Health Service Executive
Health Protection Strategy 2022-2027
Year Three Implementation Report

A Chosaint agus A Chosc
To Prevent and Protect

FSS Sláinte Poiblí: Chosaint Sláinte
HSE Public Health: Health Protection

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Abbreviations

ADON-HP	Assistant Director of Nursing, Health Protection
AFP	Acute Flaccid Paralysis
AMRIC	Antimicrobial Resistance & Infection Control, HSE
AORP	Acute Operations Response Programme within HSE Public Health: Health Protection
ARI	Acute Respiratory Infection
BCG	Bacillus Calmette-Guérin (BCG) 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	Coordinating Competent Body
CCO	Chief Clinical Officer, Health Service Executive
CCT	COVID-19 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 of the 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 with special interests in 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	Departments of Public Health
DRA	Dynamic Risk Assessment
DSA	Data Sharing Agreements
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
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 in the National Health Protection Office
HTA	Health technology assessment
HTPP	Health Threats Preparedness Programme
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
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: Health Protection
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
NSSLRL	National Salmonella, Shigella and Listeria Reference Laboratory
NTBAC	National Tuberculosis Advisory Committee
NVRL	National Virus Reference Laboratory
NWIHP	National Women and Infants Health Programme, HSE
NWSP	National Wastewater Surveillance Programme

OCIMS	Outbreak, Case, Incident Management and Surveillance Programme
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
RDPH	Regional Director of Public Health
RGDU	Research and Guideline Development Unit, NHPO

RHA	Regional Health Areas
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	Specialist 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: Delivering Health Protection in Partnership

"Ní neart go cur le chéile"

On behalf of **HSE Public Health: Health Protection**, I am pleased to present the implementation report of the HSE Health Protection Strategy 2022-2027 covering the period from **October 2024 to September 2025**. Public Health is a collaborative endeavour, and this report celebrates the achievements of the past year delivered in partnership with a wide range of stakeholders, within and across HSE (centrally and regionally), with partner agencies and organisations within Ireland, and with international partners. This report is being launched just following the **First All-Island Health Protection and Health Equity Conference**, a landmark event jointly organized **by HSE Public Health: Health Protection** and the **HSC Public Health Agency**, in a collaborative effort to protect the health of our shared populations, recognising the close social, economic and cultural links between people living on the island of Ireland. Public health threats do not recognise borders but effective collaboration by neighbouring jurisdictions can enhance the protection of all. On the theme of '*A Problem Shared….*', this event explores health protection problems common to both sides of the Irish Border, including health inequities, and recognises that solutions to some can be found in learning from each other, adopting common evidence-based approaches where that makes sense to do so, and collaborating in response where there is clear mutual benefit and a need to do so. This builds on long-established close working relationships between professionals and organisations and provides an opportunity to amplify health protection interventions and reduce harms by collective efforts on shared threats. I am very thankful to our friends and colleagues in Northern Ireland for hosting this first event in the great city of Belfast and for providing a warm welcome to all delegates as well as a great scientific programme with inspiring presentations from health leaders across the island.

This report of our activities in delivery of commitments made in our National Health Protection Strategy is peppered throughout with examples of **partnership work**. This collaborative approach is both a strength and a necessity for health protection and health security work. Activities such as **surveillance** require a myriad of partners working with us in primary care, in public health, in laboratories and across different statutory agencies and settings, to provide us with reports of suspected or known cases or outbreaks of infectious diseases or other hazards. While such activities are enabled

and supported by technology, currently our **CIDR** (Computerised Infectious Disease Reporting) system and soon to be our new **OCIMS** (Outbreak, Case, Incident Management & Surveillance Programme), there is still a human factor which means relevant parties need to understand their roles and responsibilities in supporting our critically important surveillance activities. Any **response to a health protection incident** usually involves many different parties, at national and regional level, across a range of statutory and regulatory agencies (depending on the nature of the incident) and even with international partners. Any **programme to protect health** also requires active engagement with a broad range of stakeholders and partners, including representatives of populations or settings which are in scope for any vaccination, immunisation, active case-finding or screening programme. Without the trust, confidence and engagement by the wider population, we cannot effectively deliver any health protection intervention. **That is why the most important partner in all our work is the people we serve** - we work to protect the health of the population of everyone in Ireland.

Through this work nationally we also add to **global health security**. Ireland is an important partner for many other countries, through direct bilateral relations or through multilateral groups and organisations, such the EU, WHO, ECDC and the UN. Given the two jurisdictions on the island of Ireland, we also have a close working relationship with the United Kingdom, both north/south and east/west, to mutual benefit. And as a Member State of the European Union, we have an important role in protecting Europe's health security and levering the collective resources of the EU specifically to the benefit of the people of Ireland, including access to medical countermeasures and vaccines for any future pandemic threat.

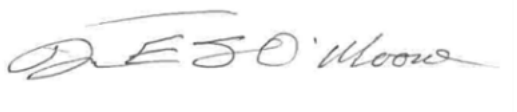
The increasing awareness of the need for enhanced protection from a range of zoonotic, environmental and climatic threats has driven our closer cooperation with a range of inter-disciplinary partners to deliver a **One Health** approach which explicitly recognises the interconnectedness of human health, animal health and environmental health. This past year we have continued to develop our partnership work in this space through the **One Health Oversight Committee**, co-chaired by the Chief Medical and Chief Veterinary Officers (CMO, CVO) including specific work on influenza of zoonotic origin and other zoonoses as well as environment and health, and ongoing work with HSE **Antimicrobial Resistance & Infection Control** (AMRIC) on antimicrobial resistance and stewardship.

We have continued to expand the range of partnerships for health protection over the past year, including work with the **Irish Prison Service** on e-health, shared governance models to deliver healthcare, and specific work on viral hepatitis infection in prisons in partnership with ECDC and the European Drugs Agency. During the coming year we will

develop further relationships with 'non-traditional' public health partners, including the **Irish Defence Forces** (for emergency planning and response).

This report shows time and again the value of the work of the National Health Protection Office, the Health Protection Surveillance Centre, the National Immunisation Office, and the Regional Public Health teams who all work together to deliver **an integrated all-hazards health protection service**. This report **spotlights** particularly interesting, innovative or impactful work, undertaken by our health protection teams, centrally and regionally, providing testimony to the depth and breadth of skills and talent within Ireland. The report also represents the enduring passion which drives the public health workforce generally and the health protection sector particularly to protect and improve health and to tackle health inequalities.

This year also saw the publication of **HSE's Public Health Strategy** which aims for better health and wellbeing for all people in Ireland. This new strategy describes the values informing the work of Public Health in HSE. In addition to the HSE cores values of care, compassion, trust and learning, Public Health has adopted two additional values: Equity as core foundation and Striving for Excellence in all that we do. This report from the Health Protection Domain within HSE Public Health clearly demonstrates how we live up to those values. But it also shows that what we achieve, we do together with others, to the benefit of all. We embody the sentiment expressed in the Irish phrase so often quoted during the dark days of the COVID-19 pandemic response: **"Ní neart go cur le chéile"**, which talks to strength through partnership. In public health and emergency planning contexts, it underscores the value of **inter-agency cooperation, community engagement,** and **shared responsibility** in achieving effective outcomes. We look forward to working with a wide range of partners during the coming year to build on the successes of this past year and secure a better and safer future for all our people.



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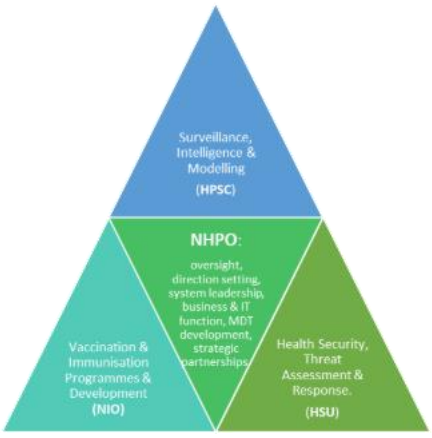
About Us

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) is led by the **Director of National Health Protection (DNHP)** and supported by **a multidisciplinary team** including National Clinical Leads for Surveillance and Immunisation, Consultants in Public Health Medicine (CPHMs), nurses, scientists, epidemiologists, programme and project managers and administrators as well as Specialist Registrars attached for higher specialist training. The NHPO works closely with Regional Directors of Public Health and with regional CPHMs/SPHMs with special interests 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 and includes the **Health Security Unit (HSU)** within its function.

The Health Protection Surveillance Centre (HPSC)

HPSC is Ireland's specialist service dedicated to the surveillance of communicable diseases. As part of the HSE, HPSC collaborates with health service providers and international organisations to provide essential information for controlling and preventing infectious diseases. 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 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.

Our Strategic Health Protection Objectives 2022-2027:

In summary, the **ten strategic objectives** of the current Five-Year Strategy are to:

1.Improve **surveillance and analysis** of health threats.

2.**Standardize public health methods** for response to health protection threats.

3.Develop capability for **environmental non-infectious hazards**.

4.Support prevention and response **to major incidents**

5.Promote **vaccination to prevent diseases**.

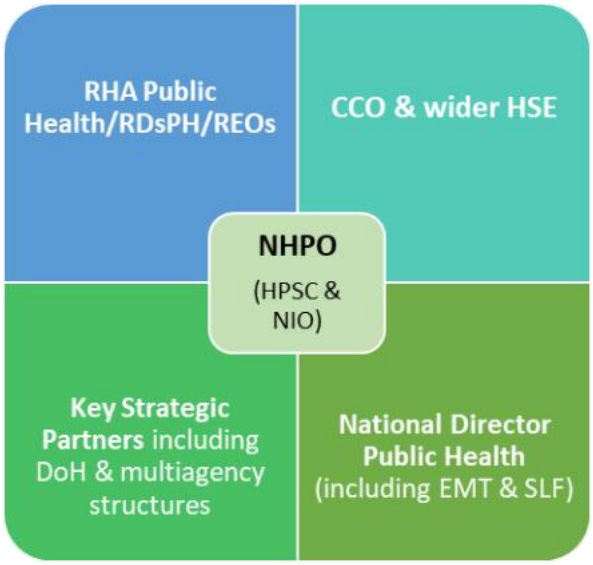
6.Use **evidence** to address **health inequities**.

7.Strengthen understanding of **global health impacts** on Ireland.

8.Create a **health protection research strategy** with collaborations.

9.Enhance training and development of the **multidisciplinary health protection workforce**.

10. Deliver a **nationally integrated health protection service** rooted in strong governance.



Health Protection functions are delivered across HSE, working within central and Regional teams, not only with the other domains of Public Health (through the Office of the National Director of Public Health) but with wider HSE structures and functions (through the Office of the Chief Clinical Officer), as well as external partners including policy makers, especially the Department of Health, and other multi-agency structures and collaborations. This collaboration at national level is reflected also internationally (see Chapter on **Global Health**)

Figure 1: Relationships between NHPO and wider HSE structures including Regional Health Areas (RHAs), Regional Directors of Public Health (RDsPH), Regional Executive Officers (REOs), Chief Clinical Officer (CCO), National Director of Public Health and their Executive Management Team (EMT) and Senior Leadership Forum, as well as policy makers in the Department of Health (DoH).

