations for mpox in EU/EEA countries April 2023](#), in these circumstances, if targeted national vaccination programmes are considered, they should be optimally implemented within a framework of collaborative research and clinical trial protocols with standardised data collection tools. Health promotion interventions and community engagement are critical to ensure effective outreach and high vaccine acceptance and uptake among those most at risk of exposure. *Mpox research programme – Reflections*

Weekly Evidence Surveillance

“Excellent resource as ever”

“An important cog in the wheel of knowledge management”

“Amazingly helpful and timely resource as we enter work on pandemic planning”

“This is a great resource with material of interest across all health protection programmes”

Objective Nine: Objective Nine: Expand and enhance the capabilities, education, and training of the multidisciplinary health protection workforce

Spotlight on Multidisciplinary Workforce Development

As a result of the *Public Health Reform Programme*, new staff appointed include Consultants in Public Health Medicine in Health Protection, aligned to health threats preparedness, surveillance, immunisation, infectious disease, environment and health. The health protection nursing workforce also increased and new nursing governance structures were introduced. Currently in post there is a Director of Nursing National Health Protection, 6 Assistant Directors of Nursing, Area Departments of Public Health, 31.7 whole-time equivalent (WTE) clinical nurse managers (CNM2) and 30.6 (WTE) health protection staff nurses in post. As of Sept 2023, there are nine vacancies - two at clinical nurse manager (CNM) grade and seven staff nurse posts. As part of the Public Health Reform, the Epidemiology career pathway was agreed and appointment to principal epidemiology, epidemiology and surveillance scientist roles continue. This will see HPSC transitioning to a Scientist Led surveillance model, working closely with clinicians within HPSC, align with the disease area SIGs

This expansion of the public health workforce enhanced the considerable skillsets and diverse experience of health protection teams at national and regional levels. These skilled and expert health protection teams are the foundation for how we protect the public from infectious diseases, environmental hazards, and other health risks. Variations exist at national and regional level in both workforce resources (size, skill-mix) and skills/capabilities (*Unpublished MDT working group report 2023*). Thus prioritising workforce development across the wide range of business as usual / business continuity health protection activities will provide service resilience to protect against and respond to all hazards; as well as enhance staff wellbeing and satisfaction.

What we will do (HSE Health Protection Strategy 2022-2027)

Action 1: Determine the skill mix, and capabilities required of the HSE health protection workforce to ensure current and future service needs are met.

Action 2: Develop a multidisciplinary education implementation plan and establish a programme of education and training for the HSE health protection workforce including: leadership and management development, team working, communications, good governance, quality assurance and quality improvement.

Action 3: Further implement the training strategy for Specialist Registrar Public Health Medicine to meet all aspects of health protection, in collaboration with the RCPI.

Action 4: Promote and expand the use of multidisciplinary European training programmes across health protection.

Action 5: Undertake job/role planning and appraisals aligned with service plans.

Achievements

- **Recruitment** is ongoing across all disciplines nursing, medicine, epidemiology, and management admin. Interest is high for health protection roles (**Action 1**).
- HPSC is transitioning to a scientist led surveillance model, working closely with clinicians nationally, regionally as well as clinicians in AMRIC, NVRL and other parts of the HSE. Two additional Principal Epidemiologists have been appointed. Work is progressing to align HPSC teams to the disease area of the SIGs.
- Established national Health Protection Special Interest Groups (SIGs) to support team development and promote integrated, collaborate working across national HSE Public Health: *Health Protection*. Based on the science of networks and guided by [the 5 C principles of an effective network](#) for improvement, AORP led the development of health protection Special Interest Groups (SIGs).

