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HSE Public Health: Health Protection

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Health Service Executive
Health Protection Strategy 2022-2027

Year Two Implementation Report

*A Chosaint agus A Chosc
To Prevent and Protect*



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Abbreviations

ADPH/ADsPH	Area Director of Public Health/Area Directors of Public Health
ADON-HP	Assistant Director of Nursing, Health Protection
AFP	Acute Flaccid Paralysis
AMRIC	Antimicrobial Resistance & Infection Control, HSE
AORP	Acute Operations Response Programme, HSE Public Health: National Health Protection Office
ARI	Acute Respiratory Infection
BCG	Bacillus Calmette-Guérin vaccination, a vaccine primarily used against tuberculosis
BBV	Blood Borne Virus
BOTP	Beneficiaries of Temporary Protection
CBRNE	Chemical, Biological, Radiological, Nuclear and Environmental (threats)
CCAC	Climate and Clean Air Coalition
CCB	Co-ordinating Competent Body
CCO	Chief Clinical Officer, HSE
CCT	COVID Care Tracker Information System
CHI	Children's Health Ireland
CIDR	Computerised Infectious Disease Reporting
CMO	Chief Medical Officer, Department of Health
CMP	Contact Management Programme, HSE
CMT	Crisis Management Team
CNM	Clinical Nurse Manager
COVAX	Electronic dataset, which records all COVID-19 vaccinations for all residents
CPHM	Consultant in Public Health Medicine
CPHM si HP	Consultant in Public Health Medicine, special interest Health Protection
CPD	Continuous Professional Development
CT	Contact Tracing
CWC	Chemical Weapons Convention
DAFM	Department of Agriculture, Food, and the Marine
DECC	Department of the Environment, Climate and Communications
DNHP	Director of National Health Protection, HSE Public Health
DOH	Department of Health
DON	Director of Nursing
DPA	Data Processing Agreements
DPENDR	Department of Public Expenditure, NDP Delivery and Reform
DPH	Department of Public Health
DRA	Dynamic Risk Assessment
DSA	Data Sharing Agreement
ECCP	European Civil Protection Pool
ECDC	European Centre for Disease Prevention and Control
EEA	European Economic Area
EFSA	European Food Safety Authority

EHO	Environmental Health Officer
EHP	Environment & Health Programme
EHU	European Health Union
EIW	European Immunisation Week
EPA	Environmental Protection Agency
EPD	Education and Professional Development
EPIET	European Programme for Intervention Epidemiology Training
EM	Emergency Management
EMI	Emergency Management of Injuries
ePLF/EUdPLF	Digital Passenger Locator Form Exchange Platform
ESG	Expert Steering Group
EU	European Union
EUHPP	EU Health Policy Platform
EWG	Expert Working Group
EWRS	Early Warning and Response Systems
FSAI	Food Safety Authority of Ireland
gbMSM	Gay, Bisexual, and Other Men-Who-Have-Sex-with-Men
GOARN	Global Outbreak Alert and Response Network
GP	General Practitioner
GZV	Gastroenteric, Zoonotic, and Vectorborne Diseases
HCID	High Consequence Infectious Disease
HCW	Health and Care Workers
HERA	Health Emergency Response Agency
HIQA	Health Information and Quality Authority
HLIU	High-Level Isolation Unit
HNIG	Human Normal Immunoglobulin
HP	Health Protection
HPAC-ID	Health Protection Advisory Committee for Infectious Disease
HPAI	Highly Pathogenic Avian Influenza
HPOL	Health Protection Operational Leadership (meeting)
HPSC	Health Protection Surveillance Centre, HSE Public Health: National Health Protection Office
HPV	Human Papillomavirus
HSE	The Health Service Executive (HSE), which provides public health and social care services to everyone living in Ireland
HSP	The Health Security Programme, HSE Public Health: National Health Protection Office
HTA	Health technology assessment
HTPP	Health Threats Preparedness Programme, HSE Public Health: National Health Protection Office
ICT	Information and Communication Technology
ID	Infectious Disease
iGAS	Invasive Group A Streptococcus
ICGP	Irish College of General Practitioners
IHR	International Health Regulations 2005
IMT	Incident Management Team

IDSI	Infectious Diseases Society of Ireland
IPAs	International Protection Applicants
IPC	Infection Prevention and Control
ISMS	Information Management System
ISO	International Organization for Standardization
LA	Local Authorities
LAIV	Live attenuated influenza vaccine
LDA	Land Development Agency
LGBT	Lesbian, Gay, Bisexual, Transgender
MCI	Nursing Management Competency
MCTD	Measles Contact Tracing Database
MDP	Management Development Programme
MDR/XDR	Multi-Drug Resistant/Extensively-Drug Resistant
MMR	Measles Mumps and Rubella Vaccine
MVUs	Mobile Vaccination Units
NAS	National Ambulance Service, HSE
NCG	National Coordination Group (Avian Influenza)
NDWG	HSE National Drinking Water Group
NEHS	National Environmental Health Service, HSE
NGOs	Non-Governmental Organisations
NHPO	National Health Protection Office, HSE Public Health
NIAC	National Immunisation Advisory Committee
NID	National Incident Director
NIIS	National Immunisation Intelligence System
NIMT	National Incident Management Team
NIO	National Immunisation Office, HSE Public Health: National Health Protection Office
NIOC	National Immunisation Oversight Committee
NCL	National Clinical Lead
NMBI	Nursing and Midwifery Board of Ireland
NOJAHIP	Norwegian Jet Ambulance for High Infectious Patients
NRCS	National Radon Control Strategy
NSIO	National Social Inclusion Office
NSP	National Serosurveillance Programme
NTBAC	National Tuberculosis Advisory Committee
NVRL	National Virus Reference Laboratory
NWIHP	National Women and Infants Health Programme, HSE
NWSP	National Wastewater Surveillance Programme
OCIMS	National Outbreak Case and Incident Management Surveillance System
OCT	Outbreak Control Team
OH-ALLIES	One Health—All Ireland for European Surveillance
ONMSD	Office of the Nursing and Midwifery Services Director
OOH	Out of Hours

OPCW	Organisation for Prohibition of Chemical Warfare
PCI	Primary Childhood Immunisation Schedule
PEP	Post-Exposure Prophylaxis
PICU	Paediatric intensive care unit
PHA	Public Health Agency, Northern Ireland
PHA	Public Health Area
PHEIC	Public Health Emergency of International Concern
PHRA	Public Health Risk Assessment
PHREAG	Public Health Expert Review Advisory Group
PHM	Public Health Medicine
PPE	Personal Protective Equipment
PPS	Point Prevalence Surveillance
PPV23	Pneumococcal Polysaccharide Vaccine
RCEH	Radiation, Chemicals, and Environmental Hazards Directorate of the UK Health Security Agency
RCPI	Royal College of Physicians of Ireland
RCSI	Royal College of Surgeons in Ireland
RCNME	Regional Centre for Nursing and Midwifery Education
RGDU	Research and Guideline Development Unit, HSE Public Health: National Health Protection Office
RHA	Regional Health Area
RPA	Robotic Process Automation (Bots)
RSV	Respiratory Syncytial Virus
SARI	Severe Acute Respiratory Infections
SCBTH	Serious Cross Border Threats to Health, Regulation EU 2371/2022
SFPA	Seafood Protection Authority
SHCPP	Sexual Health and Crisis Pregnancy Programme
SIG	Special Interest Group
SOP	Standard Operating Procedure
SPHM	Special in Public Health Medicine
SpR	Specialist Registrar
SpR PHM	Specialist Registrar in Public Health Medicine
STEC	Shiga Toxin-Producing Escherichia Coli
STIs	Sexually Transmitted Infections
TB/LTBI	Tuberculosis/Latent TB Infection
TTEx/TTE/TTX	Tabletop Exercise
UKHSA	UK Health Security Agency
VHF	Viral Haemorrhagic Fever
VPD	Vaccine Preventable Disease
VTEC	Verocytotoxigenic Escherichia Coli
WGS	National Whole Genome Sequencing Programme
WHO	World Health Organization
WSP	National Wastewater Surveillance Programme

Foreword



On behalf of HSE Public Health: Health Protection, I am pleased to present the second implementation report of the Health Service Executive (HSE) Health Protection Strategy 2022-2027, covering the period from October 2023 to September 2024. I want to acknowledge the hard work, commitment, and dedication of all our public health teams, centrally and regionally, who have contributed to the delivery of the work described in this report, which has made a real difference every day to the health of the people of Ireland.

Over the past year, we have continued to build on the foundations laid in the first year of implementing our Strategy, striving to enhance the HSE's health protection services amidst an ever-changing landscape, nationally and internationally. Our mission remains **to protect** the people of Ireland from all health hazards and to **prevent** harm through **effective interventions, including vaccination**. In this work, we seek to deliver a high-quality health protection service to all and to reduce health inequities and inequalities.

This report outlines the **key achievements** of the past year, describing how teams centrally and regionally are working together every day to reduce threats to health. This year saw considerable challenges from responding to surges of respiratory infections over the winter; rising threats from measles and pertussis infections during 2024, and most recently, the declaration in August 2024 by the World Health Organization (WHO) of a **Public Health Emergency of International Concern (PHEIC)** due to the threat from mpox Clade I infection in some African states. In response, we have established National Incident Management Teams (NIMTs) to coordinate a response to measles, mpox and pertussis, led by the **National Health Protection Office (NHPO)**.

In responding to the known threat from winter viruses, the NHPO led the implementation of a **new RSV immunisation programme** delivering, from September 2024, a new monoclonal antibody (Nirsevimab) to all newborn babies (and specific group of vulnerable infants) in this RSV season. Further, emergent infections, including the Oropouche virus, and the rise of vectorborne infections in Europe (such as dengue fever and Crimean-Congo haemorrhagic fever) talk to the point that the impact of **climate change** is real and not only in terms of weather patterns, but also **the spread of infectious diseases**, including by extending the range of insects that can act as disease vectors.

Further, during this year we have seen increased concerns about the potential of **highly pathogenic avian influenza (HPAI)** to cause a global pandemic, following identification of cases in cow herds in the United States of America and subsequent transmission to humans. In response to such threats, the HSE produced a new **Operational Pandemic Plan**, which will be tested in Year Three in a Command Post Exercise (Exercise Pandora) delivered by the NHPO working closely with the HSE's Emergency Management teams and Regional Health Areas (RHAs). We have also worked closely with Professor Mary Horgan, Interim Chief Medical Officer (CMO), who was commissioned by the Minister of Health to look at Ireland's capabilities in responding to **Emergent Health Threats (EHTs)** and considered the role we can play in developing our capabilities in this function.

We have continued to work with **international partners**, including the European Centre for Disease Prevention and Control (ECDC), WHO, and the UK Health Security Agency (UKHSA), contributing to the development of evidence-based guidance to support public health programmes; responding to health threats impacting Europe and globally; and collaborating on joint projects to improve our collective health security. In Year Two, we worked with UKHSA to deliver training to our teams in responding to **chemical hazards**, and we plan to deliver further training on **radionuclear incidents** later in 2024.

This year, we have seen the creation of Regional Health Areas (**RHAs**), which creates new opportunities for **Area Directors of Public Health** to work together with the **Regional Executive Officers (REOs)** to understand and meet the health needs of their populations, including their health protection needs. This new operating environment provides us with opportunities for more joined-up working between central and regional public health teams to make

a difference to the health of the population. All these initiatives are crucial steps towards our goal of delivering a resilient, agile, and responsive health protection service that can address both current and emerging health threats by employing an all-hazards approach.

The theme of this year's HSE Public Health: Health Protection Conference, "**To Protect and Prevent: Managing Environmental Hazards in a Changing Climate,**" underscores our commitment to **Objective 3** of the Strategy. According to the WHO, climate change presents a fundamental threat to human health.¹ These effects are complex and act as 'multipliers' of health threats. They include:

- **Extreme Weather Events:** Increased frequency and intensity of heatwaves, storms, floods, and wildfires lead to injuries, deaths, and mental health issues.
- **Air Quality:** Higher temperatures and changing weather patterns can worsen air quality, leading to respiratory and cardiovascular diseases.
- **Infectious Diseases:** Climate change alters the distribution of vector-borne diseases, like malaria and dengue, and increases the prevalence of food- and water-borne illnesses.
- **Food and Water Security:** Disruptions in food systems and water supply can lead to malnutrition and dehydration, particularly affecting vulnerable populations.
- **Mental Health:** The stress and anxiety caused by extreme weather events, displacement, and loss of livelihoods can lead to mental health issues.
- **Health Infrastructure:** Climate change can strain health systems, reducing their capacity to provide care during emergencies.

Addressing climate change through mitigation and adaptation strategies can significantly reduce these health risks and improve overall public health. In the NHPO, we continue to integrate environmental health considerations into our health protection efforts, in surveillance, in research activities, and in our capabilities in responding to environmental health threat, collaboratively with key partners, like the **HSE National Environmental Health Service (NEHS)**, and stakeholders external to the HSE.

While we celebrate the progress made, we remain aware of the challenges that lie ahead and the work that remains. The journey towards fully realising the ambitions of the Strategy is ongoing and requires sustained effort, innovation, and collaboration. Moving forward, our priorities include strengthening our incident response capabilities, fostering international partnerships, and ensuring that our services are future proofed against evolving health threats.

The progress and achievements outlined in this report would not have been possible without the unwavering dedication and support of many individuals and teams. I extend my deepest gratitude to the members of the HSE Public Health: Health Protection teams. Special thanks are due to the NHPO, including the Health Protection Surveillance Centre (HPSC) and the National Immunisation Office (NIO), for their leadership and strategic direction. I am particularly grateful to our health protection colleagues in the Regional Departments of Public Health for their continued efforts and dedication.

I also extend my sincere appreciation to the **HSE Public Health Senior Leadership Team**, led by Dr John Cuddihy, National Director of Public Health, and Dr Colm Henry, Chief Clinical Officer (CCO), HSE, for their visionary leadership and steadfast support. I am also grateful for the ongoing support of our colleagues across the HSE and of our wider partners, including the CMO and her team, the Department of Health, other governmental departments and agencies as well as our international partners who have all provided invaluable guidance, expertise, and collaboration.

Finally, I acknowledge the continued engagement and cooperation of the wider healthcare community, whose commitment to protecting public health underpins all that we do. Together, we all will continue to work towards achieving the goals of the HSE Health Protection Strategy, ensuring a safer and healthier Ireland for all.

Dr Éamonn O'Moore,
An Dr Éamonn Ó Mórdha

Director of National Health Protection, HSE
Stiúrthóir um Chosaint Sláinte Náisiúnta, FSS

¹ The World Health Organization, 2023, [Climate Change](#).

About Us

About Health Protection

Health protection is the prevention and control of infectious disease, environmental and radiation risks, including the emergency response to major incidents and health threats.

HSE Public Health: Health Protection

HSE Public Health: Health Protection was created as part of the wider Public Health Reform Programme and launched with the first HSE 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. HSE Public Health: Health Protection strategic health protection direction to HSE Public Health, working in collaboration with key partners (national and international) on prevention, early identification, preparedness, and response to threats from all health protection hazards.



The National Health Protection Office (NHPO)

The NHPO is led by the Director of National Health Protection (DNHP) and supported by a multidisciplinary team including National Consultant Leads for Surveillance, Immunisation, and Health Security, Consultants in Public Health Medicine (CPHMs), Specialists in Public Health Medicine (SPHMs), nurses, scientists, epidemiologists, programme/project managers, administrators, and Specialists Registrars in Public Health Medicine (SPR PHM). The NHPO works closely with Area Directors of Public Health and with regional SPHMs and CPHMs with specialist interest in Health Protection (CPHM si HP), ensuring an integrated central response to existing and emerging health threats. The NHPO includes the Health Protection Surveillance Centre and the National Immunisation Office within its governance.

The Health Protection Surveillance Centre (HPSC)

The HPSC is Ireland's specialist service dedicated to the surveillance of communicable diseases. As part of the HSE, the HPSC collaborates with health service providers and international organisations to provide essential information for controlling and preventing infectious diseases. The HPSC's mission is to improve public health through timely disease surveillance, independent advice, epidemiological investigations, and related research and training. Its functions include disease surveillance, operational support, professional training, research, policy advice, and public information dissemination.

The National Immunisation Office (NIO)

The NIO manages vaccine procurement and distribution, and it develops training and communication materials for the public and health professionals in line with the Department of Health (DOH) Immunisation Policy. All immunisation information is evidence-based and reviewed by experts from the Royal College of Physicians of Ireland (RCPI) **National Immunisation Advisory Committee** to ensure scientific accuracy. Recognised for its credibility by the WHO, the NIO is government-funded and focused on delivering high-quality, equitable, and timely immunisation programs. The NIO's mission is to maximise vaccine uptake, prevent outbreaks of vaccine-preventable diseases, and support patient-centred immunisation initiatives through strategic direction and collaboration with key stakeholders.



Introduction

Launched at the Second Annual HSE Public Health: Health Protection Conference on the 8th October 2024, this online publication reflects on the progress made in health protection during the second year of implementing the HSE Health Protection Strategy 2022-2027 from October 2023 to September 2024.

Year Two Priorities

This report showcases a clear commitment to and progress in implementing the Strategy's goal of building a resilient, intelligence-led, and evidence-informed health protection service.

Year Two actions and achievements focused on three priorities:

1. Adopting an all-hazards approach to health protection.
2. Building an integrated, national health protection function.
3. Creating an agile health protection service fit for the future.

Collaboration and Integration

Year Two's activities have focused on operationalising the structures established in Year One to enhance preparedness and response capabilities and to ensure health protection services effectively respond to a wide range of health threats. Collaboration is essential to addressing emerging threats, such as environmental challenges, and in integrating new approaches into the health protection framework.