Objective One: Surveillance

Strengthen surveillance and epidemiological analysis of health protection threats

The **HSE-Health Protection Surveillance Centre (HPSC)** is Ireland's specialist agency for the surveillance of communicable diseases and other health hazards, working within the governance of the **National Health Protection Office**.

Our Priorities

The National Health Protection Strategy outlines five primary actions for surveillance and epidemiological functions for HPSC, which are summarised below:

- To identify surveillance needs for an **all-hazards** health protection approach.
- To increase surveillance **capacity and capability** to meet our needs.
- To **update or replace information systems** to ensure they meet data requirements and align with HSE client systems.
- To **enhance collaboration** among national and regional public health teams to improve surveillance methods and capacity.
- To p**rovide timely surveillance data and analysis** to support public health **decision-making** and **prioritization.**

HPSC delivers a health protection surveillance programme that supports public health action and meets obligations under infectious disease laws, international agreements, and HSE policy. To maintain efficiency and sustainability amid limited resources, the programme is being continuously redesigned to align with health protection priorities in the Health Protection Strategy. And this work has continued during the past year, including progressing development and deployment of the new **Outbreak, Case Incident, Management and Surveillance (OCIMS) Programme.**

Year Three Achievements: What we accomplished

HPSC strengthened surveillance and epidemiological analysis of health protection threats through various key actions and initiatives including:

OCIMS

- Working with the Office of the National Director of Public Health (NDPH) and HSE Technology and Transformation, the HPSC OCIMS team completed Requirement and Technical Specification documents for OCIMS phase 1 and is now developing and configuring the system (Actions 2, 3, 4, and 5).
- The HPSC OCIMS team actively supports project working groups for OCIMS design and implementation, focusing on clinical operations, integration, and security to align with programme strategy. (Actions 2, 3, 4, and 5).
- Working with UKHSA colleagues using the same product has enabled valuable knowledge sharing, improving system effectiveness and project results.

Information System Modernisation

- A data pipeline now integrates multiple sources into one file, streamlining analysis for modelling, reports, and dashboards.
- The 2024 CIDR stabilisation and modernisation project was completed, with teams continuing to manage ongoing projects while prioritising OCIMS workstreams.
- HPSC's Robotic Process Automation (RPA) solution processed nearly 114,000 transactions in 2024, saving about 8,000 staff hours and over €290,000 across the year.

Surveillance and Reporting Improvement

During the past year, HPSC has led out on innovative improvements in surveillance and reporting, working in partnership with others internally and externally. Key accomplishments include:

- **Power BI RPA dashboards** now enable **real-time public health surveillance,** supporting National Incident Management Teams in 2024/25 responding to outbreaks of measles and pertussis.

The **National Notifiable Disease Hub Project** was **a finalist in major Irish Health and ESRI awards**; more hubs, such as one for outbreaks, are in development.

HPSC is collaborating with the **Gay Men's Health Service (GMHS**) and the **Department of Public Health HSE Dublin and Midlands** to extract and analyse Sexually Transmitted Infection (STI) clinic data for a proof-of-concept electronic reporting project.

- A **new integrated respiratory virus bulletin** was launched for winter 2024/2025, providing weekly interactive updates on COVID-19, influenza, RSV, and other respiratory viruses across Ireland.
- Northern Ireland has also introduced a similar report, ensuring **comprehensive coverage** for the whole island's population and health services.
- **Vaccine uptake reporting for influenza and COVID-19** has been expanded to align with updated NIAC recommendations and KPI requirements.
- **Med-Lis Laboratory Information Management System** was successfully **integrated into CIDR** after **collaboration** between public health and hospital teams.
- **SARI surveillance** grew from one to **three sentinel hospitals,** raising population coverage from 6.1% to 11.2%, with **paediatric data available for the first time.** Another site will be **added from October 2025.**
- HPSC is building **capacity in biostatistics and modelling**, notably developing a POMP-based model for forecasting influenza-A hospitalisations in partnership with university departments, aiding winter health system planning.

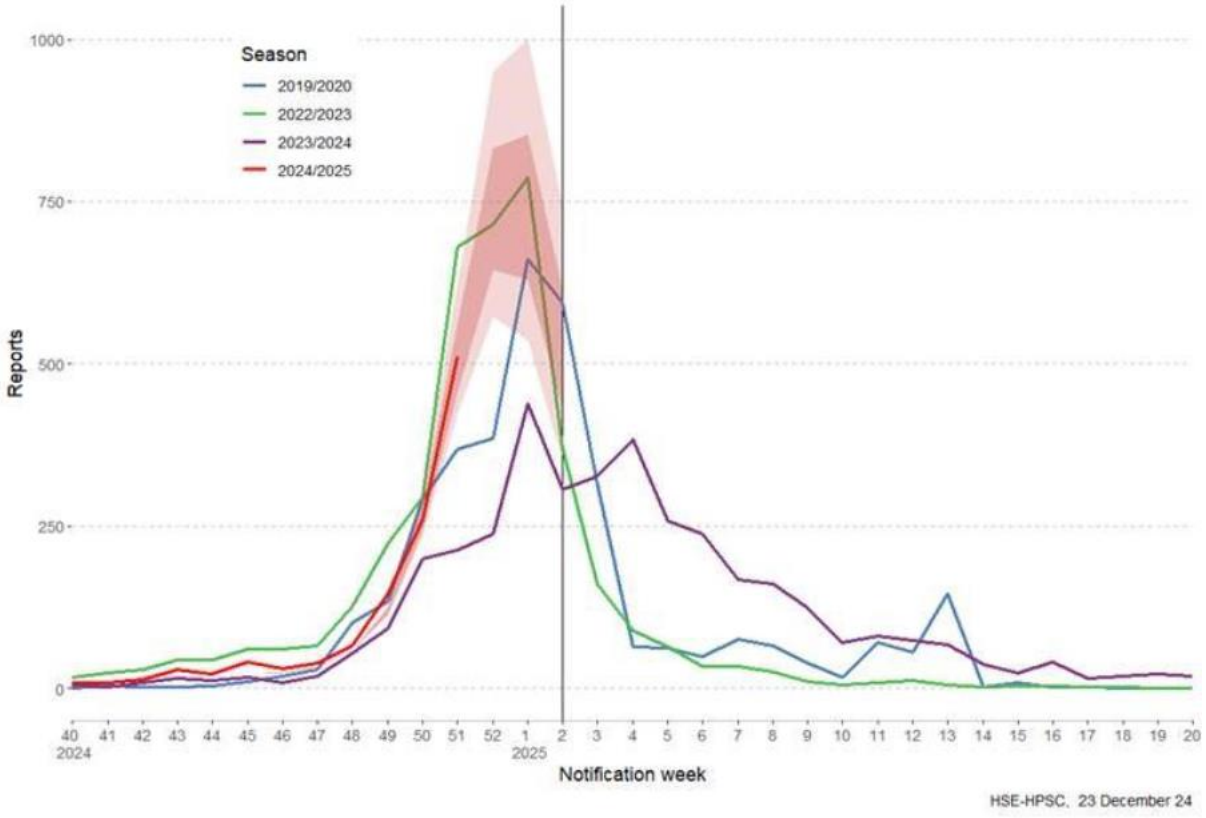


Figure 2: Example of short-term forecast for influenza A hospitalised cases during the 2024/2025 winter season, mathematical model developed using the POMP (partially observed Markov processes) approach

Working in Partnership

- New procedures have been implemented in collaboration with the National Salmonella, Shigella and Listeria Reference Laboratory (NSSLRL) to facilitate the sharing of Antimicrobial Resistance (AMR) data for Salmonella species (including S. typhi and S. paratyphi) and Shigella isolates. Additional genotyping and typing data are expected to be available in 2025.
- The RPA Team conducted a Knowledge Transfer Session with Regional Public Health colleagues, including RPA users, senior epidemiologists, and surveillance staff.
- In support of the **RSV nirsevimab pathfinder immunisation programme**, HPSC developed an **online survey tool** to monitor nirsevimab uptake on a weekly basis during the programme and to estimate its epidemiological impact.

Good Governance and Risk Mitigation

In the past year, HPSC introduced new processes to enhance data protection and management:

- A Robotic Process Automation (**RPA) Data Protection Impact Assessment** was approved by the HSE Data Protection Officer, supporting governance efforts.
- A **Data Quality Framework** (aligned with ISO8000-1) was created for training staff and monitoring data quality.
- A **Data and File Retention Policy** was developed with Public Health and HPSC. HSE IIS implemented an automated solution to remove files outside retention periods, including records from Robotic Process Automation for COVID-19, influenza, and RSV.

Research and Presentations

- **HPSC's Robotic Process Automation** (RPA) team presented on the success of the solution at the **Healthcare Ergonomics & Patient Safety conference**, a globally recognised event which focuses on advancing healthcare safety through Human Factors Ergonomics. This opportunity enhanced the visibility of the HPSC RPA team as leaders in innovation while facilitating knowledge sharing and stakeholder engagement (Action 5).

Spotlight on European partnership work by HPSC

- **Sexual Health**: In 2024, the HIV-STI team (NHPO and HPSC) joined with nine other countries in an **ECDC project** to utilise **Electronic Health Records (EHR)** for improving surveillance of STIs (EHR-STI). The aim of the project is to provide near to real time data on mode of transmission and other behavioural indicators for gonorrhoea, to identify population groups at risk and in need of targeted prevention measures, and to enable international reporting of better-quality surveillance data to ECDC and WHO. The HIV-STI team are working collaboratively with colleagues from the Information Systems team in HPSC, the Gay Men's Health Service (GMHS) and the Department of Public Health HSE Dublin and Midlands. Work progressed in 2024 in defining a dataset and extracting laboratory, demographic and behavioural data from the STI clinic system. It is a proof-of-concept project which may facilitate reporting

electronically from other STI clinics in Ireland. It will also inform the design and development of the new comprehensive national **Outbreak, Case, Incident Management and Surveillance (OCIMS) Programme,** which is being implemented in 2025-2026.

- **Respiratory Viruses**: HPSC was invited to contribute to the development of an RSV-focused RespiCompass round, following a presentation detailing our experience and expertise with ECDC modelling, which led to this request for assistance.