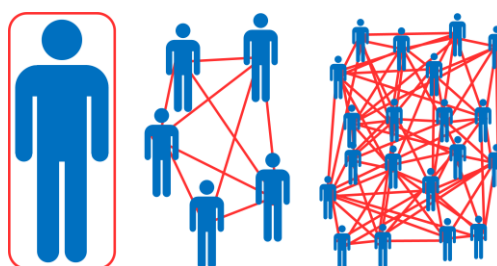


Figure 14: Network example (CC BY-SA, 2023) [This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

SIGs collaborate across the Health Protection system to support the development of effective and efficient standardised approaches to prevention, investigation, surveillance, and response to notifiable infectious diseases including the development of advice and guidance and education materials. They form a critical part of the national health protection service and infrastructure to enable distributed leadership, collaboration and development of specific areas of Health Protection (**Actions 1, 2**).

- AORP established and led the fortnightly Health Protection Operational Meetings with MDT attendance and updates from Areas, NIO, HPSC, NSIO, Health Protection Public Health, ADsPH. This is an opportunity for the SMT and regional teams to raise health protection matters which require medium to long term solutions and supports the development of a nationally integrated health protection service rooted in strong governance (**Action 2**).
- AORP established and led the fortnightly Health Protection Planning and Delivery Group Meetings. This is a meeting between AORP and CPHMs si Health Protection where effective and efficient ways of working and significant business and administrative issues are discussed (**Action 2**).
- In November 2022, AORP established and provided oversight of a national multidisciplinary working group that considered and agreed best practice regarding multidisciplinary working across the six public health areas. Recommendations outlined in the final report (April 2023) were supported by ADsPH. They are currently under implementation across all six Area Public Health Departments as required (**Actions 1, 2**).

- AORP instigated and oversaw the establishment of a multidisciplinary *out-of-hours* working group tasked with designing a new safe, feasible, sustainable model of out-of-hours working. Agreed options for an appropriate multi-disciplinary out-of-hours service in line with Public Health reform were presented in a report to the National Director of Public Health (NDPH) in January 2023. An East / West model was preferred. A national steering and working group, led by the NDPH have since been formed to progress implementation of the preferred model (**Action 2**).
- Lead on the development of an iGAS webinar for medical professionals in collaboration with RCPI Institute of Medicine and Faculties of Public Health, Paediatrics and Pathology (**Actions 2, 3, 4**).
- National office, HPSC and NIO facilitated training of SpRs in Public Health through health protection placements. Many CPHMs / SPHM are SpR trainers and provide teaching session (s) with SpRs in Public Health Medicine. Some CPHMs are Examiners in the RCPI Part 2 examinations for Public Health Medicine (**Action 3**).
- Multiple activities have been achieved in relation to expanding and enhancing the capabilities, education, and training of the multidisciplinary health protection workforce (**Actions 2, 4**). These activities are as follows:
 - HPSC procured MS Excel, MS Access, R and [ARCGIS](#) training to upskill staff.
 - Delivered training in-house on the fundamentals of statistics and delivered Business Objects training to new staff at HPSC and in selected HSE Health Regions. Further in-house training in Power BI, R, outbreak investigation, ARCGIS and statistics to be delivered in autumn.
 - Provided CPD opportunities for national staff (e.g., monthly CPD online sessions) and has active R, Business Objects and ARCGIS User Groups.
 - Facilitated placement and participated in training of Irish and European fellows in the [European Programme for Intervention Epidemiology Training \(EPIET\) programme](#). This two-year training programme plays a key role in strengthening the prevention, preparedness, surveillance and control of infectious diseases and other cross-border health threats or issues of public health concern in the EU/EEA Member States and at EU level. Through the programme public health professionals are trained in the use of state-of-the-art, shared standards and methods, good practices, and common public health objectives to enhancing response capacities for effective field investigation and communicable disease control at European, national and community level to meet public health threats.
 - Facilitated short placements of master's and undergraduate project and medical students (Trinity College Dublin and University College Cork).
 - HPSC, in conjunction with the Food Safety Authority of Ireland (FSAI), delivered outbreak cases studies to veterinary students at University College Dublin, and delivered a half day lecture series for Masters in Science (MSc) students in Healthcare Infection Management at Trinity College Dublin.