Regional and central initiatives aim to create a cohesive health protection service across Ireland in line with the **Sláintecare** vision. Partnerships with international organisations, such as Northern Ireland's Public Health Agency, the UK Health Security Agency (UKHSA), and the European Union (EU), have been further strengthened, enhancing Ireland's capacity to respond to global health challenges.

Report Overview

This report provides a structured review of the progress made during Year Two of the HSE Health Protection Strategy 2022-2027. It is organised around the **Strategy's ten key objectives**. It highlights significant advancements. While not exhaustive, the report shows the substantial progress.

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 the 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: Surveillance

Strengthen surveillance and epidemiological analysis of health protection threats



What we will do from 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.

Overview

In Year Two, significant progress was made in enhancing surveillance systems and data reporting. The **Health Protection Surveillance Centre (HPSC)** focused on modernising data collection and analysis processes as well as ensuring timely and accurate reporting of health threats. Achievements include launching the procurement process for a National **Outbreak Case and Incident Management System (OCIMS)**, establishing the **National Notifiable Disease Hub**, and working to integrate various surveillance systems. These actions align with the broader goal of providing better quality data for public health decision-making.

Spotlight on the Health Protection Surveillance Centre

As Ireland's specialist agency for the surveillance of communicable diseases, the **HPSC**, continues to deliver a health protection surveillance programme that provides epidemiological intelligence for public health action and that fulfils obligations as laid out in the notifiable infectious disease legislation, international agreements, and HSE policy. This extensive surveillance programme is being redesigned to ensure **efficiency**, and **sustainability** in the context of HSE resources restrictions and the need to provide surveillance expertise and insight on health protection priorities. In the last year, HPSC established a **Scientific and Clinical Leadership Group** to develop and ensure the strategic direction of the HPSC.

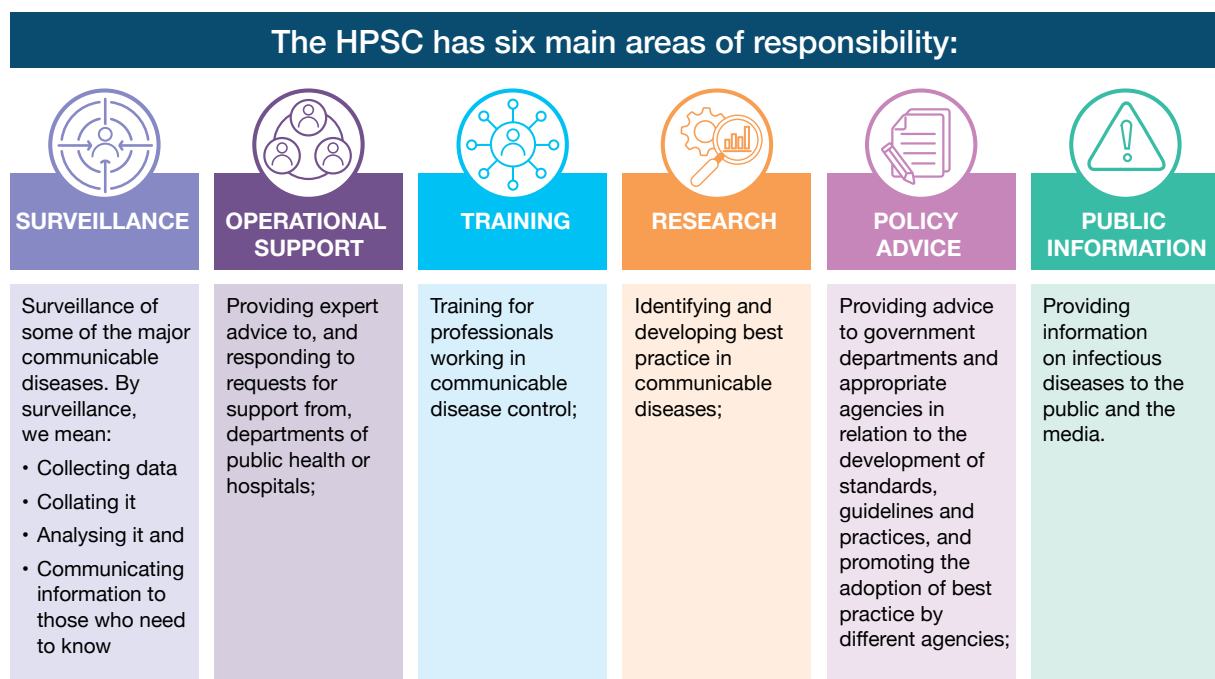


Figure 1: Main Areas of Responsibility of the HPSC

Year Two Achievements: What we accomplished

The HPSC strengthened surveillance and epidemiological analysis of health protection threats through various key initiatives include:

Information System Modernisation

- Working with the Office of the National Director for Public Health (NDPH), the HPSC supported the launch of a procurement process for a **National Outbreak Case and Incident Management System (OCIMS)**, including scoping surveillance requirements for the tender of OCIMS. The HPSC collaborated closely with the NDPH and HSE Technology and Transformation to enable the delivery of OCIMS (**Actions 2, 3, 4, and 5**).
- The HPSC implemented continuous upgrades to 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 OCIMS going live (**Actions 3 and 4**).
- The HPSC 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. This initiative will deliver efficiencies of workflow. The first proof of concept was delivered in June 2024 (**Actions 3, 4, and 5**).
- The HPSC **Robotic Process Automation (RPA)** solution processed over 200,000 transactions, enabling scientists in HSE Regional Departments of Public Health to save approximately 15,000 hours, resulting in a cost savings exceeding €600,000 for the entire year (**Actions 3, 4, and 5**).

Surveillance and Reporting Improvement

- The HPSC improved respiratory disease surveillance through **funded business cases** that included **wastewater surveillance, seroepidemiology, whole genome sequencing (WGS), expansion of the GP sentinel surveillance programme, and the expansion of the hospital Severe Acute Respiratory Infections (SARI) surveillance programme** (**Action 5**).
- The HPSC developed a **comprehensive notifiable infectious diseases information hub** to enable dynamic display of weekly notifiable infectious disease data (**Action 5**).
- The HPSC continues to **develop 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**).
- The HPSC is developing a PowerBI template **epidemiological summary dashboard** and report for use during gastroenteric disease outbreak investigations (**Action 5**).
- The HPSC delivered **extensive training and mentoring for HPSC and Regional Departments of Public Health staff in PowerBI**, enabling the creation of in-house dashboards across various epidemiological and business areas (**Action 3**).
- The HPSC developed an automated **robotic process to deliver reporting** of COVID-19 by vaccination status (**Actions 3, 4, and 5**).
- The HPSC works with the **National Health Protection Environment and Health Lead** to deliver **environmental surveillance** as part of an 'all hazards' surveillance programme and to improve surveillance activity in Ireland (**Action 2**).

Working in Partnership

- The HPSC **strengthened surveillance networks** with Regional Departments of Public Health to provide surveillance and epidemiological intelligence (**Action 4**).
- In response to surveillance staff resource issues in the Regional Departments of Public Health, the HPSC implemented measures to **reduce surveillance workloads regionally**. These measures included restricting validation requests to high priority requests, supporting enhanced data uploads to CIDR, and training on CIDR (**Actions 3, 4, and 5**).
- The HPSC, in partnership with **HSE Integrated Information Service (IIS)**, developed RPA Power BI Dashboards for visualising and analysing RPA data, aiding in monitoring and understanding public health trends and insights (**Actions 3 and 5**).

Good Governance and Risk Mitigation

- The HPSC developed a robust **data governance policy** to ensure timely, quality, consistent, and effective surveillance data to inform public health policy and vaccination strategy (**Actions 3 and 5**).
- The HPSC developed a **contingency plan** to address and mitigate the risks associated with gaps in surveillance and epidemiological capacity at HPSC (**Action 5**).

Research and Presentations

- The HPSC published of **14 peer reviewed publications** in 2023 (**Action 5**).
- The HPSC presented **16 oral presentations and 11 poster presentations** at national and international meetings and conferences in 2023 (**Action 5**).
- Dr Catherine Timoney of the HPSC was awarded third place in the long oral presentation category at the **RCPI Summer Scientific Meeting** in 2024 (**Action 5**).
- Research by Senior Epidemiologist Sarah Jackson of the HPSC featured by Trinity College Dublin on social media for **World Tuberculosis Day** (**Action 5**).

Success Stories

Delivering the National Notifiable Disease Hub

The HPSC has delivered a **new data hub** that, for the first time, displays data for seventy-nine notifiable infectious diseases in Ireland. The hub makes it easy to explore the data over a five-year period and marks a significant achievement for the HPSC.

- The hub represents a change in the way the HPSC delivers data to stakeholders and the public.
- It will improve how data is displayed, and it also give users access to underlying aggregate data.
- The hub includes features, such as statistical measures, to compare the current week's data with earlier data, and it has a filtering capacity to display data by disease group.
- The new data dashboards display data on trends and key epidemiological features for notifiable infectious diseases reported in Ireland.

This new tool has been designed to benefit users by including new epidemiological information not previously available in the HPSC's weekly infectious disease reports thereby promoting citizen epidemiology. The Data Hub is a valuable resource for anyone working on or interested in the epidemiology of infectious diseases in Ireland.

The National Notifiable Disease Hub has come about through collaborative work between the HPSC and People and Place, Ltd. Other key stakeholders include laboratories and clinicians that notify infectious disease cases and the Regional Departments of Public Health that manage the surveillance system at regional level. The hub was selected as a finalist for an ESRI Ireland Customer Success Award (**Actions 3 and 5**).

International recognition of the high performance of Ireland’s National SARS-CoV-2 Whole Genome Sequencing (WGS) Programme

Dr Carina Brehony and Sarah McGarry placed joint first in the oral presentation category at the RCPI Public Health Winter Scientific Meeting event on behalf of the National SARS-CoV-2 Whole Genome Sequencing (WGS) Programme. The presentation highlighted the recent successes of the Programme, including improved sequencing turnaround time, which is ranked first in Europe and third in the world (**Actions 2 and 5**).

Employing an All-Island Approach: The Gastroenteric, Zoonotic and Vectorborne Disease Team hosted a North South meeting

The Gastroenteric, Zoonotic and Vectorborne Disease (GZV) Team in the HPSC hosted the first meeting of the North South GZV Group on the 31st January 2024 in Dublin. The team in the HPSC welcomed GZV colleagues from the Public Health Agency (PHA) in Northern Ireland. The meeting focused on prominent GZV surveillance issues in Ireland in 2023 including shigellosis in gay, bisexual or other men who have sex with men (gbMSM), antimicrobial resistant typhoid and leptospirosis. The cryptosporidiosis outbreak associated with travel to Spain, and guidance in relation to VTEC case management were also discussed. The group aim to meet quarterly moving forward (**Actions 1 and 4**).

Improving Surveillance through Research on TB Vaccination Cessation

Sarah Jackson, Senior Epidemiologist at the HPSC, has contributed significantly to improving disease surveillance through her research. Her recent paper, “Retrospective Cohort Study Exploring the Impact of Universal Tuberculosis (TB) Vaccination Cessation on the Epidemiology of Paediatric TB in Ireland, 2011-2021,” published on ScienceDirect, investigates the effects of the cessation of universal Bacillus Calmette-Guérin (BCG) vaccination in Ireland in 2015.

The study assessed whether halting the BCG vaccination led to an increase in paediatric TB cases. Although the research did not reveal a significant rise in TB cases among children aged 0-6, it highlighted an interruption in the previously declining trend of TB in this age group. This observation serves as an early warning and suggests the need for continued surveillance to monitor potential future increases in TB incidence (**Actions 1, 2, and 3**).



Objective Two: Infectious Disease

Ensure standardised public health approaches to prevention, investigation, surveillance, and response to notifiable infectious disease



What we will do from 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.

Overview

In Year Two, progress was made in ensuring **standardised public health approaches to the prevention, investigation, surveillance, and response to notifiable infectious diseases**. Key achievements include a new **National Health Protection Incident Response Plan** developed by the NHPO in consultation with Area Directors of Public Health (ADsPH) and their teams as well as other relevant stakeholders. It outlines the governance, roles, and responsibilities for HSE Public Health: Health Protection staff at central and regional level to coordinate a national multi-disciplinary and multi-sectoral Health Protection National Incident Management Team (HP-NIMT). It provides guidance on key issues such as the **categorisation of incidents** (See **Table 1**).

PHA (Public Health Area) Incidents	Public health incidents impacting primarily within the boundaries of a single Health Region are usually managed locally by the Area Public Health team, with appropriate advice on request from the NHPO and its constituent offices (HPSC for surveillance and NIO for immunisation). In some circumstances, following consultation initiated by either the Area Public Health team or the NHPO, they may jointly decide to take a national approach. This decision will require careful consideration by both parties of the pros and cons of the situation and agreement on the approach.
Cross PHA Incidents	For incidents that cross Health Region boundaries, one of the impacted Area Public Health teams may lead the response, usually identified by either locus of incident and/or mutual agreement between the affected Areas. Again, advice and support from national entities can be provided on request.
National Incidents	If an incident continues to evolve to impact three or more Areas, it may be escalated to a National Incident, on advice of the DNHP. In some circumstances, an incident within only two Health Areas may also trigger a HP-NIMT informed by discussion between the relevant ADPH and the DNHP. An incident in a health region that has cross border, or international involvement may similarly be escalated to a national incident following discussion and agreement of the ADPH and DNHP. A HP-NIMT may also be convened in response to a health threat likely or known to impact across all or most of the country; a serious health threat impacting even only one Health Region, e.g. case of high consequence infectious disease, a serious chemical incident, a complex or serious incident requiring scarce specialist expertise, or a case involving considerable multiagency involvement (like a radio-nuclear incident).
National Public Health Emergencies	These are major public health emergencies requiring extensive cross sectoral collaboration, likely to or known to be impacting on the whole country, including events like a pandemic or catastrophic weather event. In such circumstances, other national emergency structures may stand up; NHPO and HSE will work in support of these as well as within its own emergency response governance structures.

Table 1: Criteria for categorisation of incidents as described in the National Incident Management Plan

Further, it describes a range of triggers which may require establishment of a National Incident Management Team, as commissioned by the DNHP (See **Table 2**).

- **An infectious disease outbreak or environmental incident** that extends across three or more HSE health region geographical boundaries and where a coordinated national response is needed. Note: In some circumstances, an incident within only two Health Areas may also trigger a HP-NIMT, informed by discussion between the relevant ADsPH and the DNHP.
- **A single case of certain rare diseases of immediate public health concern** such as diphtheria, botulism, rabies, viral haemorrhagic fever, human case of avian influenza due to novel virus, or polio (IHR urgent WHO notification [ref IHR Annex 2 decision instrument]).
- **A rare or unusual infection** or one with high risk of mortality and morbidity **generating concern among the public, significant interest at policy level, requiring specific resources and/or expertise** at national level.
- **A new, novel emerging or re-emerging disease/incident of major public health concern, without current cases/effects in Ireland, where spread to Ireland is likely, and preparedness is required.**
 - International outbreaks in which Ireland has the most cases, or where Ireland has identified that the source is within Ireland or requires international input from Ireland (e.g. to an EU OCT).
- **An environmental incident** large/severe enough to require a national approach.
- **A chemical incident** large/severe enough to require a national approach.
- **A radiation or nuclear incident** within Ireland, or external requiring assessment of national impact, or which requires international input from Ireland, or from which Ireland could derive benefit from joining international IMTs.
- **Potential deliberate release bioterrorism incidents, use of biotoxin, chemical or radio-nuclear materials in attack** on individual or groups or wider community.
- **Microbial or chemical contamination of food or water**— suspected, anticipated, or actual event of national consequence.
- **Vaccine recall incidents.**
- **'Look-backs' after contamination/exposures across regions.**

Table 2: Triggers for consideration by DNHP in convening a NIMT

The document also provides an outline membership for consideration in a NIMT and provides other information and resources that will support the key strategic objective of standardisation of public health approaches to improve quality of response to and of investigation of incidents and outbreaks.

During 2024, several **National IMTs** were established, including in response to the escalating threat from measles in Ireland and internationally. The **Measles NIMT** was established by the DNHP at the end of January 2024. It has met regularly during the course of the year to share intelligence and information and support a coordinated response centrally and regionally to protect vulnerable populations through MMR vaccine programmes as well as supporting response to incidents and outbreaks by providing advice and guidance to responding public health teams and sharing learning from those responses. The work also included the development of an innovative contact tracing tool, updated guidance on measles, and an in-action report on the first six months of the response.

In August 2024, a **National MPOX2024 Incident Management Team** was convened with agreement with the Chief Clinical Officer (CCO) by the DNHP to support collaborative preparation and response in Ireland following the WHO Director General's Declaration of a **Public Health Emergency of International Concern (PHEIC)** on the 14th August 2024, which was triggered by the escalating number of infections with mpox in the Democratic Republic of the Congo (DRC) and a growing number of neighbouring countries in Africa. Specifically, the emergence of a new clade of the mpox virus (Clade I) and its rapid and extensive transmission in eastern DRC, and reports of outbreaks in neighbouring countries—including Burundi, Rwanda, Uganda, and Kenya—require a coordinated international response to prevent infections and save lives. The NIMT is working to gather and share intelligence on mpox Clade I (nationally and internationally); to support development of a dynamic public health risk assessment (including identification of specific populations or sub-populations at risk); to provide evidence-based advice to inform the response across a range of settings and populations according to need; and to describe, develop, and deploy mitigations, especially vaccination of at-risk individuals. At time of writing of this report, the work remains ongoing.