Spotlight on North/South Partnership Work on island of Ireland

- A **North-South GZV surveillance partnership** aims to improve understanding of epidemiological issues in each jurisdiction, exchange information regarding data collection methodologies, and support alignment in surveillance activities where applicable.
- **DAFM led EU funded north-south consortium One Health – ALL Ireland for European Surveillance (OH-ALLIES) project:** HPSC participates with a member on the steering group of this three-year project, which is intended to facilitate capacity building for animal and environmental surveillance systems related to selected emerging and re-emerging pathogens relevant to public health on the island of Ireland.
- **Oropharyngeal Gonorrhoea Infections among Young Heterosexual Users of Online Sexual Health Services across the Island of Ireland:** This study examined oropharyngeal gonorrhoea (OPNG) cases among young heterosexuals across Ireland and was conducted in collaboration with the HSE Sexual Health Programme, SH:24, and PHA NI. Findings from the all-island OPNG study were published in BMJ STI as part of the UK Field Epidemiology Training Programme (UKFETP).

Spotlight on National Partnership Working

- **Paediatric Measles Seroprevalence Study:** Due to a rise in measles cases in 2024, the **National Serosurveillance Programme**, in collaboration with the ECDC public health microbiology fellowship programme (EUPHEM), the National Virus Reference Laboratory, and four Laboratory Surveillance Network hospital sites, collected data on the seroprevalence of measles antibodies in children aged 3-17 years. This surveillance data was used by the National Incident Management Team (NIMT) and Department of Health for national outbreak

response in 2024. The study results are expected to be published in an international peer-reviewed journal for dissemination to European and global networks.

- **Automated clinical data extractions from GP systems:** In 2024/2025, ongoing improvements by the Sentinel GP Surveillance Programme have enabled near-total weekly clinical return rates for sentinel GP ARI/ILI consultations. This collaboration between HPSC and the **Irish College of General Practitioners** (ICGP) sets the stage for future innovative surveillance methods.
- **Managing infectious disease notifications across Dublin:** After the East Clearing House Team stood down, HPSC and regional public health teams from Dublin and surrounding areas collaborated on a new strategy to handle notifications efficiently and ensure surveillance continuity. They overcame challenges such as managing laboratory data for Dublin addresses split between three Regional Health Authorities, using existing resources with HPSC support. The process involved thorough options appraisal and open dialogue, highlighting the need for strong national-regional communication and cooperation during organisational changes.

Spotlight on HPSC delivering excellence in professional training

- In April 2024, HPSC served as a training location for **EPIET** by hosting the EPIET RAS module, which brought together the latest group of EPIET fellows from various European countries in Dublin.
- HPSC supported collaboration with **learning centres in Ireland and European partners** by organizing placements for undergraduate students from **University College Cork** and **MedEPIET.**
- **In-house skills development in R** was addressed with courses on applied epidemiology and multivariable analyses using R. This training is reinforced through peer groups, including a monthly R user group.

Objective Two: Infectious Disease

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

Ensuring standardised approaches to Vaccine-Preventable Diseases (VPDs):

Vaccine-preventable diseases (VPDs) are infections that can be avoided through vaccination or immunisation. Historically, these diseases caused significant illness and death in Ireland. Vaccination is the most effective public health measure after clean water for reducing infectious disease burden. Recently, vaccine coverage in Ireland has declined, particularly due to COVID-19 pandemic, mirroring trends across Western Europe. To address potential resurgences, the NHPO and HPSC are developing new strategies at both central and regional levels.

What we accomplished in the past 12 months

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

- **Information System Modernisation:**
  - **A measles Power BI dashboard** was developed to support review and presentation of epidemiological data in response to increase measles case numbers since 2024. The dashboard has multiple uses including for presentation at the **Measles National Incident Management Team (NIMT)** meetings.
  - **A pertussis Power BI dashboard** was developed to support review and presentation of epidemiological data in response to increase pertussis case numbers since 2024. The dashboard has multiple uses including for presentation at the **Pertussis National Incident Management Team (NIMT)** meetings.

- The design of both dashboards has been informed by close collaborative working with NIMT chairs and the wider Health Protection Service, centrally and Regionally.
- The team are responsible for the weekly update of the National Notifiable Disease Hub.

- **Surveillance and Reporting Improvement:** In 2024, two national **Incident Management Teams** were established in response to increased cases of **measles and pertussis**. The VPD team collaborated with the chairs of both NIMTs and managed the epidemiology aspects for both meetings, providing current information in a format suitable for decision making. This involved integrating data from various surveillance sources to offer a summary of the diseases' epidemiology. Surveillance activities for the measles NIMT included coordination with:
  - Regional teams on developing a system for contact tracing information
  - NIO, HSE Access and Integration, and HSE Enhanced Community Care to supply data on the MMR vaccination catch up campaign
  - The HPSC SeroEpidemiology team to incorporate population level serosurveillance information (covering historical and recent, adult and paediatric data)
  - Collaboration with OCST colleagues to include international measles surveillance data.
- **Role of modelling data in the measles response**: To assess the potential effects of the measles-mumps-rubella (MMR) vaccination Catch-Up Campaign, the **HPSC Modelling Group** evaluated the likely impact of measles transmission based on current MMR vaccine coverage and supplementary data. The team utilised agent-based models incorporating regional estimates of population immunity, travel patterns, societal networks (including schools, families, and workplaces), and disease transmission dynamics. Multiple scenarios were developed to evaluate the risk of significant outbreaks and to determine the effects of additional vaccination efforts.
- **Vaccination Uptake:** The VPD team's ongoing reporting on **seasonal influenza and COVID-19 vaccine uptake** has been expanded to incorporate the most recent recommendations from the National Advisory Immunisation Committee (NIAC) and updated key performance indicator (KPI) requirements, responding to the evolving needs of HPSC's stakeholders. In addition to weekly summaries on vaccine uptake for seasonal influenza and COVID-19, the reports now include

targeted data on specific populations such as Healthcare Workers (HCWs) and residents of Long-Term Care Facilities (LTCFs). In partnership with the National Integrated Immunisation System (NIIS), new vaccination-related indicators will be introduced in both general and population-specific reporting for the upcoming 2025-2026 winter campaign.

- Preparations for weekly seasonal influenza vaccination reporting to have it produced using the software R, are at an advanced stage with the plan to replicate that for the weekly COVID-19 vaccination reporting too.

Working in Partnership

- The VPD team collaborates closely with key national and regional partners and stakeholders, including the **National Immunisation Office (NIO), National Health Protection Office, National Immunisation Advisory Committee (NIAC), Regional Departments of Public Health, Health Products Regulatory Authority (HPRA)**, and relevant **laboratories**. This collaboration ensures the timely delivery of epidemiological and vaccine uptake data to inform public health decision-makers. Notably, over the past year, the VPD team has contributed significantly to the Measles and Pertussis Guideline Groups, supporting the respective National IMTs. The team provided epidemiological data for the Measles and Pertussis Guidelines and actively participated as members of the **guideline development groups** (GDGs). Engagement in these GDGs demonstrates how surveillance and epidemiological data are utilised to guide practice and are integrated within the broader health protection framework.

Developing the Evidence-base for Action: Research and Presentations (VPD)

- **Invasive pneumococcal disease scientific publications:**

  - Global impact of ten-valent and 13-valent pneumococcal conjugate vaccines on invasive pneumococcal disease in all ages (the PSERENADE project): a global surveillance analysis. **Lancet Infect Dis**. 2025 Apr;25(4):445-456. doi: 10.1016/S1473-3099(24)00588-7. Epub 2024 Dec 17. https://pubmed.ncbi.nlm.nih.gov/39706204/

  - Global impact of 10- and 13-valent pneumococcal conjugate vaccines on pneumococcal meningitis in all ages: The PSERENADE project. **J Infect.** 2025 Mar;90(3):106426.doi: 10.1016/j.jinf.2025.106426. Epub 2025 Jan 27. https://pubmed.ncbi.nlm.nih.gov/39864526/

  - Serotype distribution of remaining invasive pneumococcal disease after extensive use of ten-valent and 13-valent pneumococcal conjugate vaccines

(the PSERENADE project): a global surveillance analysis. **Lancet Infect Dis**. 2025 Apr;25(4):445-456. doi: 10.1016/S1473-3099(24)00588-7. Epub 2024 Dec 17. https://pubmed.ncbi.nlm.nih.gov/39706205/

- **Hepatitis unknown aetiology scientific paper (IMT was held in 2021-23):**
  - Investigation of an outbreak of novel hepatitis of unknown aetiology in children and adolescents, Ireland, 2021 to 2023. **Euro Surveill**. 2025 Apr;30(14):2400536.doi: 10.2807/1560-7917.ES.2025.30.14.2400536.https://pubmed.ncbi.nlm.nih.gov/40211974/

Spotlight on Contact Tracing Measles Outbreaks:

Development of a measles contact tracing database: Measles is a highly infectious viral disease. Effective response to cases and outbreaks involves identifying individuals who may have been exposed (referred to as 'contacts'), documenting their connections to confirmed or probable cases, and recording any associations in terms of person, place, or time. Collecting and monitoring this data allows public health teams to manage transmission networks and reduce the likelihood of ongoing community spread. The creation of a national measles contact tracing database (MCTD) was a joint project between Regional and National Health Protection. An Excel tool was designed to support regional contact tracing activities and reporting at both Regional and National levels. Establishing suitable governance and support structures with regional teams and HPSC colleagues contributed to the implementation process.

Spotlight on supporting reporting of Ireland's work on VPDs internationally

- **WHO Report on VPDs:** The team coordinated the completion and submission of the annual WHO Joint Reporting Form on Immunisation and Vaccine Preventable Diseases (eJRF), incorporating inputs from colleagues in HPSC, NIO, and NHPO.
- **WHO Report on Polio Eradication Committee:** The team coordinated the completion and submission of the **WHO Annual Progress Report on Polio Eradication Activities** for 2024. The meeting of the **National Polio Expert Committee in Ireland** took place in May 2025 and addressed the status of Acute Flaccid Paralysis (AFP) surveillance in the country. This committee is multidisciplinary, chaired by the NDHP, and includes stakeholders and experts from outside Health Protection.

- **WHO Measles and Rubella Elimination Annual Status Report for Ireland:** The team coordinated the completion and submission of the WHO Annual Status Report. The work involves contributions from across Health Protection and is a regular part of the VPD calendar.

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

Environment and Health Programme

In our Health Protection Strategy, as part of our commitment to enhance protection from hazards related to the environmental harms we aim to:

- Define health protection roles for environment and health together with stakeholders.
- Broaden environmental hazard surveillance.
- Prepare plans for climate-related health hazards.
- Strengthen advocacy in environmental health.
- Work with agencies like the Environmental Protection Agency (EPA) on public health submissions regarding environmental risks.
- Lower carbon emissions within HSE health protection operations and services.