- Health protection nursing teams, aligned to multidisciplinary teams in Area Departments of Public Health, continue to implement new ways of clinical practice to provide specialist health protection advice, education, and consultation to residential care facilities (RCFs), acute settings, intellectual disability (ID) settings across public and private sectors (**Actions 1, 2**).
- Uptake by health protection nursing of further education in the domain of health protection, infection prevention and control, health promotion and sexual health promotion has been high among nursing teams with this trend continuing for the 23/23 academic year (**Actions 1, 2**).
- Development and delivery of health protection nurse education programmes has taken place. This includes:
 - A bespoke Health Protection Nursing **Foundation Programme** has been delivered on two occasions with positive feedback - including to 30 HP nurses in May 2023.
 - Monthly **continuous professional development** (CPD) webinars on various HP topics continue.
 - Nursing **Leadership Programmes** delivered by the HSE [National Clinical Leadership Centre](#) for Nursing and Midwifery with high uptake for iCare Programme and the leadership development programme for nurse managers and staff nurses.
- Multiple peer-reviewed papers published, and conference abstracts presented (nationally and internationally) between Jan and August 2023 (**Actions 2, 4**).
- The NIO has hosted and been part in several webinars and conferences to healthcare professionals to support the national immunisation programmes and to share the experience of Ireland at an international level (**Actions 2, 4**).
- [Epi-Insight](#), HPSC's epidemiological bulletin continues to publish regularly to a national and international audience (**Actions 2, 4**).