Year Two Achievements: What we accomplished

Notable advancements were made in standardising HP approaches for the prevention, investigation, surveillance, and response to notifiable infectious diseases through the implementation of collaborative strategies and innovative solutions.

National Measles Preparedness and Response Coordination

- The NHPO led the coordinated central response to measles, focusing on health protection preparedness, investigation, control, and reporting. The **Measles National Incident Management Team (NIMT)**, established on the 31st January 2024, has been delivering a comprehensive response to the threat of measles in Ireland.
- Due to sub-optimal MMR vaccine uptake in the Irish population, particularly in certain cohorts, the NIMT recommended expanding the existing **MMR Catch-Up Programme**. A funded plan was agreed with the DOH, targeting four groups: children, young adults under 25, healthcare workers, and underserved populations with delivery through **HSE Immunisation Teams and General Practitioners (GPs)**.
- The **MMR Catch-Up Campaign** launched in March 2024, was supported by a wide-reaching communications campaign. By August 2024, over 1,700 clinics had been conducted and over 8,000 vaccines administered across HSE clinics. Over 960 GPs have administered more than 3,100 vaccines from February to June 2024. The MMR catch-up programme has made important strides in improving vaccination coverage, but challenges persist, particularly amongst groups with historically low uptake, including in certain communities and counties, so targeted efforts remain essential to bridge immunisation gaps.
- **Effective communication** was essential to the Measles NIMT response. The communications sub-group developed a plan that included general and targeted messaging across various platforms, with materials available in multiple languages. Collaboration with National Social Inclusion Office (NSIO) and non-governmental organisations (NGO) colleagues ensured that information reached underserved populations. Regular updates were provided to healthcare professionals, with key representatives on the NIMT to facilitate communication and provide expert input. A **HSE National Patient Safety Alert on the risk of measles in healthcare settings** was issued on the 28th March 2024.
- The **logistics sub-group** delivered key initiatives, including an end-to-end pathway for diagnostic materials and a testing algorithm to prioritise highly suspect cases. Pathways for post-exposure prophylaxis (PEP) with human normal immunoglobulin (HNIG) were developed. A surge PEP HNIG pathway was also proposed.
- The development of a **measles contact tracing database (MCTD)** allowed for standardised and efficient tracing of contacts. The MCTD captured key information on contacts and facilitated reporting at both regional and central levels. While generally well-received, capturing large volumes of contacts from a single exposure was sometimes challenging; efforts were made to minimise data collection where possible.
- The **number of cases and outbreaks of measles** is reported by the HPSC regularly (**Actions 1, 2, 3, 4, 5, and 6**).

Incident Preparation, Response, and Control

- Collaboration with Regional Departments of Public Health and Community Support Teams has led to the development of clear pathways for testing respiratory virus pathogens when an outbreak of **Acute Respiratory Infection (ARI)** is suspected in a **long-term care facility**. The **report** is available online. The next step involves updating Healthlink to enable long-term care facilities to access respiratory virus swab results for their residents (**Actions 2 and 4**).
- In August 2024, the NHPO published its report on the upsurge and national incident response to **invasive Group A Streptococcus (iGAS) activity**. The report outlines an unseasonal and significant rise in iGAS cases in Ireland, which began in late 2022 and continued into 2023 (Year One). By August 2023, iGAS activity had returned to levels considered seasonally normal in the pre-pandemic era. The report details the measures taken to mitigate its health impact and the lessons learned. The full iGAS **National Incident Report** is available online (**Actions 5 and 6**).
- In February 2024, Public Health HSE Dublin and Midlands identified a cluster of **acute hepatitis B (HBV) cases** in young men from neighbouring towns, with six cases reported from October 2023 to February 2024.

This cluster, which differed from background trends in HPV affected a younger population, with a higher proportion of gay, bisexual, and other men who have sex with men (gbMSM) and cocaine users. An **acute Hepatitis B NIMT** was formed in March 2024 and met regularly until July 2024. The NIMT, including health and community representatives, undertook enhanced surveillance, contact tracing, and HBV genotyping. Although no direct epidemiological links were found, two cases shared the rare HBV genotype F1. Control measures involved vaccination, targeted health promotion, and development of a new standard operating procedure for public health management of acute HBV cases and contacts. The response uncovered gaps in HBV vaccination coverage among gbMSM and drug users, prompting recommendations for equitable vaccination and a national adult immunisation information system. The NIMT also secured funding for HBV vaccine administration costs for close contacts, though vaccination barriers remained in primary care for those without GMS or doctor visit cards. A key response element was a co-created targeted health promotion campaign. The NIMT's collaborative efforts were crucial, involving experts from various fields and ensuring thorough reviews and effective public health messaging, which led to the swift development of new protocols and highlighted the benefits of a coordinated public health response (**Actions 2, 3, 4, and 5**).

Success Stories

National Resilience in Highly Pathogenic Avian Influenza through One Health

The H5N1 panzootic, a Highly Pathogenic Avian Influenza (HPAI), triggered widespread outbreaks in poultry globally, with significant spillover into various mammals, including terrestrial and marine predators, and more recently, cattle. In March 2024, H5N1 emerged as a pathogen in dairy cattle in the United States, leading to outbreaks across twelve states and four mild human cases among dairy workers. This incident involved the H5N1 subtype B3.13. The outbreak was traced to a single introduction from wild birds to a cattle herd in Texas, with onward spread occurring through cattle-to-cattle transmission via infected milk, exacerbated by biosecurity lapses on affected farms and during animal transport. Although H5N1 was detected in US retail milk samples, the US Department of Agriculture declared the milk supply safe due to the virus being inactivated through pasteurisation. There is minimal evidence of human adaptation of H5N1 clade 2.3.4.4.b in terms of attachment to human respiratory epithelium or person-to-person transmission.

National Risk Assessment and Preparedness in Ireland

Ireland's national H5N1 Dynamic Risk Assessment aligns with the European Centre for Disease Prevention and Control (ECDC) and Control and the WHO, concluding that H5N1 poses a low risk to the general population and a low-to-moderate risk to those occupationally exposed to infected birds and animals. Key components of HPAI management in Ireland include existing surveillance systems, such as horizon scanning and epidemic intelligence development around HPAI. Statutory surveillance of influenza is conducted through the National Influenza Surveillance System, with the GP Sentinel Surveillance Scheme monitoring Influenza-Like Illness. Severe disease is tracked through the Severe Acute Respiratory Infection Surveillance System. Influenza diagnostics include multiplex RT-PCR testing for SARS-CoV-2, influenza, and RSV in most regional laboratories, with referral of sentinel and non-sentinel A/HX and A/untypeable samples to the National Virus Reference Laboratory (NVRL) for subtyping. In November 2023, protocols for the **Management of contacts of highly pathogenic avian influenza H5N1 clade 2.3.4.4b** were published, focusing on the identification and control of veterinary incidents of public health significance and establishing rapid public health responses.



Ireland's response to HPAI is coordinated by a multidisciplinary subcommittee, co-chaired by the NHPO and DAFM with representation from Northern Ireland. This National Coordination Group (NCG) oversees prevention and preparedness activities and monitors HPAI threats and responses, operating under the One Health Oversight Committee (OHOC). The OHOC, jointly chaired by the Department of Health and DAFM, provides strategic coordination of One Health activities, involving collaboration with relevant stakeholders within and beyond the health sector, including professionals from Northern Ireland. In 2023, HSE Public Health: National Health Protection delivered two multidisciplinary and multisectoral HPAI tabletop exercises, one at the central level and one in collaboration with Northern Ireland, to strengthen preparedness and response efforts (**Actions 2, 3, 4, 5, and 6**).

Auditing Tuberculosis Outcome Data Completeness in North Dublin

In 2022, 222 tuberculosis (TB) cases were notified to the Computerised Infectious Disease Reporting (CIDR) system in Ireland. Of these, 69 TB cases were notified in North. The number of new TB cases in North Dublin increased by 8% from 2021 to 2022, and there was a significant amount of incomplete outcome data.

To address this, a study was conducted to examine all confirmed TB cases reported to the Department of Public Health in HSE DNCC Dublin North West (CHO 9) between the 1st January 2018 and 31st December 2021. A total of 174 TB notifications were identified during the 2018-2021 period. Among these, 146 cases (83.9%) had incomplete outcome data.

In collaboration with the HPSC, HSE Public Health engaged with clinical sites managing TB cases to improve the completeness of outcome data. An agreement was reached with these services to retrieve the missing outcome data and to ensure that future outcomes would be forwarded to the relevant Public Health department digitally. A year after the completion of the audit, re-analysis of the data showed a significant improvement. The proportion of TB cases notified between 2018 and 2021 with incomplete outcome data decreased by 36%, from 84% to 48% (**Actions 2 and 3**).

Objective Three: Hazards Related to the Environment

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



What we will do from 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

Overview

In Year Two, great strides were made protecting the population from environmental hazards through strategic actions and collaborations, particularly through the development of the Environment and Health Programme in the NHPO. The activities focused on enhancing health protection by addressing environmental risks worsened by climate change, expanding surveillance systems, and advocating for stronger environmental health policies. The goal is to ensure that health protection systems are resilient, proactive, and aligned with national and international standards for environmental health.

Environment and Health Programme

The Environment and Health Programme (EHP) within the NHPO service is led by Dr Ina Kelly and works with CPHMs and multidisciplinary teams (MDTs) in the Regional Departments of Public Health.

The EHP has identified key areas for improvement, aligning with Objective 3 of the Strategy. The goal is to protect the population of Ireland from avoidable environmental threats and improve environmental determinants of health, addressing underlying inequalities in line with the UN Sustainable Development Goals.

Climate change is leading to increased incidents of extreme weather events, such as heatwaves, cold snaps, severe floods, and storms, as well as the northern migration of invasive insect species, some of which are vectors for infectious diseases.² Poor air quality and air pollution contribute to premature deaths in Ireland, and ongoing high exposure to radon gas leads to lung cancer.^{3,4} The build-up of environmental antimicrobials contributes to global antimicrobial resistance, and chemical and water contamination remains a challenge for Ireland.⁵

The Environment and Health Programme aims to:

- **Enhance Surveillance:** Improve central and regional monitoring systems to better assess public health risks.
- **Support Advocacy:** Utilise enhanced surveillance data to inform and prioritise advocacy on key environmental health hazards.
- **Develop Guidance:** Create evidence-based guidance to improve health protection practices and standardise responses to environmental threats.
- **Clarify Responsibilities:** Define and streamline the responsibilities of key organisations in managing national environmental and health issues.
- **Support Sustainability:** Work towards a net zero carbon emissions target by 2027, in line with the HSE's environmental policy.

² IPCC, 2022, Climate Change 2022: [Impacts, Adaptation, and Vulnerability](#). European Centre for Disease Prevention and Control 2024, [Disease vectors](#).

³ Ireland has high levels of radon gas. Radon gas is linked to the risk of development lung cancer.

⁴ World Health Organization, 2023, [Radon](#). European Environmental Agency, 2023, [Ireland – air pollution country fact sheet](#); Environmental Protection Agency, 2023, [Ireland's ambition to move towards the health-based WHO air quality guidelines will be challenging, but will have a significantly positive impact on health](#).

⁵ The accumulation of antimicrobials in the environment—stemming from sources like agricultural runoff, industrial waste, and improper disposal of medicines—is fuelling the global issue of antimicrobial drug resistance. In Ireland, this problem is compounded by the ongoing contamination of water sources with these chemicals. This not only heightens the risk of developing drug-resistant pathogens, but also poses serious risks to both human health and aquatic ecosystems. Addressing these challenges requires strengthened regulatory frameworks and innovative strategies to mitigate the impact of antimicrobial and chemical pollutants on water quality and public health.

Year Two Achievements: What we accomplished

Considerable progress was made in addressing environmental health concerns through a series of targeted actions and collaborative initiatives.

Review of Environment and Health Needs

- To advance the development of an all-hazards health protection service as outlined in the HSE Health Protection Strategy 2022-2027, a comprehensive review of the Environment and Health Needs in Ireland was conducted. This review involved documentary analysis, literature review, and consultations with public health colleagues. The findings highlighted a diverse range of stakeholders across various sectors, including national and international organisations. Further training, development and expansion of the multidisciplinary team was identified as an opportunity to address capacity concerns.
- The review also noted that while a wide range of environment and health guidance is available on the HPSC website, these guidelines need updating, taking into account the Irish context. The population in Ireland is diverse, with certain subgroups at increased risk of exposure to environmental hazards, such as air and noise pollution, radiation, water quality, climate change, and chemicals. The absence of a centralised Environment and Health surveillance system limits the ability to monitor these exposures and their health impacts, thereby limiting public health input into research and strategy development. Additionally, legislation aimed at reducing exposure to environmental hazards is often developed outside of public health, so its use has not been evaluated from a public health perspective.
- To address these gaps, a three-year implementation plan has been proposed. Key actions include: developing an Environment and Health Programme Implementation Strategy aligned with the HSE Health Protection Strategy; integrating quality improvement and performance measurement; enhancing multi-disciplinary team capacity through training and development; establishing a comprehensive Environment and Health Surveillance System; creating a research strategy to address urgent information gaps; and, reviewing the use of public health and environmental legislation. These recommended steps aim to develop a comprehensive Environment and Health Programme that enhances workforce capacity, improves surveillance and research, and ensures effective legislative measures to protect public health.
- The findings of the Review of Environment and Health Needs are summarised in the infographic presented in **Figure 2 (Action 1)**.

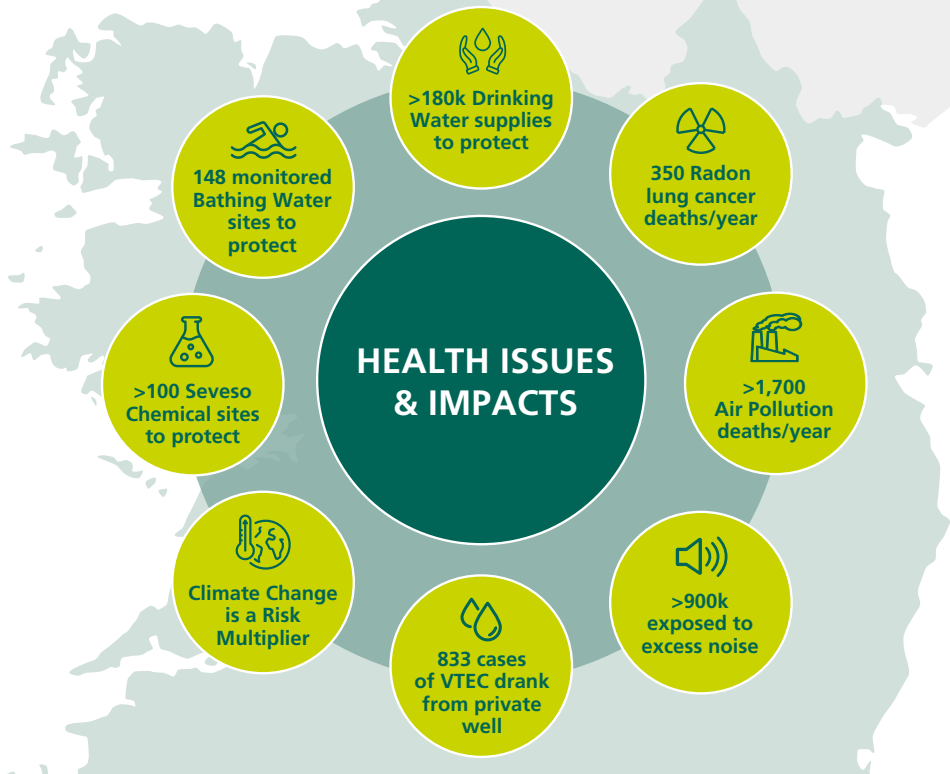
ENVIRONMENT AND HEALTH NEEDS REVIEW

KEY STAKEHOLDERS

- | | |
|---|--|
| Government <ul style="list-style-type: none"> • DOH • DECC • LA | HSE <ul style="list-style-type: none"> • Public Health • Environmental Health • Emergency Management |
| Independent Bodies <ul style="list-style-type: none"> • CCAC • EPA • NGOs • Academia • Public | International Organisations <ul style="list-style-type: none"> • UKHSA • WHO • ECDC • EEA |

RESOURCES

- Experienced clinicians
- Excellent suite of environment and health guidance available
- Opportunity to enhance capacity through multidisciplinary training



PRIORITIES FOR ACTION

GAPS	ACTIONS
E&H strategy implementation	Develop workstreams for priority issues & impacts
QI & performance measurement	Integrate evaluation and monitoring into plans
MDT capacity	Develop MDT guidance, PHRA tools and training
E&H surveillance	Develop system informed by international evidence
E&H research strategy	Develop action research and leverage env. funding
Application of legislation	Review legislation use

Prevention Preparedness Response Recovery

Figure 2: Infographic Summarising the Review of Environment and Health Needs 2024

Systems Improvement and Information Management

- Important strides were made in scoping the development of a **Severe Weather Alert and Response System (SWaRS)** for Ireland. Led by Dr Kevin Brown within the EHP, this initiative maps current weather preparedness and response systems within the HSE. Key messages for severe weather events, particularly for vulnerable groups, were developed and published. Future plans include ensuring comprehensive prevention and response measures, with collaboration from the UK Health Security Agency (UKHSA) (**Action 3**).
- In 2024, the HPSC, in collaboration with the Environment and Health Special Interest Group (SIG) and Regional Public Health Departments, led a project to establish a **national database for monitoring environmental incidents**. Data from 2023 was summarised, and a national working group was formed to standardise variables for environmental incidents. Efforts are also underway to develop real-time, coded mortality data to improve the timeliness and accuracy of environment-related mortality data (**Actions 2 and 4**).
- In 2024, **Environment and Health resources** were migrated from HSE to HPSC webpages to support an all-hazards focus. This migration involved moving over seventy webpages, including public and professional information, clinical guidelines, and position papers. The process will continue into 2025 (**Action 4**).