In **Year Three**, the action plan from our Review of Environment and Health focussed on addressing key priority hazards including:

- Air pollution
- Environmental noise
- Radon gas
- Unsafe and insecure drinking water supplies
- Unsafe bathing water
- Climate Change risks of direct, indirect and cascading adverse impacts on health

The **timeline for delivery on the Priorities for Action** in the Review of Environment and Health is as follows:

PRIORITIES	ACTIONS	TIMELINE FOR DELIVERY
An Environment and Health Programme implementation strategy aligned to the Health Protection Strategy 2022-2027, taking into account the changing HSE structures and governance	Develop evidence-informed workstreams for each health priority issue, addressing all phases of risk management (prevention, preparedness, response, recovery)	2025 In Progress
Integrate quality improvement and performance measurement throughout implementation plan	Formalise and implement a monitoring and evaluation framework aligned to agreed performance measures	2025
Increase Environment and Health capacity by expanding MDT membership	Develop appropriate MDT guidance, training and resource repositories to enhance MDT capacity, capability and engagement	2026 In Progress
A comprehensive Environment and Health Surveillance system to improve clinical management and provide evidence to support Health in All Policies	Develop best-practice Environment and Health Surveillance in anticipation of a central OCIMS	2027 In Progress
An Environment and Health research strategy that leverages research in action to improve population outcomes while informing research funding priorities	Develop research strategy that addresses most urgent Environment and Health information gaps, aligned with health priorities identified, and utilising internal and external stakeholder resources	2027
Investigate the use of Public Health Legislation as it relates to Environment and Health, and conversely, environmental legislation as it relates to Public Health	Conduct a review of the use of Public Health and relevant environmental legislation as it relates to Environment and Health	2026

Year Three Achievements: What we accomplished

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

Collaboration with national and regional stakeholders is being conducted through the restructured **Environment and Health Special Interest Group (E&HSIG),** whose members represent various relevant disciplines. The group's workplan is in development.

As part of this initiative, **hazard assessment overviews** are being prepared to:

- Provide concise summaries of each Environment and Health Programme workstream to support multidisciplinary education, development, and programme management
- Highlight the use of the **source-pathway-receptor model** in public health risk assessment
- Outline Public Health interventions that can affect risk pathways
- Identify areas where Public Health measures may need further attention and development
- Function as a tool for prioritising Public Health actions

Guidance documents for environmental source investigations related to notifiable infectious diseases are being developed collaboratively with the HSE National Drinking Water Group and the E&H SIG. These documents will be distributed to relevant stakeholders according to RGDU methodology as applicable.

Environmental hazards often originate outside the health sector. Collaborating with various government departments and agencies enables formal or informal **Public Health Risk Assessment** (PHRA) and provides tailored public health advice aimed at preventing the release or exposure to priority hazards. Collaborations include participation in:

- Environmental Protection Agency (EPA) Health Advisory Committee
- National Adaptation Steering Committee chaired by the Department of Climate, Energy and the Environment (DCEE)
- Department of Housing, Local Government and Heritage (DHLGH)-led steering groups, expert groups and sub-groups relevant to addressing health risks from Drinking Water and Urban Waste-Water Treatment
- EPA, DCEE and DHLGH Radon steering and working groups.

Action 2: Enhance surveillance of environmental hazards.

The NHPO-HPSC established a **National Environmental Incident Database** in Year Three, with data collection beginning in Q2 2025. This project involved cooperation among HPSC epidemiologists, Regional Departments of Public Health—both Consultant and Surveillance staff—as well as national CPHM Environment & Health representatives. National reporting on environmental incidents is scheduled to start in **Q3-Q4 2025**, with the collected data intended to support prioritisation, policy development, and workforce planning. This update in surveillance also supports the ongoing development of the Environment and Health module within the **Outbreak, Case, Incident Management and Surveillance (OCIMS) Programme.**

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

As chair of the **Adaptation and Resilience Working Group** for the **HSE Climate Action Strategy**, CPHM Environment & Health led an evaluation of the first **Health Sectoral Adaptation Plan (HSAP) 2019-2024** to guide the development of the next HSAP (2025-2030). The Department of Health identified barriers to adaptation, such as limited resources, capacity constraints, lack of SMART goals, and insufficient actionable information. Collaboration continues with leaders in adaptation and resilience, contributing to:

- The Climate Change Advisory Council's 2024 Annual Review on Adaptation, highlighting resource protection and impact measurement
- Ireland's first National Climate Change Risk Assessment, published by the EPA in 2025, focusing on sector-wide cascading risks
- The National Adaptation Steering Committee's National Adaptation Framework and Climate Change Adaptation Guidelines
- Various draft adaptation plans from non-health sectors.

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

EU legislation forms the primary framework for environmental health protection, addressing areas such as air pollution, drinking water quality, bathing water standards, and the control of major accident hazards involving dangerous substances. The NHPO Consultant in Public Health Medicine (CPHM) for Environment & Health, Dr Ina Kelly, serving as Rapporteur for Climate Change and the Environment on behalf of the Standing Committee for European Doctors (CPME.eu), contributed medical expertise to the following initiatives:

- The EU Health Air Coalition campaign advocating for improved air quality, including participation in an event at the European Parliament in January 2025;
- Joint CPME submissions with partner organisations to the EU in support of cleaner air across Europe.

Furthermore, recognising that many health hazards originate from commercial activities, Dr. Kelly authored and championed the adoption of a new CPME policy on commercial determinants of health.

Action 5: Collaborate with key stakeholders to support public health advocacy submissions to government departments on environmental threats to health.

An evaluation conducted of the Health Protection input to and impact from submissions on planning and licensing is identifying key areas for potential improvement within the current system, as well as outlining actions required to enhance health protection and outcomes. The evaluation involved collaboration with HSE Regional Departments of Public Health, HSE Health Improvement, and contributions from HSE National Environmental Health Service, EPA, Office of the Planning Regulator, and the **Department of Housing, Local Government and Heritage** regarding relevant issues, risks, and possible solutions.

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

Working with the HSE Climate Action Unit and participating in working groups for Greener Models of Healthcare and Green Spaces has helped prioritise illness prevention and therapeutic, as well as biodiversity, benefits in green space planning. The next step is to collaborate with HSE Green Teams to further Health Protection's zero-carbon initiative.

Objective Four: All Hazards Preparedness and Response

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

During the past year, we reached an important milestone in public health and indeed in the life of the nation, with the **five-year anniversary of the first COVID-19 pandemic lockdown** which was implemented on March 27th, 2020. The recent anniversary was a reason to reflect on that experience for many individuals and families, especially those bereaved because of COVID-19 as well as the many people impacted then and since, including for some debilitating Long COVID illness, mental and physical health changes, and disruptions to education which continue to echo through the lives of children and young people now.

Preparing for future pandemics and other threats motivated the former Health Minister to commission an **Emerging Health Threats Function Expert Steering Group** (ESG), chaired by the now acting Chief Medical Officer, Prof. Mary Horgan and which included experts from the National Health Protection Office, HPSC and NIO. The report developed by this group published in **October 2024**[1] contains recommendations to strengthen Ireland's preparedness for public health crises, ranging from pandemics to the effects of the climate emergency:

- establishing a new **Health Security Emergency Response Service (HSERS)** to ensure HSE Public Health has the capacity and capability to rapidly deliver mass testing, contact tracing and vaccination in response to public health incidents and emergencies
- utilising the **National Emergency Co-ordination Group (NECG) structure** to facilitate a coordinated **whole-of-government response** to future national health emergencies including pandemics
- establishing an **expert advisory group** to provide scientific and technical advice to support government decision making during health emergencies
- **enhance surveillance capabilities** to enable all-hazards surveillance and a strengthening of the **'One Health'** approach to emerging health threats

- establish an **Evidence Synthesis Hub** and rapid activation mechanism for emerging health threats
- **enable and support Ireland's participation in multinational studies and adaptive trials** to facilitate the development and deployment of medical countermeasures
- a recommendation that a **further enhancement of the existing health protection function represents the optimal model for Ireland**, ensuring that the institutional knowledge and experience within the current health protection structures can be retained and built upon

While not all of the recommendations of this report have been fully implemented at this time, there has been significant focus in HSE and with our partners on developing enhanced capabilities and building capacity in health protection services, nationally and regionally, to ensure we are 'battle ready' for any future threat. This includes the development and delivery of **major training exercises**, to test not only plans but also how well our health system functions in preparing for and responding to health protection threats. During 2024, in partnership with the UKHSA, we developed training for HSE and partner agencies in relation to both environmental and radiation incidents (referenced in last year's report). In 2025, and almost on the anniversary of the first COVID-19 lockdown, the National Health Protection Office, working closely with the National Office for Emergency Management and HSE Regions, the Department of Health and other partners, delivered **Exercise Pandora- Ireland's first pandemic response training exercise**.

Spotlight on Pandemic Preparedness: Key Insights from Exercise PANDORA

On **6th March 2025**, the HSE National Health Protection Office, in collaboration with the National Office for Emergency Management, conducted **Exercise PANDORA,** a national command post exercise (CPX) designed to test the operation of the **HSE Operational Pandemic Plan (HSE OPP)**, which provides a phased model for pandemic response escalation based on international guidance and lessons learned from COVID-19. Key objectives of the exercise were:

- to test communication and coordination structures,
- identify gaps and strengths in Ireland's health system preparedness,
- gather recommendations to inform an update of the HSE's OPP.

The exercise was conducted through a pre-exercise inject, followed by five scenario injects on the day. Structured response templates were used to gather mixed-method feedback and reflections from participants on the day, these templates were completed via the Qualtrics™ platform and followed by facilitated hot debriefs and reflective cold debriefs. Exercise PANDORA was evaluated against its aims and objectives.

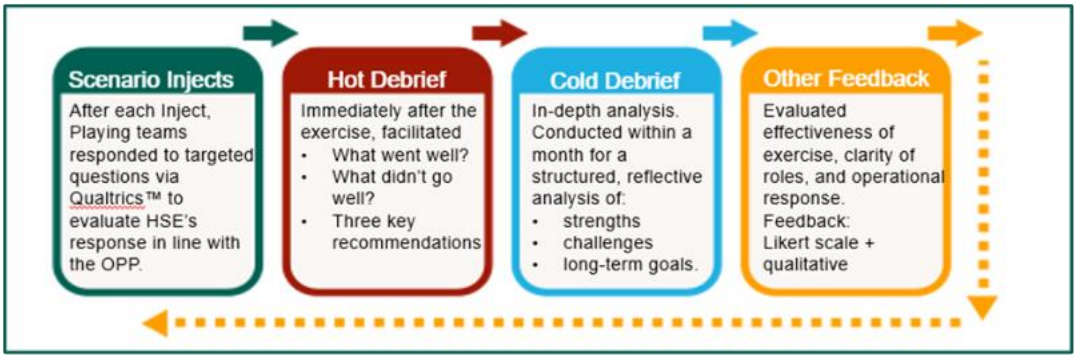


Figure 3: Evaluation framework for Exercise Pandora

Planning for Exercise PANDORA began in July 2024, requiring extensive coordination across the HSE. Key focus areas included early detection, resource management, interagency collaboration, and the rollout of a highly effective H5N1 vaccine.