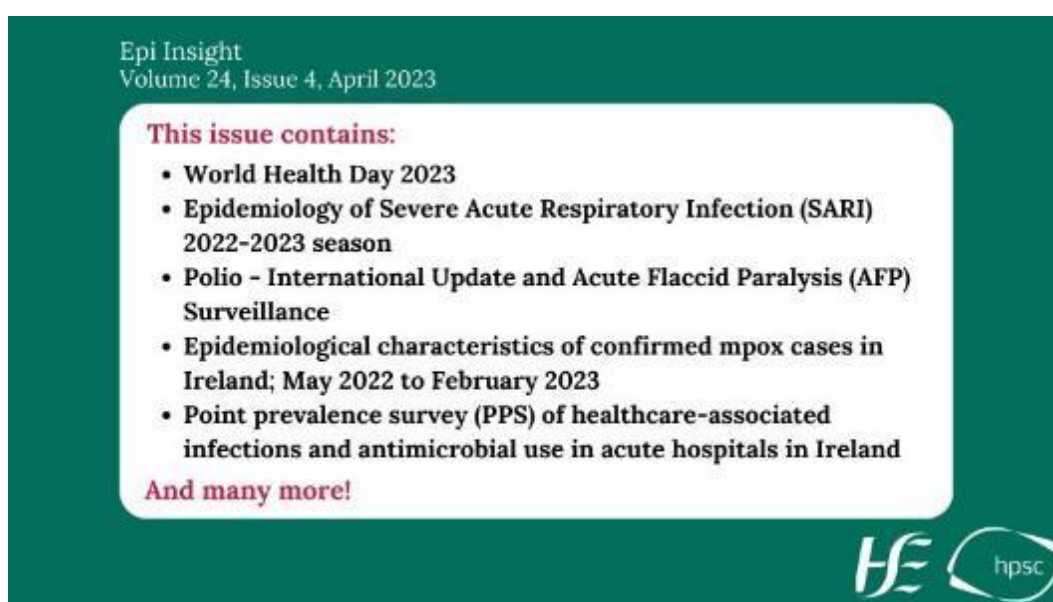


Figure 15: Epi-insight, HPSC's epidemiological bulletin

Ongoing Work and Future Activities

- HPSC and NIO will continue to recruit and on board new enhanced surveillance and Covid-19 members of staff and strengthen team working within their areas as well as within the wider HSE Public Health: Health Protection (**Action 1**).
- Continue the ongoing integration of the nursing workforce into the health protection function and multi-disciplinary teams. This includes upskilling in health protection service demands areas including MPox, TB, IGAS, varicella in congregate settings and measles etc (**Action 1**).
- Health protection nurses will continue to undertake post graduate education and continuing professional development courses in health protection and related areas.
 - Leading on and contributing to the nursing aspects of *out of hours implementation plan*.
 - Ongoing scoping and development of the HP nursing role within the clinical TB service.
 - Scope nursing role in pillars of PH other than health protection.
 - Winter Planning engagement days coordinated by HP ADONs in conjunction with Community IPC colleagues and Area Flu leads.
 - Scoping of the nursing role into antimicrobial resistance (AMR) activities
 - Re-establishing sexual health network links to improve collaboration on knowledge and information sharing, capacity building and healthy attitudes to sexual health. (**Action 1**).
- Develop, in partnership with NMPDU/CNME and [National Clinical Leadership Centre for Nursing and Midwifery](#) (NCLC), clinical leadership competencies and career development framework to underpin effective performance at all levels of nursing management (**Actions 1, 2**).
- Continue to support and promote nurse participation in initiatives e.g. Peer vaccinator programme delivery or promote practice nurse knowledge and competency on childhood immunisation (**Action 2**).
- Continue to provide multidisciplinary continuous professional development education and training courses, programmes and webinars, as appropriate (**Action 2**).
- Commence a multidisciplinary training needs analysis and a training strategy for epidemiology pathway (**Action 2**).
- HPSC are collaborating with the [Public Health Laboratory](#) (PHL) on an annual 'Lab4epi' training day for all Departments of Public Health and the HPSC (**Actions 2, 3**).
- NIO, in collaboration with ICGP, develop training on immunisations for doctors who are undergoing GP training (**Actions 2, 3**).
- Continued engagement with GP community through ICGP webinar and other media (eZine; Forum Magazine) to impart key health protection messages ahead of winter 2023/24 (**Action 3**).

Celebrating Success

Nursing team development and amalgamation across the areas

Health protection nursing collaborate with multidisciplinary team members to ensure team amalgamation in the areas is combined with positive working relationships. Work has progressed to clarify governance and communication. Anchor days have proven very successful both for the nursing team and the entire teams, as have the development of algorithms for frequently managed notifications e.g. norovirus, VTEC. Teams have commenced work to streamline public health management of RCF and congregated settings, using a lean approach This involves engagement and development of skill set in managing outbreaks in vulnerable social inclusion congregate settings.

In person engagement days arranged for winter planning have been organised. Health protection nurses participate in policies, procedures, protocols and guidelines (PPPG) development; clinical auditing of practice, needs assessment; managing risk and developing strong culture of health and safety at work.

Delivery of monthly CPD webinar open to all staff

Maximising the effectiveness of Multidisciplinary (MDT) working at Area level

In November 2022, a nationally representative MDT Working Group was convened to review current models of MDT working, and to advise Senior Management Teams within newly-reformed Public Health Areas, as well as National Leads within HSE Public Health, on the most feasible approaches to enhancing effectiveness of MDT working at Area level. The scope of this work was to highlight examples of good practice across the country, identify challenges to effective MDT working, and to propose solutions to any challenges identified.

Principles that underpin effective MDT working include that teams should have clear membership and a shared purpose, strong leadership and core processes for joint working. Communication and collaboration. Finding and recommendations were captured under four key areas/enablers i.e. technological needs, quality and standardisation of practice, staff engagement, and resourcing and governance. This report was presented to Area Directors of Public. A Department of Public Health in the Health Region is piloting its implementation.

Objective Ten: Provide direction and support to the development of a nationally integrated health protection service, rooted in strong governance

Spotlight on HSE Public Health: Health Protection

HSE's **Public Health: Health Protection** was created as part of the wider Public Health Reform Programme and launched with the first National Health Protection Strategy in October 2022. The mission of the HSE Public Health: Health Protection is **“To Protect and Prevent”**: to protect the people of Ireland from all-hazards and prevent harm from health threats, national and international.