Working in Partnership

- The **Environment and Health Special Interest Group (SIG)** provides a platform for sharing expertise on environmental public health hazards and supporting consistent, evidence-based assessments. In June 2024, the group convened to review workforce capacity, prioritise environment and health topics, and make recommendations for action, which informed the review's findings and recommendations (**Action 4**).
- **Adaptation and resilience** are key focus areas of the **HSE Climate Action Strategy 2023–2050** to protect the population's health from climate change's adverse impacts. Actions include implementing measures from the Department of Health Sectoral Adaptation Plan and preparing for future sectoral planning. A multidisciplinary working group is auditing progress, identifying challenges, and providing recommendations for the next statutory health sectoral adaptation plan, ensuring health considerations are integrated across sectors (**Action 3**).
- The **HSE National Drinking Water Group (NDWG)** is an interdisciplinary team representing various health and environmental departments. Over the past year, in collaboration with the Environmental Protection Agency (EPA), the group produced joint position papers on **Trihalomethanes and Haloacetic Acids in Drinking Water** and on **Nitrate & Nitrite in Drinking Water** and completed a frequently asked questions on **Manganese in Drinking Water** (HSE resource). They also delivered interagency scenario-based training at national events, which were well received and endorsed (**Actions 2 and 5**).
- Dr Mary O'Mahony working with the EHP led out on work relating the **radon health risk and its mitigation**. HSE have advocated for building regulations requiring radon-proof membranes in new constructions across Ireland. Over the past year, we have contributed to Phase Two of the **National Radon Control Strategy**, collaborating with the Department of Environment, Climate and Communications, the EPA, and the Department of Housing to maximise the health benefits of these regulations (**Action 5**).



Figure 3: Environment and Health Sig

Success Stories

Raising Awareness about an Air Quality Incident in the Midlands

In January 2024, the Department of Public Health Dublin and Midlands effectively managed an air quality incident that posed significant health risks. During a period of cold, still weather, routine monitoring by the EPA detected high levels of particulate matter (PM10 and PM2.5) in towns such as Edenderry, Naas, and Portlaoise. These levels, classified as “poor” or “very poor” under the Air Quality Index for Health, were primarily attributed to the burning of solid fuels, a widespread practice in the region.



The EHP advised the regional teams. Recognising the potential health impacts—especially for vulnerable groups like the elderly, children, and those with underlying respiratory or cardiac conditions—the Department of Public Health quickly issued a Public Health Alert on 10th January 2024. The alert included detailed mitigation advice and was accompanied by a memo sent to General Practitioners across the Midlands.

The public health response was bolstered by a coordinated media campaign featuring interviews with key public health figures such as Drs Ann Marie Murray, Ina Kelly, and Ruth McDermott. These efforts were covered by local media outlets, including the Westmeath Independent and Midlands 103, and national platforms like RTE’s Morning Ireland. This comprehensive approach not only mitigated the immediate health risks but also significantly raised public awareness about air quality issues, highlighting the importance of reducing exposure during such incidents (**Actions 1, 2, and 4**).

Building Environmental Health Capacity through Education and Engagement

In 2024, the Health Protection Continuous Professional Development (CPD) programme made significant progress in enhancing the capacity of public health professionals to respond to environmental health hazards. The newly launched Environment and Health component of the CPD programme began with a highly attended session presented by Dr James Gilroy on “Complex Systems and How They Fail: Learning from Incidents to Prevent Waterborne Outbreaks.”

The session, which attracted over seventy participants from across HP, underscored the importance of understanding and mitigating the complexities of environmental health risks. This educational initiative is part of a broader strategy to consolidate existing CPD programmes within HSE Public Health, aiming to strengthen the all-hazards focus and broaden the audience for these crucial training sessions.

Moreover, efforts are ongoing to integrate the Environment and Health content across various public health platforms, ensuring that the knowledge and skills needed to address environmental health challenges are widely disseminated. This proactive approach not only equips public health professionals with the tools they need but also reinforces the importance of environmental health in the overall Strategy (**Actions 1 and 4**).

Objective Four: All Hazards Preparedness and Response

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



What we will do from 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.

Overview

In Year Two, notable progress has been made in strengthening Ireland's all-hazards preparedness and response capabilities. The **Health Security Programme (HSP)**, rebranded in 2024, has focused on enhancing prevention, early detection, and effective response to major health incidents. Key accomplishments include enhancing pandemic preparedness, the improvement of early warning systems, and strengthening of collaboration with international colleagues. The updated HSE Operational Pandemic Plan, which will be tested through Exercise Pandora, provides a framework for managing future pandemics. Additionally, the HSP's engagement with vulnerable communities, expanded training efforts, and collaborative initiatives reinforce a robust and coordinated approach to health security.

Spotlight on the Health Security Programme

In 2024, the Health Threats Preparedness Programme within the NHPO was rebranded as the **Health Security Programme (HSP)**. This rebranding aligns with European and international practices, reflecting the Programme's expanded role in managing both proactive and reactive measures to mitigate acute public health threats. Led by Professor Máirín Boland, the HSP is dedicated to several key actions: developing a strategic framework for health threats that includes planning for chemical, biological, radiological, and nuclear (CBRN) threats; enhancing early warning systems for high-consequence infectious diseases (HCIDs); and strengthening capacity at Points of Entry. The Programme also prioritises engagement with communities, including vulnerable and underserved communities, to improve prevention and response efforts.

By adhering to [EU Regulation 2022/2371](#) on serious cross-border threats to health and the [International Health Regulations](#), the HSP contributes to a robust and coordinated health security approach. This approach supports the implementation of the Strategy, ensuring comprehensive preparedness and resilience in the face of health emergencies.

Year Two Achievements: What we accomplished

Prevention, Preparedness, and Response Planning

- The HSP coordinated the HSE's response to the first **national health emergency preparedness assessment**, a requirement under this new [2022 EU 2371 Regulation on Serious Cross Border Threats \(SCBTH\)](#). It was developed through cross-divisional stakeholders including from Public Health, Emergency Management, Environmental Health Services, laboratory networks, Acute and Community Operations. The HSP submitted the report in December 2023 in collaboration with the Department of Health (DOH). This report demonstrated Ireland's adherence to the new regulation and highlighted national preparedness capabilities ([Action 7](#)).
- The HSE **Operational Pandemic Plan** was revised and updated through a collaborative process co- led by the DNHP and HSE Emergency Management, supported by the HSP. Drawing from lessons learned during the COVID-19 pandemic and aligning with WHO guidance, the revised plan provides clear operational advice and for future pandemic responses. It outlines macro-level planning and response strategies for HSE service areas during the operational phases of a pandemic, designed to be complemented by more detailed local plans for specific areas ([Actions 1 and 2](#)).

- The **HCID Steering Group**, co-chaired by Professor Máirín Boland, has made significant progress in enhancing Ireland's preparedness for **High Consequence Infectious Diseases (HCID)**. A comprehensive manual has been developed for managing suspected or confirmed cases of **Viral Haemorrhagic Fever (VHF)** in adults, and initial funding has been secured for procuring advanced Personal Protective Equipment (PPE) for the National Ambulance Service and the National High-Level Isolation Unit. Additionally, shared training programmes, standard operating procedures, and guidance for HCID response are being developed to ensure that frontline workers are well-equipped and prepared (**Action 2**).
- In response to global events in 2024, the NHPO has strengthened preparedness for avian flu. The **Highly Pathogenic Avian Influenza** National Coordination Committee (HPAI-NCG) has been actively monitoring and advising on avian influenza. For the first time, Ireland procured 10,000 avian flu vaccine doses for high-risk workers, obtained through the **EU Health Emergency Preparedness and Response Authority (HERA)** process. This vaccine is a key component of preparedness with the use case in development with NIAC. In November 2023, **revised guidance on managing contacts of HPAI** was issued, incorporating the latest international best practices. Additionally, the HSE Pandemic Exercise for an HPAI scenario is organised for later in 2024 to ensure robust avian influenza preparedness (**Action 3**).

Collaboration, Exercises, and Training

- The HCID Steering Group has conducted critical simulation exercises, such as **Exercises Aistriú and Volare**, which focused on testing the end-to-end transfer of patients with serious infectious diseases. These exercises have been instrumental in refining response protocols and enhancing coordination to HCID threats (**Action 2**).
- In April 2024, the HPS hosted an online **workshop focused the evidence base and operational aspects of Public Health Emergency Preparedness** to improve the HSE Public Health Preparedness Plan. Over fifty delegates from across HSE Public Health attended the workshop, co-chaired by Professor Máirín Boland, and Dr Niall Conroy, CPHM si HP, HSE Dublin and South-East. International expert presenters included Professor Yasmin Khan from the University of Toronto and Dr Paula Vasconcelos from the Directorate-General of Health, Portugal. Over (**Actions 4 and 5**).
- In March 2024, the HSP participated in **INEX 6**, an **international nuclear emergency** exercise held at the National Emergency Co-ordination Centre in Dublin. This scenario-driven tabletop exercise focused on the recovery phase following a nuclear event, testing response and recovery plans across sectors, agencies, and government departments. INEX 6 provided crucial insights into cross-sectoral collaboration and governance during nuclear emergencies (**Actions 1 and 6**).
- The HPSC and NHPO took part in the WHO 2023 **Joint Assessment and Detection of Events (JADE) Exercise**, which focused on national radiological emergency management. In this multi-sectoral exercise, real-time communication with the EPA and international stakeholders was central. The exercise stressed the importance of multi-sectoral engagement and strengthened connections between key stakeholders (**Actions 2 and 6**).
- **Exercise Pandora** has been developed by the HSP. It will test the updated **HSE Operational Pandemic Plan** in Year Three. Delivered by a cross-sectoral central exercise team, the exercise will assess the HSE's ability to execute actions and responsibilities in response to an escalating avian influenza emergency. Teams from each of the six Regional Health Areas, along with the central team, will be tasked with responding to increasingly severe scenarios and outlining their planned actions. The exercise will provide key insights, identify gaps, and highlight actionable steps for improvement. (**Actions 3, 4, and 5**).

Success Stories

Exercise Liath: Building CBRN Capability through Training and Exercises

On the 20th June 2024, the NHPO hosted a chemical incident tabletop exercise in Dublin, known as Exercise Liath. This event was attended by sixty participants, including NHPO multidisciplinary team members, representatives from regional Public Health Departments, HSE Emergency Management, the EPA, the FSAI, and DAFM.

The exercise was organised and chaired by the HSP, with the scenario-specific tabletop exercise led by Andrew Kibble and Edwin Huckle from the **Radiation, Chemicals, and Environmental Hazards (RCEH) Directorate of UKHSA**. A planning group from the Health Security Programme and Regional Public Health Departments worked closely with the RCEH to tailor the exercise to the Irish context, focusing on an acute chemical incident and a multi-agency public health response, incorporating relevant Irish guidance throughout the exercise.

The exercise followed a presentation on current Irish guidance and involved a scenario where a farm heating oil tank leaked up to 1,500 litres of kerosene, contaminating the surrounding land and a local river. Prior to the exercise, a scene-setting webinar on the “Principles of Management of Chemical Incidents” was delivered by UKHSA RCEH colleagues, attended by over 100 staff from HSE Public Health: Health Protection. **A similar training on Radiation and Nuclear Threats is scheduled for the end of 2024 (Actions 1 and 2).**

RescEU Simulation Enhances European-Level Coordination and Preparedness for HCID Response

During an exercise led by the HSE HCID Steering Group (co-chaired by the HSP), Ireland, Germany and Norway exercised contingency planning for safe transfer of a HCID case from Dublin’s to Duesseldorf’s High Level Isolation Unit (HLIU) availing of the Norwegian Jet Ambulance for High Infectious Patients (NOJAHIP) EU standing Civil Protection (rescEU) resource.



A three-country planning group defined key performance indicators for the exercise which aimed to test interfaces in alert mechanisms, activation, communication and safe transfer processes across teams. The exercise took place across three days in March/April 2024. There was successful activation of the NOJAHIP-team using the Emergency Response Co-ordination Centre. Pathways for communication were established and clinical and technical information was communicated and integrated into preparational SOPs tested during the exercise. All partners’ feedback was positive.

This complex simulation exercise enabled alerting, activation and management processes to be strengthened and harmonised at European and National level and has led to improved coordination and preparedness for safe management of patients with HCID **(Actions 1, 3, and 4).**

Strengthening Multinational Collaboration through Chemical Terrorism Preparedness

In November 2023, Dr Mary O’Mahony, CPHM at HSE South, along with key representatives from An Garda Síochána and the Defence Forces, participated in a tabletop exercise hosted by the Organisation for the Prohibition of Chemical Weapons (OPCW) in The Hague. This exercise was critical in evaluating cross-EU collaboration and addressing gaps in chemical terrorism preparedness.

The exercise covered two main areas:

- **Day 1:** Review of Chemical Weapons Convention (CWC) obligations and Member State responsibilities.
- **Day 2:** Identification of gaps in preparedness, response, and investigation, focusing on the establishment of multi-agency teams including police, HSE Crisis Management Team (CMT), Fire and Rescue CMT, and Defence CMT.

Following the event, feedback sessions provided insights and priority actions for both Member States and the OPCW to enhance chemical terrorism response capabilities. This exercise contributed to improving national and EU-level strategies for handling chemical threats **(Actions 1 and 2).**

Objective Five: Immunisation

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



What we will do from 2022-2027

- Action 1:** Develop a national immunisation end-to-end information system.
- Action 2:** Ensure robust and timely monitoring of uptake and enable estimate of vaccine effectiveness at population level and in defined risk populations.
- Action 3:** Review and make recommendations for future service delivery of national immunisation programmes.
- Action 4:** Collaborate with all immunisation providers, promoting collective responsibility to increase vaccine uptake.
- Action 5:** Identify groups within the population with low vaccine uptake and develop tailored immunisation programmes for them.
- Action 6:** Continue to integrate the COVID-19 vaccine programme into the same governance structure as other routine vaccination programmes within the HSE.
- Action 7:** Develop processes for administration of vaccines in outbreak situations.

Overview

Year Two saw meaningful advancements in the prevention and control of vaccine-preventable diseases, with a focus on ensuring equitable access across diverse population groups. The integration of governance structures and targeted campaigns led to increased vaccine uptake, particularly in communities with historically low vaccination rates. The overarching aim was to deliver well-governed and robust immunisation programmes that provide comprehensive coverage and reduce health inequalities.

Spotlight on the National Immunisation Office

The National Immunisation Office (NIO) played a crucial role in protecting Ireland's population from vaccine-preventable diseases across all life stages in Year Two. The NIO focused on improving governance, operational resilience, and equitable access to immunisations, aligning with the Strategy's overall goal of health protection through prevention. Key initiatives included the development of new vaccination schedules and targeted campaigns such as the **MMR Catch-Up**, specifically designed to reach underserved populations like the Roma and Traveller communities in response to the escalating threat from measles in Ireland and other parts of Europe in 2024. The NIO also supported the rollout of campaigns to maintain strong routine immunisation coverage. Efforts to address disparities in vaccination uptake underscored the NIO's commitment to equitable access, ensuring that vulnerable and low-uptake groups were prioritised. Additionally, the NIO concentrated on enhancing the operational efficiency and long-term sustainability of immunisation programmes, making significant strides in supporting the HSE's wider strategic objectives.

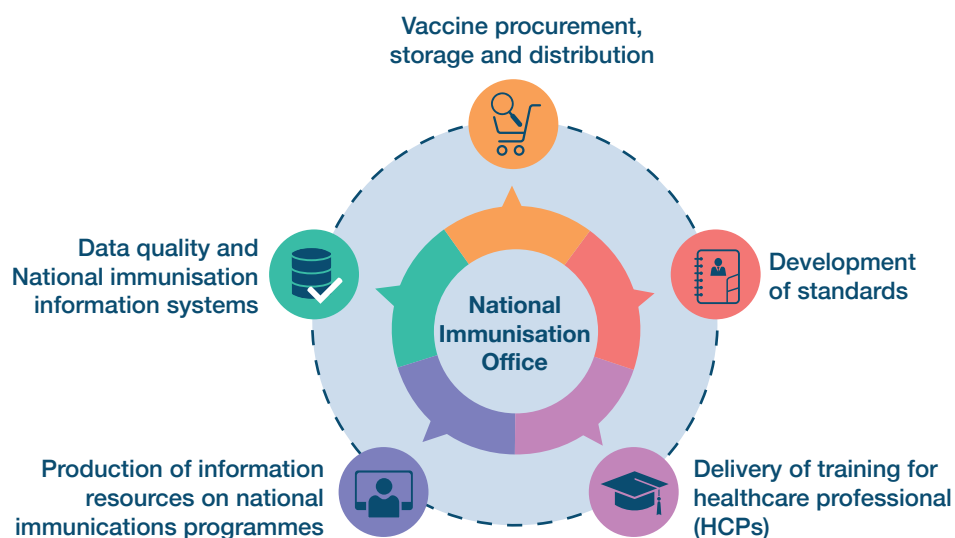


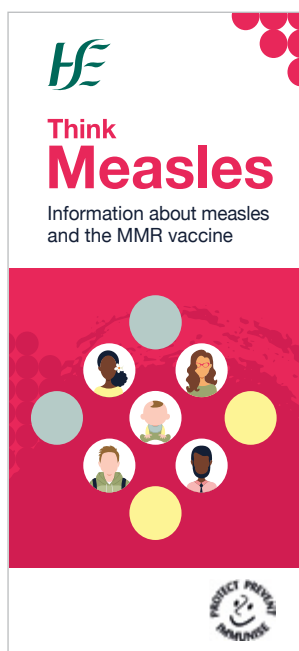
Figure 4: Responsibilities and function of the National Immunisation Office

Year Two Achievements: What we accomplished

The NIO delivered a high level of prevention and control of vaccine-preventable diseases across population groups through Immunisation programmes.