The exercise brought together senior leadership teams from across the health service, with key stakeholders both Regionally and Nationally. At the national level, representatives from the Department of Health, the Department of Agriculture, Food and the Marine (DAFM), and the National Virus Reference Laboratory (NVRL) participated. Regional teams included stakeholders from the Regional Health Areas

(RHAs), including from acute and community services, Public Health, hospital groups, emergency management, environmental health and Regional Executive Officers (REOs). One national and six regional playing teams engaged in a **simulated response to an escalating highly pathogenic avian influenza emergency**. The scenario tested critical elements of pandemic preparedness, including coordination, communication, and disease control measures. The event was attended by senior stakeholders, including the Chief Medical Officer (CMO) and Deputy CMOs (DCMOs) and the Chief Clinical Officer (CCO) as well as cross-sectoral observers from Northern Ireland, reflecting the cross-jurisdictional importance of pandemic preparedness. Observers from within the HSE and external agencies, including the Food Safety Authority of Ireland (FSAI), also participated, providing valuable insights into cross-sectoral collaboration.

An evaluation report of Exercise Pandora was provided to the HSE Chief Clinical Officer and to the CMO in July 2025.

- **Key strengths** identified by participants included strong engagement with the OPP's phased model as a helpful guide to action, early leadership mobilisation, application of COVID-era knowledge, and structured communication strategies. Participants reported that they valued the opportunity to test pandemic roles in a simulated setting, demonstrating the benefits of advance planning and fostering cross-sectoral collaboration.
- **Key challenges** identified reflected the evolving health system context: while the OPP offers a strong high-level framework at national level, effective delivery of a pandemic response depends on complementary Regional and as well as other non-health protection national service-level plans, which had not been developed at the time of play.

Recommendations emerging from the evaluation focus on four areas:

i. Further OPP development,

ii. Regional preparedness,

iii. Strategic priorities,

iv. Future exercises.

Exercise PANDORA successfully met its objectives, providing valuable insights to inform future pandemic planning and strengthen Ireland's resilience.

Updating the HSE Operational Pandemic Plan: Applied learning from Exercise Pandora

Following the experience and the impact of the COVID-19 pandemic, the **HSE Operational Pandemic Plan (HSE OPP)** was developed by the National Health Protection Office (NHPO) and the National Office for Emergency Management (NOEM), to establish a comprehensive framework, outline sets of operational actions, and inter-service dependencies to effectively plan for and respond to the potential impacts of a pandemic. The HSE's Senior Leadership Team approved the **first edition** of the HSE OPP in July 2024. This version was used to inform the proceedings of Exercise PANDORA (see above) which was developed to test the operationalisation of the HSE OPP impacts of a pandemic.

The HSE OPP has **five sections**:

- **Background:** (Country context, Purpose & Scope, Objectives, Target Audience, Risk Assessments)
- **Planning considerations & Assumptions:** (Health Equity, Principles & Ethics, Legal & Policy, Methods & Approach, Operational Stages, Planning Assumptions, Funding)
- **Systems & Capacities:** (Emergency Coordination & Governance, Collaborative Surveillance, Community Protection, Clinical Care Systems, Countermeasures)
- **Plan Activation & Triggers:** (Activation of Plan, Triggers, Assessing and Adjusting response) (see Figure 4 below)

- **Operational Actions:** (Outline action and coordination requirements for HSE services across identified operational phases)

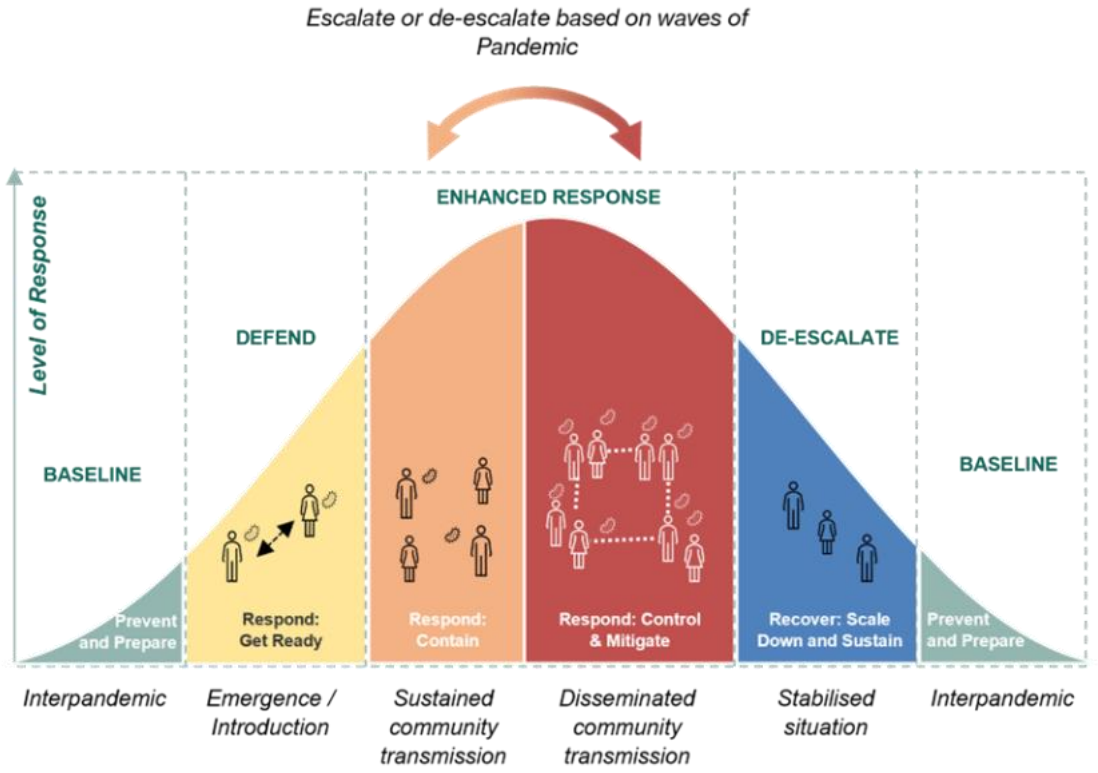


Figure 4: HSE Operational Pandemic Plan Phase descriptions.

The operational focus of this central plan details the macro level planning and responses required by HSE service areas during the operational phases of a pandemic. There is a further requirement at Regional, Service and Functional level to continue the development of more detailed plans using the HSE OPP as guidance, and this work is currently ongoing, and was the focus for the **EPIC11 workshop** in Dublin in September (**see below**).

During this year, a small working group from the NHPO and the NOEM was established to review the HSE OPP and produce a **Second Edition** which takes account of:

- learning from our recent National Command Post Exercise - Ex PANDORA,
- changes in HSE organisational structures especially relation to Regional Health Areas,
- changes to DoH governance structures for future national health crisis management,
- the role of the Regional Operational Pandemic plans, which are currently work in progress, led by RDsPH.

The updated HSE OPP provides clear operational actions and coordination guidance for HSE Leadership and Management to prepare for and respond to pandemics. Rather than being prescriptive, it serves as a framework to build resilience through lessons learned from COVID-19 and other pandemics. The plan aligns our National Response with current expert advice, including WHO recommendations on Preparedness and Resilience for Emerging Threats and updated International Health Regulations (2024)[2].

This Second Edition of the HSE OPP provides information on updates to governance structures within both HSE and the Department of Health (DoH). It outlines the strategic role of the **HSE National Crisis Management Team** (NCMT) in operational oversight and support. The document also details the roles of the **Regional Crisis Management Team** (RCMT) and **Integrated Health Areas** (IHA), including their operational functions across Acute, Community, and Primary care services in managing and coordinating responses. Additionally, it describes recent modifications to DoH governance for national health crisis management, such as the establishment of the National Health Threats Management Committee (HTMC), chaired by the Chief Medical Officer.

At the time this was written, the publication date for the Second Edition HSE Operational Pandemic Plan had not been set; however, the working draft served as a reference for the EPIC11 workshop (**see below**).

Spotlight on EPIC11 National Workshop, Dublin, September 2025

Participants from Ireland and international partners from WHO and ECDC at the EPIC11 national workshop in Dublin at the EPIC Museum on September 16,17, working together to prepare for the forthcoming Public Health Emergency Preparedness Assessment in 2026.

The European Union Commission's Health and Digital Executive Agency (HaDEA) manage EU programs on health, digital transformation, and emergency preparedness. In September, a National Workshop—organised by the Department of Health, HSE, and EPIC11—took place in Dublin under a HaDEA service contract for the European Commission. **EPIC11** refers to **Emergency Preparedness Integrated Courses** under

Article 11 of the Regulation (EU) 2022/2371 on Serious Cross-Border Threats to Health (SCBTH). The workshop aimed to improve Ireland's prevention, preparedness, and response (PPR) for cross-border health threats before the Public Health Emergency Preparedness Assessment (PHEPA) in June 2026. EPIC11 provides training and knowledge exchange to strengthen PPR planning across the EU and EEA, supporting efforts from ECDC, WHO, and others.

The two-day workshop brought together leading experts and system leaders at both central and regional levels from sectors such as health, emergency management, animal health, food safety, defence, and other areas vital to emergency preparedness. The agenda included plenary sessions, presentations, and interactive group activities, featuring reflections on Ireland's recent pandemic exercise (Ex PANDORA), peer learning with representatives from other EU countries, and targeted planning for **Public Health Emergency Preparedness Assessment (PHEPA).**

Key programme elements encompassed discussions on the EU Health Security Framework, an overview of Ireland's public health system, governance structures, and pandemic planning exercises during the first day. The second day concentrated on sharing experiences from other Member States regarding PHEPA, conducting detailed capacity-based planning, and developing actionable plans.

A principal objective of the workshop was to facilitate the implementation and evaluation of the Health Service Executive's recently updated HSE OPP. The workshop served as a platform to identify strengths, gaps, and opportunities for enhancement, thereby informing future iterations of this and related preparedness programmes at both central and regional levels, and enabling the development of a shared roadmap for improvement.

Workshop outcomes included a strengthened understanding of EU regulations and PHEPA, enhanced stakeholder collaboration, practical guidance for pandemic planning, identification of capacity-building priorities, and a comprehensive roadmap for future PHEPA preparedness.