We do this by providing **strategic health protection direction** to HSE Public Health and working **in collaboration** with key partners (national and international), on **prevention, early identification, preparedness, and response to threats from all health protection hazards**.

- We provide **expert evidence-based advice** to policy makers, health and care service commissioners and providers, and a range of other stakeholders and partners.
- We **collect and collate** surveillance data, intelligence, and other information to inform **dynamic public health risk assessments** to ensure Ireland is prepared to respond to known or emergent threats, national or international.
- We are committed to **delivering excellence** in everything we do and have an ongoing programme of **quality improvement** across all our domains of work.
- We provide **structured training** and a wide range of **education and information programmes** for health and care professionals (including doctors in training and other clinicians), wider stakeholders and the public.
- We are committed **to addressing health inequities and inequalities**, to ensure all the people living in Ireland are protected from harm as we understand that **‘No one is safe until everyone is safe’**.
- We actively engage with **international partners**, including ECDC, WHO, and a wide range of other health and public health agencies at country level, including the UK Health Security Agency (UKHSA).
- We ensure that **active learning** is embedded within our responses to health threats and experience gained is used to inform our public health guidance.
- We are committed **to improving the evidence-base** in health protection and do this through active research programmes and engagement with a wide range of national and international scientific conferences and research forums.

Our **organisational structures** are described [here](#) and in Figure 16 below.



Figure 16: Elements of HSE Public Health: Health Protection structure

The **national office led by the Director of National Health Protection (DNHP), supported by a senior management team** which includes **National Consultant Leads for Surveillance, Immunisation and Health Security (Threats)**.

A tier of **Consultants in Public Health Medicine (CPHMs)** working in the National Office, NIO and HPSC, provide leadership and expert guidance to any response to or preparation for extant or emergent health threats, working closely with **Area Team based CPHMs with special interest in Health Protection (CPHMs si HP)**. Those CPHMs lead multidisciplinary health protection teams that provide a wide range of skills and expertise to the delivery of the health protection service.

In addition, multi-disciplinary expert advisory groups known as **Special Interest Groups (SIGs)** (see also Objective 9) provide further resources to share intelligence, evolve learning and inform development of evidence-based guidance in relation to a wider range of health protection issues, ranging from specific infectious diseases to environmental hazards (including climate change) and organisational development/quality improvement programmes).

What we will do (HSE Health Protection Strategy 2022-2027)

Action 1: Deliver on the objectives outlined in this strategy.

Action 2: Provide expert advice to the HSE Public Health Reform Programme to create an optimal health protection service (configured and resourced to meet the needs of the population).

Action 3: Further develop a national health protection service based on the HSE values of care, compassion, trust and learning; and a culture of trust, openness, respect and caring.

Action 4: Ensure clarity around roles and responsibilities, including leadership, with clear lines of accountability and clarity around organisational structure and governance.

Action 5: Support team development and promote integrated, collaborate working across a national health protection service.

Action 6: Develop branding for a new integrated national health protection service.