Immunisation Campaigns

- The NIO developed the new **Primary Childhood Immunisation Schedule** for babies born on or after the 1st October 2024, including the development of training and supports for healthcare professionals and development of communication and information for the public (**Action 4**).
- The NIO led on the development of the measles, mumps and rubella (MMR) vaccine catch-up campaign. The primary aim of the **MMR catch-up campaign** was to raise awareness about the importance of measles vaccination and encourage people who previously were not vaccinated to avail of one via participating general practitioners (GPs) and a HSE clinic. Focus was devoted to tailoring programmes to groups with populations with low uptake (**Actions 2, 4, 5, and 7**).
- The NIO rolled out **nasal influenza vaccine**, live attenuated influenza vaccine (LAIV), into senior infants as well as all primary ages special schools and performed an evaluation on the programme to inform future work (**Action 5**).
- The NIO developed **Pneumococcal Polysaccharide Vaccine (PPV23)** campaign to remind people aged 65 and older to get the vaccine to protect themselves against pneumonia, septicaemia and meningitis. The campaign was geo targeted across seven areas that had low vaccine uptake (**Actions 2 and 4**).
- The NIO 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 (**Action 6**).
- An additional **11,000 people availed of the Human papillomavirus (HPV) vaccine** through the Laura Brennan HPV Catch Up Vaccination programme in 2023, supporting the goal of eliminating cervical cancer by 2040. The NIO Information and Communication Technology (ICT) Team also supported booking portal development and implementation (**Action 5**).
- The NIO lead the Measles Immunisation Subgroup of the Measles NIMT and supported the delivery of the **Measles Vaccine Catch Up Programme 2024** through providing clinical, ICT and communications leadership, expertise and delivery of a national immunisation programme with support of a national campaign and ICT solution. In collaboration with HSE e-Health colleagues, NIO staff worked to stand up an online booking portal where members of the public can book MMR vaccine appointments in HSE clinics (**Actions 4 and 7**).



Programme Improvement and Good Governance

- The NIO developed the **NIO Immunisation Strategy 2022-2027**.
- Preparatory work commenced for the **National Immunisation Information System (NIIS)** development and roll-out project, NIO team are members and chairs of various groups now working on this project including the project steering group. The NIO will continue to work with HSE and external stakeholders on the procurement and implementation of NIIS system (**Action 1**).
- **Eleven national vaccine tenders** were completed in the last 12 months amounting to almost €98 million ranging from yearly tenders to five years tenders. A further six tenders will be completed in the coming months (**Action 1**).
- The NIO progressed a production environment for **immunisation records dataset** development and internal vaccine uptake reports and analytics (**Action 2**).
- The NIO **on-boarded additional staff** to this complement of thirty-five staff members as part of improving NIO resilience and moving the COVID-19 vaccine programme into business-as-usual functions (**Action 6**).
- The NIO supported **operational alignment between COVID-19 and flu immunisation** programmes to support and foster winter resilience (**Action 6**).
- The NIO developed **reporting governance structure** in conjunction with the HPSC to standardise reporting methodologies to strengthen and improve validation processes (**Action 2**).



Stakeholder Engagement

- The NIO worked with the **Immunisation Taskforce and National Immunisation Oversight Committee** to investigate low vaccine uptake and put in place processes to follow-up children who may have missed vaccines (**Actions 3 and 5**).
- The NIO funded and supported the General Practice Nursing Professional Development Coordinators to host **four regional immunisation conferences** in Dublin, Cork, Athlone, and Sligo, attracting over 800 GP nurses and receiving highly positive feedback (**Action 4**).
- The NIO supported the Irish College of General Practitioners (ICGP) in developing an **immunisation-specific module for GP trainees and GPs**. This online resource covers the importance of vaccinations, best practice management, and strategies for addressing vaccine hesitancy in a general practice setting (**Action 4**).
- The NIO continues to work with national **stakeholders in the areas of cervical screening and treatment** to support Ireland's efforts to eliminate cervical cancer by 2040. In November 2023, the Minister for Health Stephen Donnelly announced that Ireland is on target, with sustained effort from all stakeholders, to eliminate cervical cancer by 2040 (**Action 5**).

- The NIO continues to work with HSE colleagues on the integration, where possible, of the **influenza and COVID vaccine programmes (Action 6)**.
- The NIO continues to work with colleagues on the development of a **sustainable vaccination workforce**, within new HSE structures to enable national immunisation programmes and response to outbreaks and other emergency programmes (**Actions 3, 6, and 7**).
- The NIO presented on Ireland's HPV vaccine programme at the **OECD Expert Group** on the Economics of Public Health (**Actions 3 and 4**).
- The NIO partnered with the **Economic and Social Research Institute (ESRI)** on research into factors affecting childhood vaccine uptake (**Actions 3 and 5**).

Community Engagement and Communications

- The NIO Circulated over **900,000 pieces of merchandise** to support the Health and Care Workers (HCW) Flu Programme. Over 350,000 flu and 750,000 COVID information leaflets were printed and distributed while supporting the roll out of the COVID-19 autumn and spring booster campaigns (**Action 6**).
- The NIO launched the **#GetTheFacts** campaign to remind parents of children in their first year of secondary school to get vaccinated to protect their child from preventable diseases, such as whooping cough and meningitis (**Actions 2 and 4**).
- The **Flu, Pertussis, Covid vaccines and PCI immunisations** were promoted in the Maternity Guide for pregnant women and through online information campaigns informing pregnant women and parents about immunisation programmes (**Action 5**).
- The NIO produce and distribute 100,000 54-page **immunisation books for parents of newborn children** in Ireland, including a very popular fridge magnet about the Primary Childhood Immunisation (PCI) schedule (**Actions 3 and 4**).
- The NIO also provides over 200,000 school immunisation packs for both primary and secondary school programme (**Actions 3 and 4**).
- The Clinical Advice Service of the NIO responded to an average 150 **immunisation-related clinical queries a week** from healthcare professionals (**Action 4**).
- The **HSELand e-learning module** was developed for the Primary Childhood Immunisation Programme (PCIP) to coincide with changes (**Action 4**).



Figure 5: The team providing the Clinical Advice Service of the NIO

Success Stories

The Introduction of a New RSV Immunisation Pathfinder Programme

Respiratory Syncytial Virus (RSV) poses a significant threat to infants, leading to increased healthcare visits and hospitalisations. Between Week 40 of 2023 and Week 9 of 2024, there were 1,397 RSV-related hospitalisations among infants under one year old in Ireland, with 118 admitted to paediatric intensive care units (PICUs). In response, the CMO and DOH requested the NHPO, including the NIO, to assess the feasibility of an RSV immunisation programme for the 2024/2025 season. This led to a Health Technology Assessment (HTA) by the Health Information and Quality Authority (HIQA) to evaluate vaccine efficacy and identify the most cost-effective strategy. The NIAC recommended passive immunisation for infants and RSV vaccination for those aged 65 and older.

Based on NIAC's recommendations, the NHPO set up a HSE Working Group, leading to the creation of the RSV Immunisation Pathfinder Programme. Approved on 18th June 2024 by the Minister of Health, the programme aims to protect infants born between September 2024 and February 2025, as well as high-risk infants during their first RSV season. Midwives are administering the RSV monoclonal antibody, Nirsevimab, in maternity hospitals. Clinical implementation tools, such as Standard Operating Procedures (SOPs) and consent processes, ensure smooth delivery. The programme aims to protect vulnerable infants and reduce pressure on the healthcare system.

Although the initial focus is on infants, future expansion to older adults and pregnant women is being considered, in line with NIAC's recommendations. Further data on cost-effectiveness, efficacy, and logistics will guide potential adjustments to Ireland's RSV immunisation efforts. HIQA's HTA report, due in 2025, will provide insight into the programme's impact and help shape future policy for broader protection against RSV (**Actions 1, 2, 3, 4, and 7**).

Targeting Low Uptake Groups in the MMR Catch-Up Campaign

In 2024, the MMR Catch-Up Campaign has administered over 7,500 doses of the vaccine, focusing on areas with historically low uptake by setting up clinics in strategically chosen locations. The HSE Vaccination Teams prioritised ethnic minorities, congregated settings, and educational institutions, with targeted outreach to meat factories and sites for Beneficiaries of Temporary Protection (BOTP) and International Protection Applicants (IPA). Evening clinics and personal engagement with community leaders, especially within Traveller and Roma groups, were instrumental in fostering trust and increasing participation.

Pre-clinic engagement involved Clinical Leads visiting sites to address safety concerns and coordinate promotional efforts with community leaders. This approach, combined with active support from educational institutions, resulted in higher attendance at vaccination clinics. Tailored communication strategies, including social media, SMS messages, flyers, and local radio interviews, effectively reached targeted communities and boosted vaccine uptake.

Mobile Vaccination Units (MVUs), branded for visibility, played a key role in providing on-site vaccinations at community events and festivals. These MVUs not only improved vaccine access but also acted as mobile advertisements, raising awareness throughout the campaign. Visual and promotional materials, such as posters and branded merchandise, further enhanced outreach and trust, contributing to the campaign's success in increasing vaccine uptake among low uptake groups (**Actions 2, 4, and 5**).



Objective Six: Inequities

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



What we will do from 2022-2027

- Action 1:** Ensure data collection systems for surveillance and immunisation include ethnicity and other variables to capture at risk groups.
- Action 2:** Proactively engage with at risk groups on health protection issues affecting them.
- Action 3:** Work collaboratively with HSE Social Inclusion, communities, and their advocates in responding to health protection incidents.
- Action 4:** Act as strong public health advocates for at risk populations within the HSE and externally.
- Action 5:** Support further development of the migrant health protection programme including infectious disease screening and treatment, and catch-up vaccination.

Overview

Year Two illustrates significant and ongoing efforts to address health inequities by HSE Public Health: Health Protection. Rather than being a stand-alone programme, addressing health inequities is a transversal theme that is integrated across all health protection initiatives. Key actions included improving data collection to identify at-risk groups, engaging with vulnerable populations, and working with stakeholders such as the National Social Inclusion Office (NSIO), non-governmental organisations (NGOs), and community advocates. These activities underscore the HSE's commitment to reducing disparities and ensuring equitable access to health protection services for all communities.

Year Two Achievements: What we accomplished

Evidence-informed approaches were employed to address inequities in the prevention and control of infectious diseases and other defined hazards.

Collaborations and Partnerships

- The NHPO has been working in partnership with **NGOs supporting gay, bisexual, and other men who have sex with men** (gbMSM), including **HIV Ireland MPOWER** and the **Gay Health Network** (GHN). Collaborative efforts involve working together on regional and national incident management teams, co-designing and delivering public health campaigns, and interventions, such as vaccinations. The NHPO has actively participated in the annual **Gay Health Forum**, contributions are made to **Gay Community News**, and involvement is maintained in the Sexual Health and Crisis Pregnancy Programme gbMSM working group to identify and implement priority sexual health actions to prevent STI transmission (**Actions 2, 3, and 4**).
- The **NIO** worked with the NSIO and the NGO, Cairde, to deliver **immunisation training to members of the Roma Community and the Roma Health Network**. Cairde supported the development of an immunisation tab on their website and managed a campaign to promote PCI in five languages: Arabic, Chinese, Polish, Russian, and Ukrainian (**Actions 2, 3, and 4**).
- The **NIO** supported the **Catch-up Vaccination Programme for refugees and applicants seeking protection in Ireland**, a programme administered by HSE staff in Community Healthcare Organisations. The NIO provided training and educational materials for vaccinators. Public-facing materials were also made available in several languages to ensure accessibility (**Actions 2, 3, and 5**).



Screening

- In response to challenges in screening underserved groups identified as close contacts of TB cases, the Department of Public Health Dublin and the Midlands implemented a **mobile TB contact screening service**. Barriers such as language difficulties and public transport issues have led to the use of the Community Immunisation Programme's mobile vaccination unit (MVU) for screening at clients' doorsteps. This initiative has proven successful, allowing for the screening of clients who previously missed appointments (**Actions 2, 3, and 4**).
- In April 2024, following the identification of a second TB case at a centre housing International Protection Applicants and an epidemiological link to a previous case, Department of Public Health Dublin and the Midlands conducted a risk assessment and decided to screen all residents. SafetyNet, an NGO dedicated to primary care for vulnerable groups, was brought into the housing centre to **screen for TB with its mobile chest x-ray machine**. Over 120 clients were screened, achieving a nearly 50% screening rate by offering services during six clinics on various days and times, including weekends and evenings. All x-rays were reviewed by a consultant radiologist and reported as clear of active thoracic TB, providing valuable evidence and reassurance (**Actions 2, 3, and 4**).

Outbreak Management and Response

- Working with the **National Isolation Facility**, the NHPO strongly supported the case for this essential infrastructure for outbreak and incident response to be maintained in 2024. The facility provides care and isolation for the small proportion of persons who have infectious diseases and their potentially infectious contacts, who are unable to do so safely in the community. In 2023, the highest numbers of admissions were due to scabies (42%), COVID-19 (32%) and chickenpox (12%) (**Actions 2, 3, and 5**).
- **Scabies** is increasingly common in congregate settings, overcrowded domestic environments, and areas of deprivation where comprehensive simultaneous treatment and management of cases and contacts are limited. The NHPO coordinated and worked with Public Health, Social Inclusion, the Irish College of General Practitioners (ICGP), the HSE's Antimicrobial Resistance & Infection Control (AMRIC), clinicians, SafetyNet, and the National Infectious Disease Isolation Facility (NIF) to manage the scabies outbreaks. Actions included providing support with care, isolation, and treatment at the NIF to break the transmission chains. The NHPO is currently collaborating with HSE colleagues to develop an animation video on scabies and how to treat it (**Actions 2, 3, and 4**).
- In 2024, a collaborative initiative was launched with gbMSM partners and HSE Communications to tackle a rise in **acute hepatitis B cases within the gbMSM population**, including those with non-injecting drug use. This multifaceted campaign involved actions to raise awareness and increase vaccination rates. Educational materials were distributed through various channels, including advertisements and articles in Gay Community News (GCN), A5 leaflets in English, Portuguese, and Spanish at LGBTQ+ venues, and geo-targeted digital displays. Engagement on digital and social media was bolstered with vaccine-related content featuring Reels and TikTok videos by HIV activist Robbie Lawlor, alongside paid promotions on Meta and Snapchat. Key events such as Dublin Pride, Mother Block Party, and Pantibar were targeted with customised messages displayed on Orb screens and on Capel Street. Public health priority messages were included in Pride-related materials, such as tote bags and packs (**Actions 2 and 4**).
- In June 2024, a **measles outbreak was identified at a hotel providing accommodation for homeless individuals**, resulting in four confirmed cases and the hospitalisation of two residents. To manage the outbreak, the Public Health HSE Dublin and the Midlands convened an outbreak control team (OCT) comprising of regional public health officials, central HP representatives, local paediatric hospital services, and regional HSE Social Inclusion and vaccination teams. The OCT team worked closely with hotel staff and residents, providing tailored public health advice in appropriate languages and ensuring that all relevant stakeholders were kept informed throughout the incident. Local hospitals and emergency departments were alerted. The OCT facilitated on-site testing and vaccination, including a dedicated testing pathway for residents displaying measles symptoms and offering MMR vaccinations to increase immunity within the facility. Regular coordination meetings with hotel management were held to address emerging issues and refine response strategies. The OCT also used the incident as a learning opportunity to discuss and improve processes for future outbreak responses (**Actions 2, 3, and 4**).



Success Stories

Outbreak of Varicella Zoster (Chickenpox) in an International Protection Accommodation Service (IPAS)

In June 2024, a chickenpox outbreak was reported at the D-Hotel, an International Protection Accommodation Service (IPAS) facility in Drogheda, Co. Louth. By mid-August, twenty-one cases were identified within the hotel, with seven additional linked cases reported in other HSE regions, including one detected during hospitalisation for an unrelated condition. In total, 28 linked cases were confirmed, including a family member transferred to the National Isolation Facility. No deaths or cases involving pregnancy or infants were reported.

To manage the outbreak, Public Health HSE Dublin and North East (DNE) formed an Incident Management Team (IMT) with representatives from the NHPO, IPAS, HSE Social Inclusion, HSE Primary Care, Our Lady of Lourdes Hospital, and the National Isolation Facility. Although hospital management was not directly involved in the IMT, they received regular updates. Public Health worked closely with all stakeholders to identify cases, implement control measures, and provide regular updates. Site visits helped refine infection prevention advice.