Spotlight on preparing for future pandemic vaccine needs: the role of HERA

The **Health Emergency Preparedness and Response Authority (HERA)** was established by the European Commission in 2021 as a direct response to the lessons learned from the COVID-19 pandemic, aiming to ensure that the EU and its Member States are better prepared for and can respond swiftly to serious cross-border threats to health (SCBTH)[3]. It has a specific role to improve the EU's ability **to ensure the**

availability of medical countermeasures in the event of a future crisis, including vaccines. HERA seeks to achieve this through investment in research, development, procurement, stockpiling, distribution of medical countermeasures. HERA operates in two modes:

- **Preparedness Mode**: covers the strengthening of preparedness in advance of future emergencies and focuses on threat prioritisation, stockpiling, and research.
- **Crisis Mode**: ensures implementation of a swift and efficient response once crisis hits (crisis mode) through activation of Health Crisis Boards and gains powers for medical counter measures (MCM) monitoring, procurement, and distribution.

HERA has identified three priority threats:

1. **Pathogens with pandemic potential**
2. **Antimicrobial resistance (AMR)**
3. **Chemical, Biological, Radiological, and Nuclear (CBRN) threats.**

Ireland benefits directly from the work of HERA, including in accessing vaccines for current or future threats. For example, Ireland through HERA's Joint Procurement Agreement (JPAs) and Advanced Purchase Agreements (APAs), and with negotiation mediated through the National Health Protection Office and the National Immunisation Office, has access to sufficient future pandemic vaccine to meet any likely needs for the first wave of a new pandemic. We also have through the HERA mechanism access to vaccine needed to protect frontline workers and other high-risk groups likely to be exposed to highly pathogenic avian influenza (HPAI). This means that Ireland's needs can be met through the collective negotiating power of the European Union, mediated through the HERA mechanism.

The National Health Protection Office attended the HERA Info Day held in Dublin on June 24th, 2025. The event convened over 100 participants from diverse sectors to discuss opportunities for collaboration and funding related to health emergency preparedness. Attendees included representatives from academia, research institutions, industry, national governments, non-governmental organizations, and European institutions, facilitating a comprehensive and informative exchange of perspectives. Notable industry leaders from companies such as Sanofi, Bavarian Nordic, and HiTech Health were present, underscoring the importance of cross-sector engagement. Jennifer Murnane O'Connor, Minister of State at the Department of Health, delivered the keynote address, emphasising the significance of coordinated action at the EU level to protect public health and enhance resilience.

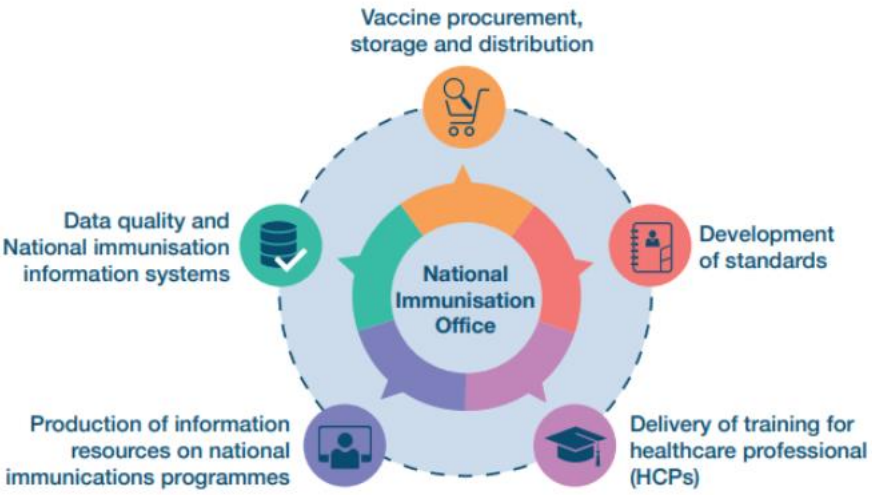
Objective Five: Immunisation

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

National Immunisation Office (NIO)

The National Immunisation Office sits within the governance of the National Health Protection Office. The vision for NIO is: The entire population of Ireland is protected from vaccine preventable diseases across the life course, through the delivery of high quality, person-centred and equitable immunisation programmes.

Responsibilities and functions of the NIO:



Key Objectives of the National Health Protection Strategy for Immunisation are to:

1. Create a comprehensive national immunisation information system.
2. Monitor vaccine uptake and effectiveness promptly at all population levels.
3. Assess and recommend improvements for future immunisation services.
4. Work with all providers to boost collective vaccine uptake.
5. Target low-uptake groups with tailored programmes.

6. Integrate COVID-19 vaccines into routine HSE governance.
7. Establish procedures for vaccine delivery during outbreaks.

Spotlight on current challenges and working towards solutions in immunisation coverage

Of concern in recent years has been the decline in the uptake of vaccines, including the Primary Childhood Immunisation (PCI) programme for children. This downward trend has been observed for some years but has been exacerbated by the COVID-19 pandemic, something seen in many Western European countries[4]. The latest data to Q1 2025 shows that the **decline in coverage has continued compared to Q4 2024**:

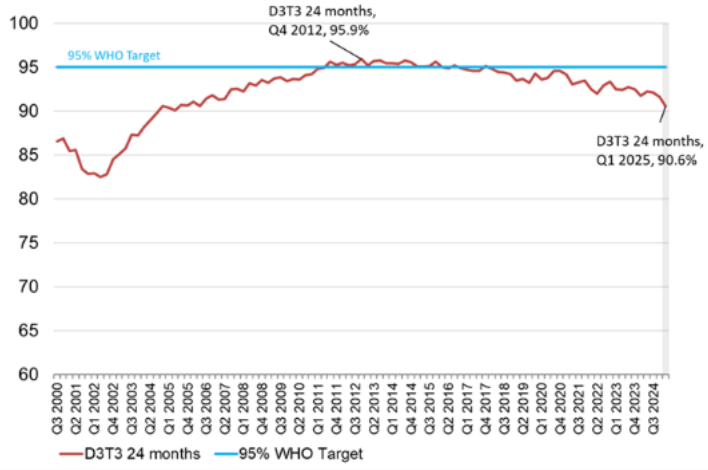


Figure 5: 6 in 1 vaccine (3 doses) (D3T3) vaccine uptake national trend - Measured at 24 months

Similar issues have been seen in relation to the uptake of the **MMR vaccine**, which protects people against measles, mumps and rubella. This was an important factor in relation to the management of the emergent threat from measles in 2024/2025.

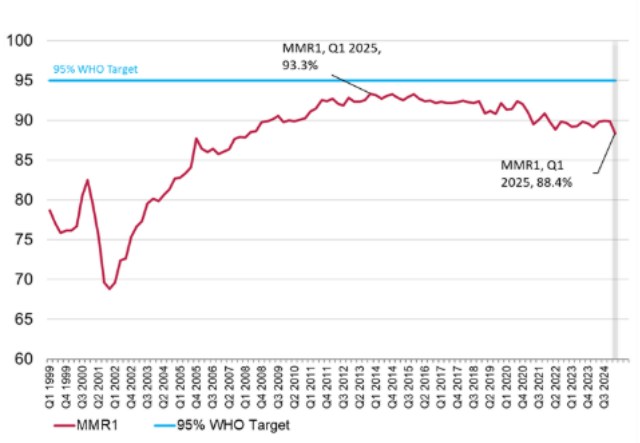


Figure 6: MMR_1 (first dose) vaccine uptake national trend - Measured at 24 months

Also, uptake of MMR and other vaccines is not evenly distributed across the country, with some areas seeing much lower uptake of vaccines than others, leading to inequities in vaccine coverage.

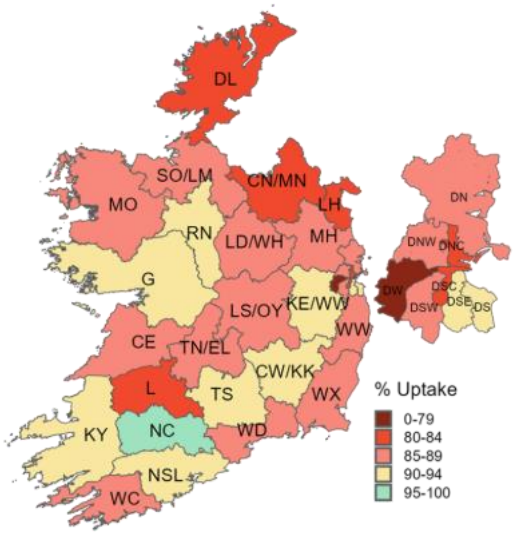


Figure 7: Variation in MMR1 immunisation uptake rates (%) by Local Health Office (LHO), in those 24 months of age in Quarter1-2025.

In response to these challenges, HSE reviewed its governance structures at both national and regional levels to facilitate coordinated efforts aimed at improving vaccine and immunisation coverage. This included addressing access to vaccination services. As a result, new governance structures were established:

• **Nationally**, the **Integrated Immunisation Oversight Group (IIOG)** is responsible for overseeing an integrated vaccination programme across all areas and services within the HSE. The group provides financial, clinical, and technical governance, focusing on human resources and supporting Health Regions to deliver a high-uptake, standardised, and equitable vaccination service. The IIOG is co-chaired by the **CCO and Lead REO for immunisations/vaccination**, Dr Colm Henry and Martina Queally, and convenes quarterly.

• **Centrally**, the **Integrated Immunisation Working Group** (IIWG) consists of the chairs of the six **Regional Immunisation Committees (RICs),** NIO, HPSC, and additional stakeholders. It meets monthly to discuss the implementation of national immunisation programmes and reports to the IIOG.

• **Each region** has formed an **RIC**, chaired by the **Regional Director of Public Health**, to oversee the regional implementation of immunisation programmes, monitor uptake, and develop strategies to improve uptake as needed.