Achievements

- This report provides evidence of the work of the HSE Public Health: Health Protection in delivering against the objectives of the HSE's Health Protection Strategy 2022-2027 during its first year of implementation. The report demonstrates clear progress as well as outlining ongoing challenges and future plans to implement work on key enablers including a **national outbreak case and incident management surveillance system (OCIMS)** and a **[national immunisation intelligence system \(NIIS\)](#)**. Delivery of these key enablers and their operational deployment will enhance current capabilities, add efficiency, and improve effectiveness of all key health protection and health security activities (**Action 1**).
- The ongoing programme of public health reform is supported by the Director of National Health Protection working with the National Director of Public Health (NDPH) directly and as a member of the NDPH Senior Management Team. During the past year, DNHP has directly supported recruitment of key consultant posts within the national as well as regional health protection teams. Further, at national level, CPHMs have been recruited to key posts in Environment and Health, Infectious Diseases and Acute Response, and work is in progress to recruit further to CsPHM posts in Health Security (within the Health Threats Programmes), Respiratory Infection including TB and Pandemic Planning, and a post to lead our work in Evidence-based Medicine, Quality Improvement and Research. Further internal restructuring of posts and roles within the HSE Public Health; Health Protection has enabled more effective working across the National Office, HPSC, NIO and the managed clinical network of CsPHM si HP working in Area Department of Public Health in the HSE Health Regions. HSE Public Health: Health Protection also actively contributed to wider work on developing multi-disciplinary teams (MDTs) and a robust national out of hours response service. As the capacity at national level as increased with recruitment to new posts, the ability of the service to meet a wider range of health protection needs has been enhanced, especially in development of the programme in relation to environment and health (**Action 2**).

- The DNHP and the SMT of the HSE Public Health: National Health Protection Office has promoted HSE's [Value in Action](#) programme as a cornerstone of the culture of the new service at all levels. Further, working with HSE's Organisational [Change programme](#), the national health protection office has developed a programme of building team culture tagged the 'Ways of Working (WoW) Programme' which has involved initially the SMT and then the CPHM tier (as posts were recruited) which has focused on developing a learning culture, collaborative working across individual team leaders and wider team members, responsive and resilience, and a supportive working with colleagues. This has been supplemented by 'All Hands' days for team members and their leaders within NIO and HPSC during September 2023. And a number of workshops and training events have been delivered by the national health protection working with CsPHMs si HP in SIGs to build the culture and support collaboration. Finally, HSE Public Health: Health Protection members and leaders have actively contributed to work undertaken by the DNHP and their SMT in developing culture within the wider public health family (**Action 3**).
- Over the course of the past year, the HSE Public Health: Health Protection SMT has evolved with more streamlined agile working practices, consolidation of governance and management structures (within the SMT and across teams directly managed by its membership), and more effective ways of working (in hours and out of hours). Ongoing programmes of work support effective collaboration both operationally and strategically with HSE Regional Health Protection Teams, through structured meetings, operational Sit Reps, and other meetings either in relation to specific incidents or issues, or more generally around organisational development (including work on development of managed clinical networks to support the work of the SIGS). Organograms and other materials outlining governance structures are provided [here](#) (**Action 4**).
- Activities in this domain are highlighted above and continue with activities including educational and training activities, team development activities, team away days and organisational development support (including on-line training resources via [HSELand](#)). Further plans to be rolled out in 2024 include implementation of 360 appraisal, initially for senior managers but then to wider staff groups, to support professional development and personal growth (**Action 5**).
- A specific brand identity within HSE has been developed for the **HSE Public Health: Health Protection** and new bilingual livery and taglines are included in this report: **HSE Public Health: Health Protection/ FSS Sláinte Poiblí: Chosaint Sláinte: To Protect and Prevent/A chosaint agus a chosc**. In national engagement, we use the phrase **HSE Public Health: National Health Protection Office/ FSS Sláinte Poiblí: Oifig an Náisiúnta Chosaint Sláinte** (**Action 6**).