Varicella serology testing was offered to residents through collaboration with phlebotomy teams from Our Lady of Lourdes Hospital, SafetyNet, and HSE Social Inclusion teams. Results informed infection control strategies and guided varicella vaccination. Vaccines were offered to high-risk residents, with support from the National Ambulance Service, National Immunisation Office, and HSE community vaccination teams. These coordinated efforts were essential in containing the outbreak and protecting vulnerable residents. **(Actions 2, 3, 4, and 5).**

Management of Latent TB Infection (LTBI) in a Prison Setting

In 2024, HP nursing staff conducted a series of visits to Mountjoy Prison, working in collaboration with CPHM and Senior Medical Officer (SMO) colleagues. The visits involved Mantoux testing of identified close contacts to detect Latent TB Infection (LTBI). The team ensured the safe transport and administration of tuberculin and accurately read the test results. Those with positive Mantoux results began treatment for LTBI in coordination with the prison medical staff. Education was provided to both the patients and the medical team, emphasising medication safety, the need to avoid paracetamol-containing products, and the correct timing for medication administration. The medications were organised in blister packs for the medical staff to administer. Ongoing collaboration with the prison’s medical team ensured regular monitoring of patients through blood tests (FBC and LFT) and face-to-face appointments. This initiative helped build stronger relationships with prison staff, deepening understanding of the unique challenges related to infectious diseases within the prison setting **(Actions 2, 3, and 4).**



International Advocacy for Prison Health

Alongside colleagues from the Irish Prison Service, Dr Éamonn O’Moore, DNHP, delivered a key note address at the **WHO Europe conference on prison health** co-organised by the Dutch Ministry of Justice and the Netherlands Institute of Forensic Psychiatry and Psychology (NIFP), in **April 2024** in Amsterdam. The conference centred on the theme of mental health in prisons. More than 250 participants confronted the many of the challenges experienced by people in detention and what countries, like the Netherlands, are doing to address them. Forensic health professionals, researchers, representatives of NGOs, and experts by experience discussed strategies to promote connection; facilitated the use of new technologies and alternatives to detention; and built up peer support systems, where people in prison can be trained to support others in navigating prison life and how to get help after release (**Actions 2 and 3**).



Further, in **May 2024**, Dr Éamonn O’Moore delivered a keynote address to the prestigious **Robert Koch Institute in Berlin at the Colloquium in Public Health**, which was centred on the theme, “On the Move: Public Health in a Globalized World.” Within the context of a constantly changing global landscape and recognising that health complexities transcend geographical boundaries, the diverse needs of mobile populations—including refugees, labour migrants and homeless persons—demand a holistic understanding of health and an integrated approach of care. The mobility of people between healthcare systems, such as the transition between prison and the community, also requires a closer look; while the continuity of care and the transfer of health data within and outside health systems is challenging, this setting can provide a temporary opportunity to reach people for health care. The global nature of all these challenges requires international collaboration and knowledge sharing. Dr O’Moore considered some of the key challenges in health protection in prison settings and the work being done in Ireland to address these challenges alongside partners in the UK through the **Five Nations’ Health & Justice Collaboration**⁶ (**Actions 1, 3, and 4**).

Key components of health protection & challenges in prisons

Risk assessment and surveillance of hazards	Prison populations often excluded/not explicitly identified in national surveillance mechanisms.
Investigation and control of communicable diseases	Cases/outbreaks may not be notified and/or responded to effectively and PH authorities may be unfamiliar with prison systems.
Detection & mitigation of other health hazards	Prisons may not be included in alerting or response mechanisms or mitigations may be unsuitable for prisons.
Emergency preparedness, resilience and response (EPRR)	Prisons may not be routinely included in EPRR structures, planning exercises or response plans.
System leadership and communication	Prisons can be a system ‘blind spot’ routinely excluded from whole system approaches.
Collaborative working with other agencies and organisations	As a result of all of the above, prisons may be invisible but necessary partners.



Figure 6: Key components of health protection challenges in prisons

⁶ Perrett, S., Plugge, E., Conaglen, P., O’Moore, E., & Sturup-Toft, S., 2020, **The Five Nations model for prison health surveillance: lessons from practice across the UK and Republic of Ireland**. Journal of public health, 42(4), e561–e572.

Exercise Fandango: Simulated WHO Public Health Emergency Meeting

In February 2024, Adam Shanley from HIV Ireland MPOWER, alongside Professor Fiona Lyons, Clinical Lead for Sexual Health, and Dr. Derval Igoe, NHPO CPHM, participated in the Exercise Fandango. This multi-country simulated emergency, coordinated by the ECDC and supported by WHO, addressed the threat of multidrug-resistant and extensively drug-resistant gonorrhoea. Member states, including public health, clinical, and civil society representatives, collaborated to develop a coordinated response. The exercise highlighted the importance of an integrated, multi-sectoral approach to protect populations most affected by these infections, ensuring that clinical, public health, and laboratory perspectives were aligned (**Actions 2, 3, and 4**).



Figure 7: Exercise Fandango, a simulated WHO Public Health Emergency meeting, February 2024. Adam Shanley, HIV Ireland MPOWER speaking

Irish Street Medicine Symposium 2023 at the University of Limerick.

The Irish Street Medicine Symposium, held in 2023 at the University of Limerick, focused on health and homelessness. The conference provided a platform for professionals working with vulnerable populations to share knowledge and network across disciplines. HSE Public Health staff presented their work on health inequalities affecting vulnerable groups, such as homeless populations. At an information stand, nurses from HSE Public Health shared insights into the work being done to address health inequities and to raise awareness about how deprivation affects healthcare access (**Actions 2, 3, and 4**).



Figure 8: Pictured left to right. Melanie Barnes, Eva Rushe, Leah Evans, (Health Protection Nurses), Rachel McCormack (SPR), Fintan Walshe (Communications), HSE Public Health Midwest

Objective Seven: Global Health

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



What we will do from 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.

Overview

In Year Two, notable progress was made in advancing global health initiatives, with a focus on understanding and addressing the impact of global health issues on Ireland. Achievements emphasised maintaining awareness of global health challenges, fostering collaborative relationships both within Ireland and internationally, and supporting global health security. Key actions included active participation in international networks, strengthening surveillance partnerships, and enhancing preparedness and response capacities. Additionally, efforts to reduce health inequities and improve vaccine accessibility were highlighted, demonstrating Ireland's commitment to contributing to global health security and resilience.

Spotlight on Global Health

Public health emergencies transcend borders, demanding a unified and agile response grounded in shared intelligence and collaborative efforts to safeguard both national and international health. In Year Two, HSE's National Health Protection Office strengthened its global partnerships, enhancing its ability to understand and respond to health threats impacting Ireland. Active participation in European and global networks, bolstered surveillance and preparedness for epidemic threats. The HPSC continues to play a crucial role as Ireland's focal point for the **International Health Regulations (IHR)** and the **European Early Warning and Response System (EWRS)**. Health protection has reinforced its capacity to report and manage serious infectious disease events, ensuring alignment with international standards. Collaborations with UKHSA, ECDC, WHO, and Irish One Health colleagues have strengthened response to emerging health threats including zoonotic infections (e.g. **highly pathogenic avian influenza**). These efforts underscore dedication to integrated international surveillance, outbreak response, and addressing health inequities, all while contributing to the broader global health security landscape.

Year Two Achievements: What we accomplished

In Year 2, significant progress was made in enhancing our understanding of global health issues and improving health protection approaches.

Fostering International Collaboration and Networks

- The NHPO and HPSC continue active participation in **European and global networks for epidemic intelligence, response, and preparedness**, coordinated by organisations such as the ECDC and WHO Europe (**Actions 2 and 3**).
- The HPSC has **strengthened its international surveillance networks**, establishing North-South partnerships with **Northern Ireland** for surveillance on STIs, hepatitis, HIV, gastroenteric, zoonotic, and vector-borne diseases (**Actions 1, 2, and 3**).
- The HPSC is also a participant in the EU-funded North-South consortium **One Health-ALL Ireland for European Surveillance (OH-ALLIES) project**, project led by DAFM (**Actions 1, 2, and 3**).
- The HPSC is an associate member of the **European One Health Association** (**Actions 1, 2, and 3**).
- The HPSC, **in collaboration with the UKHSA and ECDC, has been investigating outbreaks linked to contaminated products**, ensuring a coordinated and effective response (**Actions 2 and 3**).

- The NHPO and HPSC **maintain active membership in all ECDC disease-specific networks**, facilitating knowledge sharing and cooperation in response to health threats (**Actions 2 and 3**).
- The HPSC welcomed appraisers from the **RIVM National Institute for Public Health and the Environment** and the Environment (Netherlands) and the **Robert Koch Institute** (Germany) to evaluate its status as a **European Programme for Intervention Epidemiology Training (EPIET) site** on behalf of the ECDC. The appraisal highlighted the **excellent training and supportive environment** provided to **EPIET** fellows at HPSC (**Actions 2 and 3**).

Enhancing Global Health Security and Preparedness

- As the **national focal point for IHR**, the HPSC continues to monitor and provide epidemic intelligence on health protection threats both nationally and internationally. The HPSC has reinforced its capacity and communication channels for reporting serious infectious disease events under **IHR** and the **EWRS**. (**Actions 1 and 3**).
- The HPSC continues to **collaborate with ECDC, WHO**, and the **European Food Safety Authority (EFSA)** on surveillance issues, ensuring alignment and integration of Ireland’s health protection efforts with international counterparts (**Actions 1, 2, and 3**).
- As a member of the **Health Emergency Response Authority (HERA) Advisory Forum**, the NHPO and HPSC have contributed to achieving priority goals, including ongoing pandemic planning efforts (**Actions 1, 2, and 3**).
- In January 2024, the **HSE National Clinical Lead for the Health Security Programme** was appointed to the **EU ECDC Health Task Force Advisory Committee**, aimed at mobilising and deploying outbreak assistance teams to support local responses to disease outbreaks and collect field data (**Actions 1, 2, and 3**).
- The HPSC and UKHSA have collaborated on **chemical, biological, radiological, and nuclear (CBRN) preparedness activities**, including planning a radiological/nuclear exercise in Ireland for 2024 (**Actions 2 and 3**).

Promoting Integrated Surveillance and Outbreak Responses

- The HPSC collaborates with **Irish One Health colleagues**, including the FSAI and DAFM, on surveillance activities and outbreak investigations, ensuring a comprehensive approach to health protection (**Actions 1 and 2**).
- The HPSC coordinates the inclusion of residential care facilities in **ECDC international point prevalence surveillance studies on healthcare-associated infections and antimicrobial use**, with further studies planned for 2024 (**Actions 1, 2, and 3**).
- To address the **increase in gonorrhoea among young people**, the HPSC is working with national and international colleagues, including those in **Northern Ireland**, on a **joint pilot project** that commenced in November 2023. The HPSC is collaborating with the Sexual Health and Crisis Pregnancy Programme (SHCPP) and HSE Communications to develop awareness campaigns (**Actions 1, 2, and 3**).

Addressing Health Inequities and Vaccine Accessibility

- At the **Eurogin Conference in Stockholm** in March 2024, the NIO Business Project Manager addressed **vaccine hesitancy and recovery efforts**, particularly focusing on the HPV vaccine in Ireland (**Actions 1 and 4**).
- From the 21st to 27th April 2024, the NIO participated in **European Immunisation Week (EIW)** for the 20th consecutive year, launching a campaign to highlight the importance of immunisation in protecting babies and children against serious diseases (**Actions 1, 2, and 4**).
- The **NIO team** was selected as **one of five exemplar sites** for the **EU project “Overcoming Obstacles to Vaccination.”** The NIO team visited other projects across Europe to gain insights and bring transferable learning. In October, **the NIO hosted representatives from twenty-six EU countries to showcase the LAIV in schools and participated in the annual flu awards** (**Actions 1, 2, and 4**).
- The **NIO staff** participated in a **HERA workshop** in Brussels and attended a reception for the HERA board during their visit to Ireland as well as was involved in EU meetings related to **COVID-19 vaccination procurement** (**Actions 1, 2, and 4**).

Success Stories

Enhancing Global Respiratory Surveillance through WHO Collaboration

In May 2024, the HPSC was selected by the WHO as the fourth country globally to pilot the **Mosaic Respiratory Surveillance Framework workshop**. This framework guides national stakeholders in identifying priority surveillance objectives, selecting appropriate surveillance approaches, and developing tailored implementation plans. The workshop at HPSC was a highly successful collaborative event, where existing surveillance systems were mapped to specific objectives. The process led to the identification of forty-four needs and actions that will assist in enhancing surveillance efforts and aligning technical assistance and financial investments from partners (**Actions 1, 2, and 3**).

Strengthening Climate and Health Security Collaboration with UKHSA

On the **23rd April 2024**, the NHPO hosted a visit from representatives of the **UKHSA's Centre for Climate and Health Security**. During this session, Dr Ina Kelly presented the work of the NHPO's Environment and Health Programme, focusing on the resilience of the HSE in addressing climate-induced health impacts. Dr Philip Crowley, National Director of HSE Strategy and Research, also presented the HSE Climate Strategy. The meeting concluded with a group discussion, where key takeaways included exploring potential partnerships between Ireland and the UK in climate and health data analysis. The role of both the HSE and UKHSA in mitigating the side effects of interventions targeting climate-related health equity issues was also reinforced (**Actions 2, 3, and 4**).



Advancing Climate Resilience through Healthcare Sector Leadership

In May 2024, Dr Ina Kelly participated as a panellist in an EU Health Policy Platform (EUHPP) Live **Webinar** on Climate Resilience, representing the Standing Committee of European Doctors. The webinar focused on assessing the impact of climate change and exploring adaptation and mitigation strategies within the healthcare sector. Dr Kelly discussed the importance of climate resilience and highlighted the efforts of the healthcare sector in strengthening this resilience. She emphasised the need for appropriate investment, robust national social security systems, and enhanced collaboration to facilitate the transition to a climate-resilient society (**Actions 1 and 4**).

Objective Eight: Research Strategy

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



What we will do from 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.

Overview

Year Two brought important advancements in the development of Ireland's health protection research strategy. HSE's National Health Protection Office working with wider partners within public health and beyond, focused on fostering collaboration, building capacity for evidence generation, and ensuring research shaped health protection policies and practices. During this time, the **Research and Guideline Development Unit** within the NHPO prioritised strengthening its internal research culture, funding key initiatives, and expanding partnerships with national and international academic institutions. The creation of multidisciplinary roles and promotion of Ireland as a partner in European research efforts further supported the strategic goal of establishing a strong health protection research infrastructure. Further, during 2024, a new CPHM, Dr Keith Ian Quintyne, was appointed as National Clinical Lead for Evidence-based Medicine, Research & Quality Improvement to provide leadership to this function.

Spotlight on the Research and Guideline Development Unit

An effective **Research and Guideline Development Unit** (RGDU) supports a culture of research. It 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. This guidance is achieved through collaborative partnership, shared resources, and expertise. The development and implementation of evidence informed guidance enhances health outcomes for patients as well as the public, diminishes variation in practice, and supports and improves the quality of clinical decisions. **Dr Keith Ian Quintyne**, Lead in Evidence Based Medicine, Research & Quality Improvement, currently provides oversight to the work of the RGDU.

Year Two Achievements: What we accomplished

HSE Public Health: Health Protection and the RGDU fostered a health protection research strategy, including supporting local and international collaboration.

Leadership and Unit Development

- In May 2024 Dr Keith Ian Quintyne was appointed the dedicated **clinical lead for the RGDU** (**Actions 1, 2, and 5**).
- The RGDU has recently developed a **suite of guidance methodology** documents, which will underpin future guideline development processes. These include a **Framework for Health Protection Guidance Development in Ireland, Good Practice Guidance Methodology, Consensus Based Recommendations Protocol, and Evidence-Based Guidance Methodology** (**Action 2**).
- The RGDU has continued to develop **strong links and networks across other key guideline development organisations and evidence synthesis hubs**, including the **HSE Research and Development Unit, Evidence Synthesis Ireland, Cochrane Ireland, The Health Research Board, the UKHSA, the National Institute for Health and Care Excellence (UK), the MAGIC Evidence Ecosystem Foundation, and the Scientific Methods and Standards, ECDC** (**Actions 1, 2, 4, 6, and 7**).

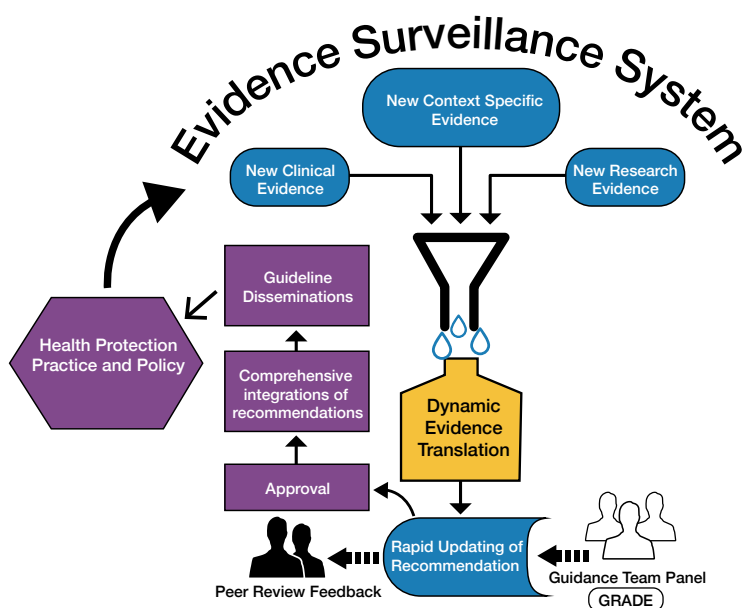
- The RGDU is developing a **repository of published scientific papers**, other publications and presentations by the NHPO and HPSC staff (**Actions 1 and 2**).
- Dr Keith Ian Quintyne is developing an **evidence-based standard operating procedure** for Priority Setting in the RGDU (**Actions 1 and 2**).
- Ms Claire Gilbourne and Dr Michelle Williams (RGDU) have attended PRINCE 2 Project Management training, and they have developed a suite of **evidence-based resources for the guideline development programmes** (**Actions 1 and 2**).
- In late 2024, the RGDU will explore the **potential for multidisciplinary joint health protection/academic posts** and **academic/operational secondments** between the RGDU and academic institutions (**Action 5**).