Year Three Achievements: What we accomplished

- The NIO funded and supported the General Practice Nursing Professional Development Coordinators to host **four regional immunisation conferences** in Dublin, Kilkenny, Limerick and Leitrim in 2025. More than 1,000 GP nurses attended with very positive feedback **(Action 4)**
- The NIO successfully launched the **new Primary Childhood Immunisation Schedule for babies born from 1st October 2024,** which includes the **Varicella vaccine for the first time in Ireland**. A national communications campaign was launched, and a suite of resources for parents was developed, including infographic materials for people with language or literacy difficulties. A new e-learning module for healthcare professionals was also developed, along with supporting information, and webinars were held for general practice nurses, HSE staff, and GPs.
- The NIO presented at the **National Healthy Childhood Conference in April 2025**, focusing on interpersonal communication to build trust in vaccines and address vaccine-related concerns **(Action 4)**
- One of the NIO Consultants in Public Health Medicine (CPHM) co-chaired the **Pertussis National Incident Management Team**. NIO staff worked with colleagues across HSE, Paediatrics and General Practice to increase awareness amongst healthcare professionals, update and deliver training to healthcare professionals. **A maternal pertussis immunisation campaign was developed by the NIO and launched in April 2025**, which had an inclusive focus, with new resources and information developed for pregnant women. Collaboration with the National Social Inclusion Office and organisations representing women from different communities was a key component. **(Action 4)**
- Work progressed with the Economic and Social Research Institute (ESRI) on **behavioural drivers of childhood immunisation**, with the launch of a survey of Public Health Nurses and General Practice Nurses, in April 2025 **(Actions 4 and 5)**
- The NIO organised **training on behavioural science from the ESRI** for almost 40 staff from the NIO, National Health Protection Office, National Social Inclusion Office, Area Public Health Departments, School Immunisation Teams and Professional Development Co-ordinators for General Practice Nursing and General Practice **(Actions 4 and 5).**

- The NIO supported the rollout 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)**
- The NIO supported the rollout of the **seasonal influenza vaccination programme**, including provision of clinical advice, public facing materials and vaccine supply chain management. **Uptake target of 75% was achieved in those aged 65 and older and those living in residential care facilities (Action 4).**
- The NIO, working with colleagues across the HSE, supported operational alignment between COVID-19 and flu immunisation programmes to support and **foster winter resilience (Action 6).**
- The NIO supported the administration of **mpox vaccines** to respond to the **Public Health Emergency of International Concern (PHEIC)**. Working in collaboration with stakeholders, the NIO clinical guidance and a suite of materials to support healthcare professionals and vaccinators **(Action 7).**

The NIO continues to work with national stakeholders to **improve HPV vaccine uptake** to support Ireland's efforts to eliminate cervical cancer by 2040 **(Action 5).**

- The NIO continues to achieve high engagement from their Immunisation Bulletin issued each quarter. Routinely the bulletin achieves an open rate of over 70% (industry standard is 19.4% for Government/Politics industry and 23.7% in the healthcare services industry).

The NIO launched a national communications campaign to i**ncrease uptake of the pertussis (whooping cough) vaccine during pregnancy**, following a rise in incidence nationally. Developed as a key output of the NIMT Vaccine and Communications Sub-Committee, the campaign aimed to build awareness and trust, particularly among underserved communities. **A full rebrand of the maternal vaccine portfolio was delivered, incorporating inclusive, diverse imagery to reflect Ireland's multicultural population and promote equitable engagement.** The campaign was supported by a proactive media strategy and multi-platform digital outreach, achieving strong reach and engagement across national press and social media. With over 700,000 people reached via Meta platforms and more than 24,000 printed resources distributed to maternity hospitals, GP practices, and community organisations, the campaign set a new benchmark for inclusive, data-informed public health communication.

- The **MenACWY reactive campaign** aims to increase awareness and uptake of the vaccine among first-year secondary school students, particularly in areas with low vaccine uptake, given the recent increase in invasive meningococcal disease (IMD). We engaged parents across social media platforms using geo targeted advertising. This campaign was live until the end of June 2025.
- Separately, the **Schools vaccine proactive campaign** was live across social media platforms from February to May 2025. The campaign targeted parents to increase awareness of the free vaccine and to look out for the consent forms in their children's school bags.

To mark the **20th anniversary of the NIO** and align with both World Immunisation Week and European Immunisation Week 2025, the NIO launched its national campaign, **"Then & Now: The Power of Vaccines."** This campaign celebrated Ireland's immunisation achievements and reinforced the importance of sustaining high vaccine uptake across all age groups. Anchored in the European theme #HumanlyPossible, the campaign used storytelling, historical imagery, and personal reflections to highlight the transformative impact of vaccines. It received highly positive feedback and was widely shared across HSE channels and partner organisations. The campaign served as a reminder of what vaccines have made possible, and what continues to be possible through collective action and public trust.

Ongoing Work and Future Activities

- Work continues to update catch-up immunisation information and **training for healthcare professionals.**
- Continuing to evaluate quality improvement project on the immunisation queries service provided by NIO and then implement any necessary improvements.
- NIO will continue to collaborate with teams across the HSE on the delivery of the **National Immunisation Information System (NIIS)**, including expansion to school vaccinations as well as other vaccines in national and population specific programmes. Information from this system will be used to identify areas of lower uptake so work to improve uptake can be more targeted in future.
- The NIO will continue to contribute to work to **provide continuity of supply of rabies immunoglobulin and vaccine, Diphtheria and Botulism Antitoxin following reorganisation of the service to a new Regional Model**
- The NIO will work with stakeholders across the HSE to plan and implement the **COVID-19 and Influenza vaccine programmes in Autumn/Winter 2025**
- The NIO will work with the **Integrated Immunisation Oversight Group** and working group, as well as the **Regional Immunisation Committees** to improve uptake of all vaccine programmes in Ireland
- The NIO will continue to lead and coordinate communications to **promote vaccine awareness** across both the child and adult immunisation journey. Efforts will focus on timely, targeted messaging to support uptake and ensure equitable access to vaccination information nationwide.

Spotlight on Success Stories in the NIO:

- The **NIO Clinical Advice Service** handled around 200 immunisation-related queries per week (8,000 annually) from healthcare professionals, with a Q1 2025 survey showing high satisfaction rates.
- **The pharmacy service** responded to approximately 427 pharmaceutical queries, including exceptional vaccine orders.
- The NIO pharmacy team addressed 483 cold chain failures, about 200 during **Storm Éowyn**, saving over **€500,000 worth of vaccines** through prompt action.
- Nine tenders for vaccines and related services were conducted to maintain supply in Ireland.

- Dr Allison Deane, under NIO supervision, co-authored a paper on HPV vaccine misinformation in disadvantaged schools, published in *Vaccine* (April 2025), and presented at the **5 Nations Health Protection Conference**.
- The **NIO Green Committee** showcased sustainability efforts with a poster at the Summer Scientific Meeting.
- **The NIO marked its 20th anniversary** during European and World Immunisation Weeks by sharing staff stories on vaccine advocacy.
- **Information materials** were distributed to over 2,000 primary care sites, hospitals, and HSE locations to support immunisation campaigns.
- A new **Statutory Instrument** now allows **school class lists to be shared with HSE immunisation teams to improve vaccine coverage**; the NIO provided guidance and a Data Protection Impact Assessment.
- National Health Protection Consultants attended an educational meeting and tour of the **National Cold Chain Service.**
- The **NIO Health and Wellbeing Committee** promoted an inclusive workplace through events like Diwali and Eid celebrations, chair yoga, and pottery classes, supporting the Healthy Ireland Implementation Plan.

Spotlight on Working with partners outside of Ireland

- Presented at the **ECDC NITAG meeting in Stockholm** on Ireland's shift to a single-dose HPV vaccine schedule.
- Participated in an international symposium at the Max Planck Institute, Berlin, focused on countering online vaccine misinformation.
- Spoke in **Paris** at a **European Observatory** event on strategies to improve immunisation uptake in Ireland.
- Took part in multiple **EU HERA** meetings on vaccine joint procurement.
- Attended the **ECDC Vaccine Monitoring Board** at EMA, **Amsterdam**.
- Joined the **Cervical Cancer Elimination Plan** launch, pledged support for Ireland’s 2040 target, and facilitated a partner panel session.
- Attended bilateral immunisation meetings between **Northern Ireland and the Republic of Ireland.**

- Presented at the **London School of Hygiene**, IPVC **Edinburgh**, and **Eurogin Porto** on rebuilding HPV vaccine confidence.
- Presented at the **Five Nations Health Protection Conference** on HPV vaccine uptake.

Spotlight on the NIO Data Team

The **NIO Data Team** plays a central role in curating the national immunisation dataset to effectively support public health priorities. Organised into dedicated workstreams, the team manages both business-as-usual operations and national immunisation data projects. To enhance efficiency and collaboration, the team implemented Atlassian Jira, enabling streamlined management of individual and shared workstreams, improved task planning, and prioritisation.

Below are some **key achievements and milestones** from our work so far this year.

Systems:

- **Schools Immunisation System (SIS):** The team maintained the SIS for reliable performance and user support, configuring it for MMR and BOTP/IPA catch-up programmes. (**Action 2 & 5**)
- **Covax/NIIS:** Managed vaccine and schedule setup for Winter Vaccination and Spring Boosters across HSE, GP, and pharmacy, and supported five software sprints with design, development, and QA, including Production Go Live. (Action 1 & 3)
- **TrackVax***:* Configured all vaccines for barcode scanning in Covax/NIIS, managed a version upgrade, led QA testing across environments, and coordinated structured testing with the vendor via Jira. (Action 1 & 2)

Data Governance: The Data Governance Manager has strengthened governance practices and supported strategic initiatives throughout the immunisation programme. Key achievements include:

Special Projects and Strategic Support:

- Led the development and review of Data Protection Impact Assessments (DPIAs), ensuring legal compliance and risk mitigation. (**Action 3, 4 & 5**)
- Reviewed Schools Immunisation Programme documentation for governance and protection standards.

- Worked with Child Health Public Health and the Department of Education on a new Statutory Instrument for secure class list collection. (**Action 3, 4 & 5**)
- Provided governance input to the NIIS Project through active participation in sub-groups and the main working group.

BAU Responsibilities:

- Advised the Data Quality Team, encouraging best data quality practices. (**Action 4**)
- Coached team members to ensure timely and prioritised delivery.
- Addressed diverse data governance queries to aid informed decision-making. (**Action 4**)

Reporting and Data Quality

The Reporting and Data Quality workstream has focused on delivering reliable insights through robust data validation, report standardisation, data quality fixes, and automation initiatives. Our goal has been to ensure that high-quality data is maintained. Key achievements this year include:

- **School Immunisation System**
  - **Special Projects:** This year, the team improved SIS reporting by creating a central SQL data warehouse, streamlining ETL processes, and adding data quality checks. Collaboration with T&T RPA has begun to implement semi-automated bulk data quality fixes for greater efficiency and preparation for NIIS migration. (**Action 2, 3 & 4**)
  - **BAU Responsibilities:** The team provided ongoing reporting support through dashboards, extracts, and analyses, maintained Power BI assets, and worked with stakeholders to address data issues. Regular review of data flags and outputs ensured improved accuracy and completeness. (**Action 2 & 4**)
- **Covax/NIIS**
  - **Special Projects:** We are adding a DQ Object layer in NIIS to show validation errors on the data-entry screen, so users can quickly fix issues. Each release includes DQ-focused UAT and targeted insight reports like early-dose or lot-anomaly alerts for clinical use. (**Action 2, 3 & 4**)
  - **BAU Responsibilities:** Our ongoing COVAX/NIIS DQ work features strong validation rules, new DQ dashboards for every campaign, and team walkthroughs for immediate issue resolution. Daily huddles address flagged

records, with lessons informing updates, and automated tools help prevent repeated errors. (**Action 2 & 4**)

Objective Six: Inequities

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

Health and disease are not equally distributed in communities. Professor Sir Michael Marmot, a leading pioneer in public health on the social determinants of health, once said: " There can be no more important task for those concerned with the health of the population than to reduce health inequalities. Review what can be done to reduce health inequalities and then do it. Social justice demands it." [5]

Understanding and addressing health inequalities and inequities is a main component of the National Health Protection Strategy. This is reflected in both reactive and programmatic activities that aim to identify how certain communities, settings, or populations may be disproportionately affected by disease or have limited access to health services, screening, vaccination, or treatment. Individuals in these groups are sometimes referred to as 'underserved', meaning they face systemic and structural barriers to accessing services, which can result in higher risks of disease and poorer health outcomes. Efforts are made to ensure that health protection interventions are targeted appropriately, culturally sensitive, and clearly communicated, particularly for those with the greatest need.