Ongoing Work and Future Activities

- **Strategic coordination of health protection activities relating to ongoing threat from COVID-19** (including response to any new variants), incorporating learning from prior experience in the pandemic period and during recent winter and other surges. This includes consideration of surveillance needs and activities with HPSC; the immunisation requirements (including work with NIO and NIAC); guidance requirements for the health and care sector (including work with AMRIC and public health Advisory Committee for SARIs (AC-SARI), and international intelligence and information to inform our dynamic public health risk assessment. This includes preparation for and response to any new Variant of Concern (VOC) and/or any surge in infection driven by this or by other factors. This also informs winter planning and future pandemic preparation. (This relates to the implementation of HTTP published pandemic intra-action review, see also Objective 4).
- **Winter planning and response:** During winter 2022-23, Ireland saw a truly multi-pathogenic winter which saw not only rises in COVID-19 but also seasonal flu, respiratory syncytial virus (RSV), other respiratory viruses and also invasive bacterial infections (especially invasive Group A Streptococcal Infection (i-GAS)). HSE Public Health: Health Protection provided expert advice and guidance to HSE and other health and care partners in areas of surveillance, disease modelling, infection prevention and control, and vaccination strategies, including specific focus on vaccination targeting health and care workers as part of health and care system resilience. As we prepare for winter 2023-24, HSE Public Health: Health Protection continues this work including engaging with public health agencies in Australia to gain insights into their experience of Southern Hemisphere winter to inform our planning.
- **Future pandemic preparedness:** The DNHP co-Chairs HSE's future pandemic preparedness group which is drafting a new plan on responding to future pandemics, based on learning from COVID-19 pandemic (here and internationally), winter response and evidence-based guidance from WHO, ECDC and other national public health agencies (including UKHSA). The final draft of the future pandemic plan will include an approach that recognises the 'wave form' of pandemics and that during any pandemic there may be periods of rapidly increasing infections as well as decreasing levels; inter-wave periods where infection levels are stable, and that a pandemic event will likely last for several years (influenced by nature of the infectious agent and the availability of medical counter-measures, especially effective vaccines). Further, that the public health measures required to control levels of infection and protect health and care services can have wide impacts on the economy, education, quality of social and healthcare, as well as physical and mental health. Therefore, interventions to mitigate the impact of future pandemics need to be a targeted as possible, impacting on as specified a part of the population or specific settings if possible, and for the shortest period possible. This framework will describe as '**baseline/defend/enhanced response/de-escalate**' and will be used for future responses to COVID-19 as well as any future emergent pandemic. Once the final draft of the plan is agreed, there will be a **tabletop exercise (TTEx)** to consider strengths and weaknesses of the plan in operation and inform any further iterative changes.

- **Responding to emergent threats from vaccine preventable diseases:** HSE Public Health: Health Protection continues to coordinate and lead strategic interventions, alongside NIO and the National Social Inclusion Office (NSIO), to prevent and respond to outbreaks of vaccine-preventable diseases especially among vulnerable and underserved parts of the community. This includes work to address the risk from **measles** (in populations where currently levels of MMR vaccine coverage are lower than desired (see Chapter 5 on Immunisations) or **diphtheria** or **polio** (which may be a risk in some migrant communities where access to diphtheria and/or polio containing vaccines in country of origin may be challenging due to economic, structural, or political reasons, including war). We have worked particularly to address the needs of vulnerable migrants in congregate settings to support and encourage offer and uptake of vaccines which will be important to avoid outbreaks in these settings, which can be crowded and contain many vulnerable people, children, and adults alike. For example, in August 2023, HSE Public Health: Health Protection worked with NIAC to change advice on the use of varicella vaccine to extend the offer to vulnerable children and adults living in congregate settings who have no proof of vaccination, immunity or infection (in response to documented increases of cases and outbreaks of infection in such settings). HSE Public Health: Health Protection has also provided strategic leadership to enhancing preparedness for any emergent detection of polio through implementation of a national reporting scheme on clinical presentation of acute flaccid paralysis (AFP) in late 2022; wastewater surveillance for polio, and updated public health guidance on responding to cases or outbreaks published in Spring 2023.
- **Responding to threats from Highly Pathogenic Avian Influenza (HPAI):** HSE Public Health: Health Protection Threat Team have worked with national and international partners (including ECDC and UKHSA) to prepare for threats from HPAI through delivery of two exercises in 2023 (including one in June in partnership with counter-parts from Northern Ireland as part of a 'one island' health security approach) and learning from a specific incident linked to Dublin Zoo in July 2023 which informs new guidance being developed for publication in October 2023.
- **Meeting Ireland's future health protection needs through improved information and intelligence assets:** Working with the National Director of Public Health, the HSE Public Health: Health Protection teams have been progressing design and procurement of two new systems which will ultimately provide us with better information and intelligence on infections and other health hazards impacting on the Irish population (OCIMS) and on the level of coverage of various vaccine programmes (NIIS), including the ability for both systems to focus in on specific vulnerable or underserved populations, communities or settings to inform health equity programmes and design evidence-based public health policies and guidelines to address gaps in coverage. Work on this has progressed significantly during 2023 and we expect to go out to procure these new systems within this financial year.