Guidelines

- In February 2024, the RGDU published new Guidelines for the Public Health Management of Contacts of invasive Group A Streptococcus (iGAS) Infection in Ireland and a resource hub for supporting documentation (**Action 2**).
- In March 2024, the RGDU published Guidelines for the Emergency Management of Injuries (EMI) and Post-Exposure Prophylaxis (PEP). This followed eighteen months of scoping, evidence synthesis, consultation and revision (**Action 2**).
- In June 2024, the RGDU published guidance documents for management of Acute Hepatitis B: Standard Operating Procedure (SOP) for Public Health Management of Cases and Contacts of Acute Hepatitis B; Algorithm: Public Health Management of a case of Acute Hepatitis B; Algorithm: Public Health Management of close contacts of Acute Hepatitis B (**Action 2**).
- Current evidence-informed **guideline development activity in health protection is focused on tuberculosis, pertussis, measles, and integrated guidance on health clearance of healthcare workers and the management of healthcare workers living with bloodborne viruses (hepatitis B, hepatitis C and HIV)** (**Actions 1 and 2**).
- The RGDU is currently developing guidance documents to support public health management of Shiga toxin-producing *Escherichia coli* (STEC), scabies, and follow up of women potentially exposed to possible Parvovirus B19 in pregnancy (**Actions 1 and 2**).

Evidence Surveillance and Review

- **Evidence requests** arise from various sources, including actions from key strategic meetings. Requestors include NIMTs, the Health Protection Advisory Committee for Infectious Disease (HPAC-ID), OCTs, weekly evidence surveillance outputs, and other sources (including wider HSE and DOH/CMO Office). The RGDU ensures that appropriate **evidence review requests** are received, screened, and processed in a timely and efficient manner and evidence-based methodology is followed when conducting any review format (**Actions 1, 2, and 6**).



- The RDGU provides **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 the ECDC and WHO structures, including Advisory and Working Groups on various aspects of health security and health protection (**Actions 1 and 2**).
- The 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 and 6**).
- 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**).

Research, Publications, and Presentations

- The RDGU presented an abstract **Determining Health Protection Research Priorities** at the HSE Health Protection Conference on the 12th October 2023 (**Action 4**).
- In March 2024, the RGDU concluded a research study designed to identify and rate the importance of **health protection research priorities** for Ireland. In **May 2024**, an article based upon this research was submitted to Journal of Public Health Research and is undergoing peer review. Publication of this work should advance development of a health protection research strategy for Ireland by blending expertise among relevant national and international opinion leaders (**Actions 1, 2, 4, and 7**).
- In **March 2024**, the RGDU published an article in the Journal of Infection Prevention titled **Efficacy of facemasks in preventing transmission of COVID-19 in non-healthcare settings: A scoping review**. This article suggests that an abundance of experimental literature is available indicating that masks are effective at preventing COVID-19 transmission, but the degree of efficacy is impacted by external factors. It further highlights that the quality of the evidence available is low (**Actions 1 and 2**).
- In **April 2024**, the HSP and RGDU co-authored a paper A narrative literature review to inform the **development of a health threats preparedness framework in Ireland**, which is undergoing peer review with BMC Public Health (**Actions 1, 2, and 6**).
- In **May 2024**, Dr Michelle Williams, RGDU, co-authored a paper with HIQA colleagues titled **Applying a Human Rights-Based Approach to Formal Care and Support Provided in the Home: A Narrative Review**. This paper was published in *Health and Social Care in the Community* (**Actions 1, 2, and 4**).
- In **June 2024**, the RGDU has submitted an article for publication titled **Evidence for the effectiveness of antivirals in the treatment and prevention of COVID-19 and Influenza: A rapid review with a focus on congregate settings and higher-risk populations**. This article supports administration of Paxlovid as an effective strategy for reducing severity of COVID-19 in the settings studied, particularly in people at risk of developing severe disease, when given within five days of symptom onset (**Actions 1 and 2**).
- In **June 2024**, Randal Parlour, RGDU, has co-authored a paper **Recognising and responding to community needs of Gay and Bisexual Men around Mpox**, which has been submitted for publication to the Journal of Community Health. This paper follows on from a nationwide survey, sponsored by **National Research and Evaluation Programme (RandE) for Mpox**, that asked gay, bisexual and other men who have sex with men (gbMSM) their views of how mpox was managed in Ireland (**Actions 1, 2, and 6**).
- In association with central colleagues, Randal Parlour and Professor Máirín Boland have co-authored a paper titled **Synthesising public health preparedness mechanisms for high-impact infectious disease threats: a jurisdictional scan**, which has been submitted for publication in June 2024 to LANCET Regional Health Europe. This paper underlines the assessment that effective public health preparedness for high-impact infectious diseases requires a comprehensive and coordinated approach that includes early threat detection, rapid and scalable response capabilities, robust healthcare systems, and strategic communication efforts (**Actions 1, 2, 6, and 7**).

Success Stories

The RDGU Surveys Stakeholders

In July 2024, the RDGU conducted a **Stakeholder Satisfaction Survey** to assess the effectiveness of services provided, including evidence generation, synthesis, and guidance development. The survey targeted key stakeholders and collaborating partners, gathering valuable insights to shape future approaches and enhance service delivery.

The survey specifically highlighted the positive impact of the Weekly Evidence Surveillance, with stakeholders praising it as an “excellent resource” and an “important cog in the wheel of knowledge management.” Feedback indicated that the service was “amazingly helpful and timely” for pandemic planning and noted its broad relevance across health protection programmes. This proactive engagement with stakeholders not only reinforced satisfaction with current services but also positioned the RDGU to better meet evolving needs, ensuring that evidence-based resources remain a central part of health protection efforts in Ireland (**Actions 2 and 4**).

Investigating Geospatial and Meteorological Risk Factors for Gastroenteric Disease in Ireland

Since 2017, the HPSC has worked with researchers, including Dr Paul Hynds (TUD), Dr Jean O’Dwyer (UCC), and Dr Coilín ÓhAiseadha (formerly HSE-East), to examine geospatial and meteorological risk factors for gastroenteric diseases in Ireland, focusing on Verocytotoxigenic Escherichia coli (VTEC), Campylobacter, and Cryptosporidium. This collaboration has led to three major projects: the Irish Research Council (IRC)-funded Epi-Centre project, the EPA-funded STEPWISE project, and the EPA-funded Climate Change Societal Health Impacts and Solutions study.

In 2023, significant progress was made in two key areas. A study on Campylobacter’s geospatial distribution revealed different environmental risks for children and adults, shedding light on age-specific vulnerabilities. This research was published in PLoS ONE and presented at the European Public Health Conference. Meanwhile, Bayesian time series analyses linked meteorological factors to disease incidence, emphasising the need for ongoing monitoring as climate change influences future disease patterns. This successful collaboration between academic institutions and public health agencies is driving evidence-based insights into environmental and climate-related health risks, helping shape public health interventions in Ireland (**Actions 1, 2, 4, 6, and 7**).



Objective Nine: A Multidisciplinary Health Protection Workforce

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



What we will do from 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.

Overview

In **Year Two**, considerable progress was made in enhancing the education and training of the multidisciplinary health protection workforce. Key initiatives included launching a **Health Protection Nursing Management Development Programme** to strengthen leadership skills and conducting surveys to assess training needs. Professional development opportunities were expanded with programmes like the Health Protection Nursing Foundation and specialised courses in infection prevention. Additionally, multidisciplinary education was promoted through European training programmes, and Health Protection Duty Rooms supported workforce capacity and readiness in addressing public health challenges.

Spotlight on Health Protection Nursing

The health protection (HP) nursing workforce includes Registered General Nurses across Staff Nurse, Clinical Nurse Manager II, Assistant Director of Nursing (ADON) grades, centrally led by **Dr Toney Thomas, Director of Nursing (DON)**. The NIO, HPSC and each of the six Regional Departments of Public Health Nursing teams are led by a senior nurse manager. An Organogram displaying the HP Nursing governance and reporting structure is published [online](#). The NHPO provides high-quality training and development opportunities, establishing itself as a centre of excellence in health protection (**Actions 2 and 3**).

Year Two Achievements: What we accomplished

To expand and enhance the capabilities, education, and training of the multidisciplinary health protection workforce, comprehensive strategies were implemented across staff satisfaction, professional development, specialist training, and public engagement, which achieved considerable progress and recognition in these areas. Year Two achievements focus on HP Nursing and briefly overview of Higher Specialist Training Programme in Public Health Medicine (SpRs in PHM).

Health Protection Nursing Achievements and Initiatives Workforce Development and Training

- A **Training and Education Policy** has been established (**Actions 2 and 4**).
- **Continuous professional development (CPD) events** were initiated to support education and training for multidisciplinary public health employees (**Actions 2 and 4**).
- An updated work plan for **Nursing Education and Professional Development (EPD)** was developed, supported by a Training and Education Policy (**Action 2**).
- A **new Leadership and Management Development programme** was launched in partnership with the Office of the Nursing and Midwifery Services Director (ONMSD) to support leadership development. The Management Development Programme (MDP) targeting frontline and middle-level nurse managers was also launched with a follow-up survey conducted to evaluate competency attainment (**Actions 2 and 5**).

- **The Health Protection Nursing Foundation** programme, accredited by the Nursing and Midwifery Board of Ireland (NMBI), was advanced to enhance public health knowledge and skills (**Actions 2 and 3**).
- Collaboration was strengthened with regional nurse and midwife education centres (**RCNME**) to provide training in clinical skills such as basic life support, anaphylaxis, IM injection, phlebotomy, and the Tuberculin skin test (TST-Mantoux) to support vaccination programmes and infectious disease management (**Action 3**).
- A baseline survey was conducted in March 2023 to **assess awareness of Nursing Management Competency Indicators** (MCI) among frontline nurse managers, which informed the development of a management development programme (MDP). A follow-up survey was administered in July 2024 to evaluate progress (**Action 2**).
- **Funding was secured** for various professional development activities to optimise workforce capability (**Actions 2 and 3**).
- Professional development was facilitated by enrolment of nurses to carefully selected courses, summarised in **Table 3**, to optimise workforce capability (**Action 1**).
- Mandatory **training compliance** has been maintained at a Green status (greater than 85%) (**Action 4**).

Table 3: List of courses and Health Protection Nurses Enrolment

Course Title	Number of HPNs enrolled* & (% of nursing workforce*)
Introduction to Sexual Health Course	11 (17)
Masters Health Promotion	1 (1.5)
HP Foundation Programme	14 (22)
Postgraduate Cert Infection Prevention and Control	5 (7.5)
NCLC clinical leadership	11 (17)
Bespoke Leadership Programme for ADONs	2 (3)
Faculty of PHM Summer and Winter Scientific Meetings	13 (20)
Venepuncture (clinical skills)	7 (11)
Postgraduate Cert Health Protection	13 (20)

*Whole-time equivalents (WTEs)

Service Integration and Quality Improvement

- A dedicated **Health Protection Nursing public-facing webpage** was developed on the HPSC website to provide information and resources (**Action 2**).
- Nursing teams actively participated and **integrated into central and regional health protection MDTs**, leading and contributing to various initiatives (**Actions 1, 2, and 5**).
- Clinical outcome and **service quality audits** were progressed in line with service priorities identified by the Regional Public Health Departments (**Action 5**).
- **Nursing representation** and contributions to various public health working groups, such as Out of Hours Service provision, MDTs, the Public Health Incident Management System (OCIMS), and Special Interest Groups (SIGs) (**Actions 1 and 4**).
- Membership in the regional **Antimicrobial Resistance and Infection Control (AMRIC) Committees** contributed to infection control initiatives (**Action 4**).
- Continued collaboration between **Health Protection and Community Infection Prevention and Control (IPC)** nursing teams occurred through regular formal and informal meetings (**Actions 1 and 4**).

- Health Protection Nursing has **revised job specifications for nursing grades**, ensuring clear governance and accountability lines (**Action 4**).
- Progress is being made on the **Nursing Career Development Guidance Framework (Actions 1 and 2)**.
- Efforts are underway to optimise the **Nursing and Midwifery Board of Ireland (NMBI) Documentation guidance (2015)** in practice (**Action 4**).

Leadership and Stakeholder Engagement

- Significant contributions were made by HP Nursing to the development of **National Health Protection Guidance**, led by the HPSC and AMRIC (**Action 4**).
- The **Regional MDT Health Protection Duty Room**, both in-person and virtual, was established, with the model pioneered in the Department of Public Health South-West and subsequently adopted by other public health areas (**Actions 1 and 2**).
- **Presentations** were delivered at the HP national engagement event regarding the Public Health Reform Programme. Oral and poster presentations were made at the Infectious Diseases Society of Ireland (**IDS**) **2023 Meeting** and the **Faculty of Public Health Medicine Summer Scientific Meeting 2024 (Action 4)**.
- The Assistant Director of Nursing (HSE South, South-West) was awarded the Catherine McAuley School of Nursing & Midwifery UCC award for Community Engagement and Activism in 2023 (**Action 5**).
- The Midwest Area nursing team was recognised with awards at the regional and central **Spark Ignite** programme (**Action 4**).
- Plans are in place to scope the **nursing role in pillars of Public Health** beyond Health Protection (**Actions 1 and 4**).

Specialist Registrars in Public Health Medicine Training Programme

- SpRs in PHM on the RCPI Public Health Medicine Higher Specialist Training scheme can undertake **six-month placements at the NHPO**. These placements provide opportunities to work within various units such as the HPSC, NIO, HSP, and Acute Response, as well as in areas of evidence-based medicine, research, and quality improvement (**Actions 3 and 4**).
- SpRs have **unique opportunities to meet their training needs while contributing significantly to substantive programmes of work both nationally and internationally**. They work alongside senior leaders, contribute to policy work with the DOH and other government departments, and engage in international public health collaborations. This includes liaising with senior HSE leaders and relevant stakeholders, including NGOs (**Actions 3 and 4**).
- In 2023 and 2024, **SpRs were key contributors to the NHPO**. They worked on high consequence infectious disease management, preparedness planning (including avian influenza) and took part in tabletop and simulation exercises related to radiation, nuclear, and chemical threats. They also gained experience in International Health Regulations, Early Warning and Response functions, and contributed to national workshops on emerging threats, the Environment and Health surveillance system, RSV immunisation, and guidance development for measles and acute respiratory infections. SpRs presented their work at the 2023 Health Protection conference and RCPI meetings. Notably, Dr James Gilroy won the RCPI Dorothy Stopford Price medal in May 2024 for his work on the school flu vaccine programme with the NIO (**Actions 3 and 4**).

Success Stories

Tuberculosis Multidisciplinary Team Meeting at University Hospital Limerick

In the HSE Public Health Midwest, the University Hospital Limerick (UHL) hosts a monthly MDT meeting dedicated to discussing the tuberculosis (TB) caseload in the Mid-Western Region. The meeting includes participants from the Mid-West MDT TB team, such as Respiratory and Infectious Disease Consultants, Clinical Nurse Specialists, Consultant Microbiologists, senior laboratory staff, hospital pharmacists, and staff from the Department of Public Health (including CPHMs, Senior Surveillance Scientists, Senior Medical Officers, Clinical Nurse Manager 2, and Staff Nurses).

This monthly MDT meeting serves as a critical platform for reviewing both current and historical TB cases, facilitating public health investigations, and guiding the contact tracing of complex cases. It also provides an opportunity to collect and analyse outcome data for surveillance purposes. By fostering collaboration across various specialties through a patient-centred approach, the meeting ensures that each TB case receives individualised, evidence-based, and case-specific support, exemplifying best practices in multidisciplinary teamwork and contributing to optimal treatment outcomes (**Actions 1, 2, and 5**).

Evaluating the Acute Health Protection Duty Room, HSE South-West

In October 2022, an Acute Health Protection Duty Room was established in the Department of Public Health HSE South-West (DPH-SW) to manage the increased volume of infectious disease notifications and queries. This revised approach introduced a centralised model aimed at improving service delivery through enhanced interdisciplinary communication, staff training, and adherence to information governance standards.

In February 2024, an anonymous survey was conducted to assess staff satisfaction within the Health Protection Duty Room at HSE DPH-SW and to gather feedback for ongoing improvements. The survey, which received responses from twenty-nine staff members across various departmental disciplines, revealed the following key findings: 95% of staff reported effective communication processes within the Duty Room, 91% agreed that daily huddles for information exchange and handover were successful, and 91% indicated that opportunities for ongoing learning were available. Additionally, 95% of staff felt adequately supported in their roles, 92% believed that patient safety and confidentiality were appropriately prioritised, 88% felt that current processes support quality improvement, and 93% expressed being “satisfied” or “very satisfied” with the Duty Room model.

A key area for improvement identified through the survey was the need for a more comprehensive capture of the workload managed by the Duty Room team. In response, a departmental workshop was held in March 2024, involving representatives from all disciplines within the Duty Room. The workshop addressed the survey suggestions and led to the implementation of the Health Protection Impact Log, a new tool designed to document the scope of the team’s daily workload and enhance the transparency of acute health protection service delivery (**Actions 2 and 5**).



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



What we will do from 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.

Overview

During **Year Two**, considerable advancements were made in continuing the development of a nationally integrated health protection service. Key efforts included strengthening leadership within the NHPO, active programme of recruitment & restructuring roles to better address current & future health challenges and enhancing collaboration across central and regional teams. The creation of **National Health Protection Incident Response Plan** and the review of the role, structure & function of **Special Interest Groups (SIGs)** further improved the system's responsiveness, resilience, effectiveness and efficiency. Additionally, significant focus was placed on addressing **emerging health threats**, including contributing to a major policy review of Ireland's preparedness for future health security challenges. And throughout, the NHPO has continued to provide leadership, oversight and operational response to a broad range of health protection challenges threatening our national health security, working in partnership nationally and internationally.

Spotlight on HSE Public Health: National Health Protection Office

HSE Public Health: Health Protection continues to deliver on its mission of "To Protect and Prevent," advancing efforts to safeguard all the people in Ireland from all health protection hazards. This service plays a pivotal role in ensuring national preparedness and response to threats, known and emergent. In Year Two, considerable progress was made in building the national team, strengthening leadership, enhancing collaboration across central and regional teams, and improving the responsiveness of health protection systems. The integration of the Acute Operations Response Programme (AORP) into the NHPO highlights the focus on creating an agile, cohesive structure for incident management with close working relationships between the DNHP and CPHMs si HP and ADsPH working on frontline public health response in RHAs.

In addition to these structural advancements, the NHPO has achieved important milestones in professional development, information security, and organisational improvement. Continuous improvements in public health surveillance have been delivered (as outlined in other chapters, including expanding our capability beyond infectious disease surveillance alone). In supporting scientific innovation and cross-system collaboration, the NHPO delivered the successful launch of the inaugural **HSE Public Health: Health Protection Conference** and the **First Progress Report on Implementing the National Health Protection Strategy**. The NHPO has also delivered enhanced winter planning efforts to support the work of HSE in responding to surges of infectious diseases seen in winter which have significant consequences on health services. The NHPO has provided senior leadership through the **National Incident Management Team structure** to responding in 2024 to escalating threats from **measles** and **pertussis**, and to the emergent threat of **mpox Clade I**, which was declared a PHEIC by WHO in August 2024. The NHPO has been at the forefront this year of delivering Ireland's first **RSV Immunisation Programme**, which has been successfully launched on September 1, 2024. In influencing policy makers, the NHPO also provided significant input into the review led by Professor Mary Horgan, CMO, at the request of the Minister of Health on Ireland's capability in responding to **Emergent Health Threats**.

Year Two Achievements: What we accomplished

Throughout Year Two, progress has been made in designing and delivering a nationally integrated health protection service.

Leadership and Organisational Structure

- The leadership function for the **AORP** Programme has been embedded within the Office of the NHPO, supported by all the CPHMs within the NHPO. This change has created a more agile structure for responding to incidents and outbreaks, fostering closer working relationships between the DNHP and the CPHMs in the Regional Departments of Health, and creating new opportunities for collaboration and integration at central and regional levels (**Actions 2, 3, 4, and 5**).
- The NHPO said **goodbye to Dr Greg Martin**, former National Clinical Lead on Surveillance. His replacement will take up post later in 2024/ early 2025. In the interim, governance of HPSC has come within the remit of the NHPO and the DNHP, supported by **Dr Lois O'Connor**, CPHM NHPO Lead for Clinical Surveillance. The recruitment process for a new National Clinical Lead on Surveillance has concluded with offer made subject to usual clearance procedures. The new post-holder is expected to be in place by early 2025 (**Action 4**).
- **Dr Keith Ian Quintyne** has been appointed as the new CPHM leading work on Quality Improvement, Evidence-Based Medicine, and Research (**Actions 1, 3, and 4**).
- A new **CPHM** post has been created to **lead pandemic planning, respiratory infections, and TB**. The reorganisation of roles at the national level has enabled the creation of this new role to meet the challenges of future pandemics, effectively plan for winter surges of respiratory infections, and lead the delivery of the new **national TB Strategy**. Recruitment to this role has taken place in July 2024 with offer made subject to usual clearance procedures with new post-holder expected to start in post in early 2025 (**Actions 1, 3, and 4**).
- A new **CPHM** has been appointed to support the work of the **Health Security Programme** and is due to take up post later in 2024 (**Actions 1 and 4**).
- **Training and professional development** of central and regional staff have been and continues to be supported with a focus on specialist training in public health medicine (**Actions 3 and 5**).
- The new NHPO **organogram** now includes all CPHMs, including NIO consultants (**Actions 4 and 6**).
- **The ICT Team**, previously managed through HPSC governance, are now managed directly by the DNHP. Aligning this critically important service to the NHPO puts improvement information technology and digital enablement at the heart of our change programme, supporting more collaborative, agile, responsive and effective working and enhancing our resilience, including preventing and preparing for cyber security threats (**Actions 1, 4, and 5**).
- The NHPO and its key leaders and subject matter experts (SMEs) have been at the forefront of work to procure new information infrastructure to support health protection functionality into the next generation, including the new **Outbreak & Incident Control Management & Surveillance System (OCIMSS)** and the new **National Immunisation Intelligence Service (NIIS)**, major infrastructure programmes building capabilities in national health protection assets (**Actions 2 and 3**).
- Through membership of the **Public Health Senior Leadership Team (SLT)** led by Dr John Cuddihy, National Director of Public Health, the DNHP has positively contributed to the development of wider public health in Ireland, supporting the work of ADsPH and other Domain Directors to enhance our public health system at all levels. This has included reviewing public health structures and governance, in response to the **SláinteCare** reform programme which has created Regional Health Areas, to ensure we continue to evolve an integrated national health protection service as well as enable effective working between all partners in public health. The work has also included developing a robust system for out-of-hours working with central and regional multidisciplinary teams (**Actions 1, 4, and 5**).

Collaboration and Integration

- More effective collaboration between central and regional teams is being supported through the **Health Protection Operational Leadership** (HPOL) meetings. This group, chaired by the DNHP, is convened fortnightly, bringing together central and regional teams (**Actions 3, 4, and 5**).
- The weekly **Health Protection Situation Report** has been revamped and is now held every Friday morning in preparation for out-of-hours activities at both central and regional levels. This meeting has improved preparedness and response out of hours. It also provides a forum for participants to share intelligence and problem solve. Issues which require more detailed discussion can be identified here and brought to other forums e.g. HPOL, or HPAC-ID, as appropriate (**Actions 1, 4, and 5**).
- Leadership has been provided for the After-Action Review of **the rise in respiratory infections** during winter 2023/2024 as well as the response to the rise in measles cases during the first half of 2024. These reviews enable us to identify areas of good practice, challenges & issues, to inform future practice in response to similar incidents. (**Actions 1, 2, and 3**).
- The role and function of **Special Interest Groups (SIGs)** have been reviewed through a consultative process commissioned by the DNHP to ensure this group of subject matter experts is working effectively and efficiently, complementing structures already in place at national level, and making best use of available expertise especially on highly specialised areas of practice. SIGs were created to enhance national central and regional teams' capabilities in dealing with infectious and non-infectious hazards, supporting the creation of evidence-based guidance and response strategies. These SIGs cover a range of key infectious diseases and non-infectious hazards, supporting the development of evidence-based guidance on preventing and responding to incidents. A final recommendation on re-structured SIGs will be made to DNHP shortly with new structures likely to be in place from Q1 2025. This realignment aims to foster closer integration between regional and national teams, ensuring a cohesive approach to developing guidance and policy within the new **Regional Health Areas (RHA) structure**. The ongoing engagement with health protection staff from various disciplines will be critical in refining the SIG model to enhance the effectiveness of Ireland's health protection service (**Actions 1, 3, 4 and 5**).

Nationally Coordinated Incident Planning and Response

- In late 2023, work commenced on developing the **National Health Protection Incident Response Plan**, commissioned by the DNHP. This plan describes the coordinated approach to incident response under public health leadership at central and regional levels. It outlines escalation definitions, roles, and responsibilities of National Incident Management Teams (NIMT) and the National Incident Director (NID) in health protection. The National Health Protection Incident Response Plan was developed in collaboration with key informants nationally and regionally. The CPHMs in the NHPO initially drafted the Plan with editorial oversight by the DNHP with editorial oversight by the DNHP. Consultation drafts were reviewed centrally by NHPO staff and the NDPH (National Director for Public Health) and regionally by the ADsPH and MDTs. After incorporating feedback, plan was approved by the DNHP, NDPH, and ADsPH on the 21st August 2024 through the Public Health Senior Leadership Team. The plan is now in use as a key template for coordinating incidents, establishing standardised approaches, and clarifying roles and expectations for all involved in National Incident Management Teams. It has been deployed formally for the first time in response to the **mpox 2024 PHEIC** (**Actions 1, 2, 4, and 5**).
- Several NIMTs have already been activated in response to various public health threats during 2024 including incidents such as **measles, pertussis, acute hepatitis B, salmonella Hessarek, as well as mpox**. The plan will continue to be adapted as lessons are learned from these and other incidents, **including invasive Group A Streptococcus infection, multidrug-resistant shigella in gbMSM, and mpox** (previous Clade II incident in 2022) (**Actions 1, 2, and 3**).

Information Security

- The HPSC continues to develop and improve its capabilities around **Information Security and Data Protection**. Efforts are underway to convert the Information Security Management System (ISMS) to the new ISO standard ISO27001:2022 for information security, with plans to be ready for auditing and certification at the end of 2024 (**Action 1**).
- Ongoing work is being conducted to **enhance technological IT security controls**, as well as developing, reviewing, and cataloguing **Data Sharing Agreements (DSAs)** and **Data Processing Agreements (DPAs)** with stakeholders (**Actions 1 and 2**).

Success Stories

Inaugural HSE Public Health: Health Protection Conference Held in October 2023

The HSE Public Health: Health Protection Conference on the 12th October 2023 brought together senior HSE officials and expert speakers, including Dr. Andrea Ammon, Director of the ECDC, and Professor Breda Smyth, Chief Medical Officer (CMO) at the Department of Health. The conference also featured insights from Professor Susan Hopkins, Chief Medical Advisor to the UKHSA, and HSE Health Protection Clinical Leads Professor Máirín Boland, Dr. Lucy Jessop, and Dr. Greg Martin. Topics included health threat preparedness, vaccination strategies, surveillance programmes, invasive group A streptococcal infection, migrant health, and the effects of deprivation and affluence on COVID-19 outcomes. The event served as an important forum for networking and learning among national and international colleagues. The progress report for Year One of the Health Protection Strategy was also published at this event.

Dr Éamonn O'Moore, DNHP, opened the conference by discussing the progress of the five-year Strategy. He highlighted the establishment of robust mechanisms designed to deliver a dynamic and flexible response to emerging threats while enhancing the capacity of the Irish public health system. Dr Ammon stressed the importance of international collaboration and information sharing in combating viral threats and antibiotic resistance, noting that infectious diseases cross borders and that global safety is interlinked. Professor Smyth underscored the value of reflecting on lessons learned from COVID-19 to strengthen health protection and emergency preparedness, reaffirming that these remain key priorities for the Office of the CMO (**Actions 1, 2, 3, and 5**).

German Ministry of Health visit the HSE National Health Protection Office

On the 9th April 2024, representatives from the German Ministry of Health visited the HSE NHPO to exchange knowledge and best practices in the field of public health. The visiting delegation included Dr Antje Draheim, Secretary of State in the German Ministry of Health; Dr Elke Jakubowski, Assistant to German Medical Officer; and other representatives from the German Ministry of Health and the German Embassy to Ireland.



During their visit, the German representatives heard from Irish public health experts about several topics, including disease surveillance, vaccination strategies, emergency preparedness and public health reform. Among the presenters were Chief Medical Officer, Dr Breda Smyth and Chief Clinical Officer, Dr Colm Henry. Dr Oliver Morgan, Director of Pandemic and Epidemic Intelligence Systems at WHO also presented on the [Pandemic Intelligence Centre](#) at WHO. The meeting was a great opportunity to strengthen public health relations between Ireland and Germany (**Actions 1, 3, and 5**).

Developing a Fully Integrated Health Protection Winter Planning and Response for 2024-2025

The **Winter Planning and Response Forum** has been set up under the direction of the DNHP to improve winter preparedness, incorporating ongoing initiatives such as the winter vaccine campaign for COVID-19 autumn/winter boosters and seasonal flu vaccines, and RSV immunisation programme this year for the first time. This Forum brings together key partners, including the HPSC, NIO, AMRIC, Community Support Team Forum, ICGP, Regional Departments of Public Health, and the NHPO, to coordinate efforts to promote health and enhance protection to vulnerable people and settings, as well as prevent the seasonal pressure on health & care services often seen in response to increases in winter infections (viral and bacterial). The work includes development and update of guidance on infection prevention and control, outbreak management, testing protocols and treatment of common winter infections linked to outbreaks.

Insights from the **After-Action Review of the Winter Response 2023-2024**, which assessed the health protection response to increased respiratory infections last winter, are shaping preparations for the 2024-2025 winter season. Recommendations focus on building on earlier successes in training, guidance and communication, while enhancing integration across central and regional stakeholders, improving laboratory testing pathways, and updating guidance considering end-user feedback. The forum is working with ADsPH representing the regions who are collaborating on streamlining testing pathways, promoting vaccine uptake among healthcare workers, encouraging HSE staff to complete HSE and training and strengthening public health action to address health inequalities effectively (**Actions 1, 3, 4, and 5**).

Striving to End Tuberculosis: A Strategy for Ireland 2024-2030

In Ireland, the pace of decline of tuberculosis (TB) has slowed in the past five years (2018–2023), indicating that achieving **TB elimination** (an incidence of TB of less than one per million population) will require a strategic collaborative effort. This is an ambitious target, made more challenging in the environment of vulnerable groups and underserved populations, where there is increasing incidence of TB.

In March 2024, the HSE published [Striving to End Tuberculosis – A Strategy for Ireland 2024-2030, Ireland's first national TB strategy](#). This collaborative document, produced by members of the multidisciplinary National TB Advisory Committee (NTBAC) and endorsed by the HSE's Executive Management Team, outlines the priorities, objectives, actions, and enablers needed to end TB in Ireland.

To ensure the success of the TB Strategy, an **implementation plan** was developed and approved by the NTBAC in September 2024. The plan sets annual targets for actions and identifies owners for each action, thereby building accountability into the plan. The [National TB Guidelines for Ireland](#) is a phased project due to be completed by World TB Day on the 24th March 2025 (**Actions 1, 3, 4, and 5**).

Designing an Emerging Threats Function for Ireland

The COVID-19 pandemic highlighted the urgent need for a robust public health system capable of addressing future emergencies effectively. In response, on the 25th January 2022, the Minister for Health established the Public Health Review Expert Advisory Group (PHREAG) to evaluate Ireland’s pandemic response and identify ways to enhance preparedness for future public health threats. The PHREAG’s final report, which received government approval for publication on the 6th September 2023, included recommendations to bolster national preparedness, develop a dedicated health threats function, and strengthen leadership across various levels of public health.

Following these recommendations, the Government appointed Professor Mary Horgan on the 21st November 2023 to design a dedicated emerging health threats function. This new function is intended to focus specifically on managing infectious diseases, preparing for pandemics, and addressing other emerging health threats. It aims to build upon existing assets and infrastructure, integrating international best practices to enhance Ireland’s public health response capabilities.

To support this initiative, an Expert Steering Group (ESG) was established, chaired by Professor Horgan with the HSE co-leading four workstreams. The ESG, comprising both international and national experts, was tasked with overseeing the development of the emerging health threats function. Between February and May 2024, the ESG met five times to review the progress of the Expert Working Group (EWG). The EWG, made up of senior officials from various health bodies, concentrated on four key areas:



The ESG reviewed the EWG’s outputs and approved the final proposal in **July 2024**.

The report of the Emerging Health Threats Function Expert Steering Group, the Horgan Review Report, has been submitted to the Minister for Health, for consideration. But during the work, it became clear that the changes delivered through the Public Health Reform Programme generally and the work of the NHPO specifically, has addressed many of the deficiencies previously identified by the PHREAG. However, much work remains to be done to ensure that Ireland’s Health Security is assured. We look forward to being part of that journey (**Actions 1, 2, 3, 4, 5, and 6**).

Conclusions and Next Steps

Year Two of the implementation of the **HSE Health Protection Strategy 2022-2027** marked a period of noteworthy progress in strengthening Ireland's health protection infrastructure and moving us closer to the ambition of being an all-hazards integrated national health protection service. The year has also been characterised by significant levels of demand for health protection operational response to threats ranging from COVID-19, flu, RSV, measles, pertussis, Hepatitis B, mpox, Oropouche virus, to highly pathogenic avian influenza. The year has also seen significant structural changes in HSE with the creation of RHAs, which has required changes to our wider public health governance structures.

Given all those challenges, and a backdrop of constraints on expenditure and the impact of the Pay & Numbers Strategy, it is not surprising that it has been a demanding year, with individuals and teams drawing down upon personal as well as system resilience to continue to deliver a high level of service. It is important that we recognise our major asset is our people- the highly trained, dedicated professionals who deliver health protection services twenty-four hours a day, seven days a week, regionally and nationally. We need to do all we can to support our workforce, enabling them to achieve more, deliver more effectively and efficiently, and receive the resources they need to do their jobs well.

Year Two of the HSE Health Protection Strategy implementation has laid a solid groundwork for advancing public health protection in Ireland. As the Strategy moves into its **third year**, the focus will expand, including a focus on **strengthening key partnerships at national and international levels**, including collaborations with **Northern Ireland**, and the wider **United Kingdom**, and the **European Union**, and a range of other international partners through the **WHO**. A priority for 2024/2025 will be to position HSE Public Health: Health Protection on the world stage, ensuring that Ireland plays a leading role in international health protection efforts in this increasingly connected world where health threats cross borders and no one is safe until everyone is safe. Whether the threat is from climate change, infectious diseases or environmental hazards, our best hope is being part of an international collaborative effort to share intelligence, resources and people to achieve more with less.

We look forward to reporting on our further progress with our **Year Three Implementation Report in 2025**.