During the next several months, HSE Public Health: Health Protection will:

- **Lead the Strategic Health Protection response to winter 2023/24**, working with HPSC and NIO to monitor the impact of various infections (including COVID-19 on the Irish population and our health and care services); supporting delivery of COVID-19 autumn boosters and seasonal flu vaccine campaigns (especially for vulnerable people and settings and health and care workers), and evolving evidence-based guidance for health and social care providers, other partners and the wider population. We will work closely with the Chief Medical Officer, Department of Health and policy makers to prepare as best we can for and effectively mitigate any impacts from viral or bacterial infections over the course of the season.
- **Continue to actively monitor for emergent health threats**, including infectious diseases (e.g., highly pathogenic avian influenza, measles, diphtheria, polio, TB, varicella etc.) or environmental hazards (including impacts from adverse weather, flooding, poor air quality or other climate-related threats), and evolve our surveillance and guidance resources accordingly to inform mitigation and prevention strategies.
- **Continue to actively engage with international partners to share learning and gain intelligence on health security risks**, within the EU mechanisms through ECDC and EU Commission structures; with wider international partners through the WHO EURO Regional Office (in Copenhagen) and WHO HQ (in Geneva), and with our close partners in the UK through engagement with UKHSA, especially colleagues in Northern Ireland as part of a **‘one island approach’** to health security.
- **Continue to provide scientific leadership nationally and internationally** through research activities, active participation in scientific conferences and production of peer-reviewed papers, supporting production of international health protection guidance, and engagement through ECDC and WHO structures including Advisory and Working Groups on various aspects of health security and health protection.

Celebrating Success



August 28th, 2023: Organised through the Embassy of Canada, a delegation from Public Health Agency of Canada (PHAC) and Innovation, Science and Economic Development Canada (ISED) met with HSE Public Health: National Health Protection Office to discuss areas of mutual interest and share learning including preparing for future pandemics.

December 15th 2022: Supporting preparation for and response to winter pressures due to multi-pathogenic winter, the HSE Public Health: Health Protection was at the forefront of public engagement and promoting COVID-19 booster and seasonal flu vaccines for eligible people.



The Irish Times, December 15, 2022.

Cases of Covid and flu set to surge after Christmas, says HSE.

People urged to take measures to help control spread of viruses as hospitals prepare to deal with increased numbers in Emergency Departments.

December 15, 2022, *The Irish Times*: Dr Éamonn O'Moore, Director of National Health Protection, urged people to get vaccinated in the run-up to Christmas. Photograph: Sam Boal/Photocall Ireland.

Conclusion

Published in October 2022, the HSE Health Protection Strategy 2022-2027 was a critical first step in outlining a clear framework for the development of an agile, intelligence-led and evidence-informed health protection service for Ireland over the following five years.

As demonstrated in this report, significant and early progress has been made in this endeavour across many aspects of health protection including surveillance, all hazard preparedness and response, environment and health, immunisation and health inequities. Through HSE Public Health Reform the health protection workforce has expanded serving to bolster and enhance the ongoing development of an integrated health protection service in Ireland.

Notwithstanding the challenges and uncertainties that may present, the achievements and work outlined provide a solid platform to build upon over the coming four years and beyond to achieve the collective aim of full implementation of the [HSE Health Protection Strategy 2022-2027](#) and protecting the health and wellbeing of people in Ireland against all health protection hazards.