National Immunisation office: Working with Underserved Communities

For many underserved communities, access to and uptake of a range of vaccine and immunisation programmes is challenging. As important as understanding data on trends in vaccine coverage rates or variation in same by age, gender, geographical location, or education level, is an understanding of the social and behavioural barriers and facilitators – including those relating to structural factors – that may lie behind an individual's decision to accept, delay or refuse vaccination for themselves or their children. Successful vaccination programmes are built on understanding and considering individuals' and communities' beliefs, concerns and expectations regarding the vaccine and the disease. Trust in vaccination recommendations and in the relevant authorities also plays a key role. In this context, approaches from social and behavioural sciences can provide an important complement to analysis of epidemiological and vaccine coverage data when designing, implementing and

evaluating strategies and interventions to enhance vaccination acceptance and uptake across the life course[6].

The 5Cs Model

In a resource published by **ECDC** in April 2025 on tools and methods for promoting vaccination acceptance and uptake, using a social and behavioural science approach, a model described now as the **5Cs Model,** which provides a structured way of understanding the core areas that may influence an individual's willingness and readiness to get vaccinated (**Figure 3**). Developed in 2018, the model is based on five components that influence vaccination intentions and behaviour. The five components of the 5Cs Model are defined and described as follows:

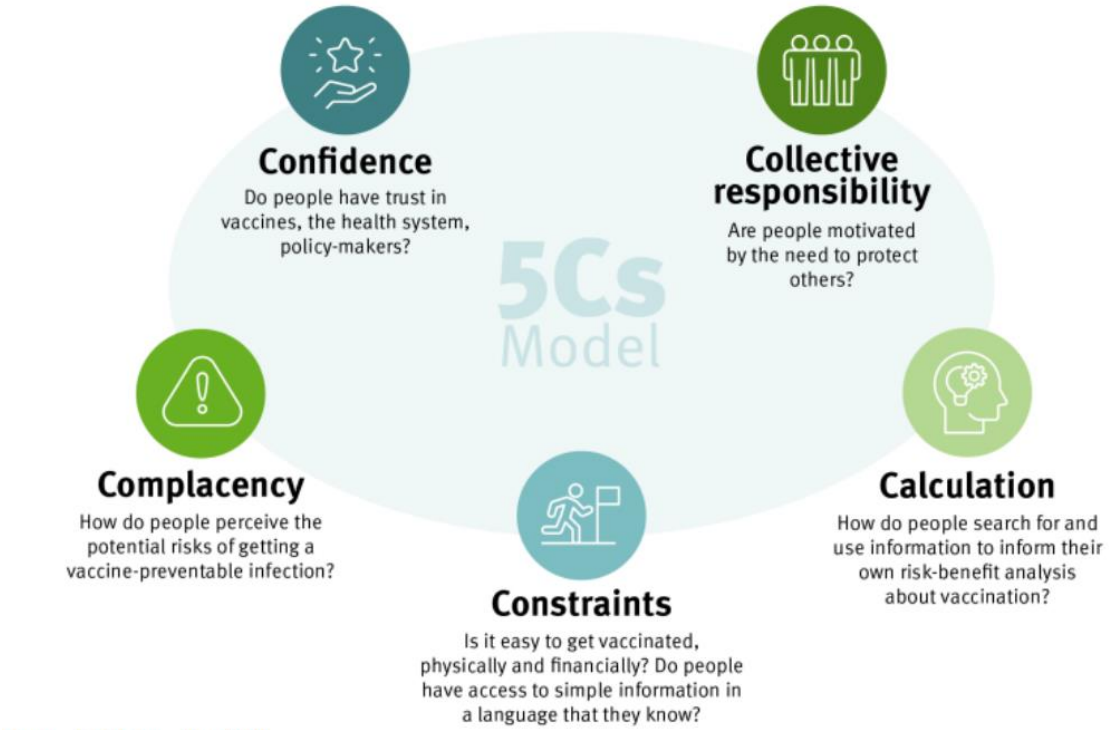
• **Confidence** refers to an individual's trust in the safety and effectiveness of vaccination, trust in the professionals and policymakers who recommend vaccination, and trust in the health authorities and health systems that provide them.

• **Complacency** refers to an individual's perceived risk of a serious outcome arising from contracting a given disease. Complacency usually describes a relative lack of interest; for example, complacency can be high when the perceived risk of a disease is low, and therefore the vaccination is perceived as unnecessary.

• **Constraints** refers to the perceived or actual barriers to vaccination faced by an individual. These constraints can be both psychological and structural; for example, referring to a person's self-efficacy or perceived ability to get themselves vaccinated, access a booking system, or take time off work to go to a vaccination appointment.

• **Calculation** refers to how an individual compares and weighs the personal benefits and potential risks of getting vaccinated. How people search for and use information about vaccination may influence this construct, as well as the availability of information, its perceived quality and the individual's ability to understand health information.

• **Collective responsibility** refers to people's willingness to protect others by getting vaccinated to prevent the spread of disease.



Source: ECDC, based on [18]

The **National Immunisation Office (NIO**) works hard to ensure that as far as our vaccine and immunisation programmes are concerned, no one is left behind. Influenced by the 5Cs Model, we work with a broad range of partners, including patient representative and advocacy groups, to build and deliver vaccination programmes that meet the needs of the target populations. Given the complexity of vaccine delivery infrastructure, including all manner of settings from GP practices, pharmacies & hospitals, to schools, universities, workplaces, prisons and congregate settings for migrant populations, achieving high levels of access and engagement is often challenging. But it is right and proper that we continue to extend the reach of vaccination programmes into every part of our society; to work build trust; to counter mis-, dis- and malinformation, and to inform people about the power of vaccines to protect health, enhance wellbeing and improve life chances for all our people.

Over the past year, NIO has worked with a wide range of partners, communities, and settings to deliver vaccination services, either as part of national immunisation programmes or in response to emergent threats from vaccine preventable diseases (VPDs). **Examples of such work** include:

- The new Primary Childhood schedule was promoted across **community representative groups**, in collaboration with the **HSE National Social Inclusion Office** https://www.hse.ie/eng/about/who/primarycare/socialinclusion/about-social-inclusion and in mainstream and targeted media **(Action 4 and 5)**
- The NIO continues to support the programme for vaccination of **Refugees and Applicants Seeking Protection,** with resources updates and revised to reflect changes to the Primary Childhood Immunisation (PCI) Schedule. Ongoing support to the clinical teams is provided (**Actions 4 and 5)**
- Work continues to co-develop resources for **Travellers** on the Primary Childhood Immunisation programme, including addressing concerns identified by Traveller representative organisations and Primary Care workers.
- **Cairde,** https://cairde.ie/ supported the promotion of our PCI and Pertussis campaigns through their digital media channels including www.heathconnect.ie.
- **AkiDwA,** https://akidwa.ie/ continue to distribute resources in community settings and digital media with **migrant women and families**, reaching 3,000 women online and 300 in a face-to-face setting.
- The NIO undertook training with community health workers and healthcare workers in the **Roma Health Network**, https://epha.org/campaigns/roma-health-network/ focusing on how to build trust in vaccines and use interpersonal communication techniques to address concerns about vaccines **(Actions 4 and 5)**
- **PCI Traveller Outreach Project** – three meetings conducted between November 2024-June 2025, engaging with Traveller Community Health Workers to address barriers and create a suite of co-created materials for the Traveller community about the updated PCI schedule.
- Work with the cervical cancer screening service on two projects funded by the **Women's Health Taskforce,** https://www.gov.ie/en/department-of-health/campaigns/womens-health-taskforce/ within Department of Health. The first project is a **pilot engaging with community champions to look at the barriers and enablers for communities receiving HPV vaccine in school**. The second is a **behavioural science research project** looking at the NIO immunisation materials supporting the second level vaccination programme, to co-design new materials, with participants from one rural and one urban area of deprivation. There is consideration on whether the second initiative could be expanded to become a **cross-border project with Northern Ireland**.

What doesn't get counted, doesn't count: Ensuring surveillance systems see everyone.

A central component of the National Health Protection Strategy is to ensure that data collection systems for surveillance and immunisation incorporate variables such as ethnicity to effectively identify at-risk groups. Health inequities continue to affect population groups due to variations in social, economic, and environmental conditions. It is essential for public health surveillance systems to advance in capturing these disparities accurately. Comprehensive understanding of health challenges relies on the systematic collection of relevant information. To address health inequities, surveillance efforts must include data on equity stratifiers (for example, age, gender, ethnicity, socioeconomic status, disability, and geography), thereby facilitating the identification of disparities in health outcomes. In the absence of such data, inequities may remain unrecognised and unresolved—an issue succinctly captured by the phrase, "*What doesn't get counted, doesn't count*," which underscores the risk of excluding key metrics and overlooking the needs of certain populations within health systems.

Appropriately collected, collated and reported data with equity stratifiers can be used to:

- **Inform evidence-base policy**: stratified data can support the development of targeted interventions tailored to the needs of disadvantaged populations and ensure resource allocation is proportionate to need.
- **Monitor Progress Toward Equity Goals:** Facilitates the evaluation of health equity initiatives over time and helps determine whether interventions are reducing or exacerbating disparities.
- **Enhance Accountability:** Transparent data collection and reporting promote accountability in addressing health inequities and supports compliance with national and international commitments to health equity
- **Improving Crisis Response:** During public health emergencies, stratified data guide equitable response strategies and resource distribution, and ensures that vulnerable groups are not overlooked in planning and response.

Incorporating equity stratifiers into public health surveillance is not only a technical enhancement - it is a moral and strategic imperative. It ensures that what matters gets measured, and that no one is left behind in the pursuit of better health for all.

Spotlight on the development of evidence-based methodologies to mitigate health disparities in the Irish population: innovative work by HPSC.

Vulnerable and marginalised populations face disproportionately higher risks of infectious diseases. During the past year and in line with the National Health Protection Strategy's objective to reduce health inequities, the **Health Protection Surveillance Centre (HPSC)** undertook a comprehensive evaluation to assess the suitability of equity stratifiers currently collected in the HSE's computerised infectious disease reporting surveillance system **(CIDR)**, CIDR - Health Protection Surveillance Centre which is the key surveillance system currently used to collect and collate reports of notifiable and other important infectious diseases from laboratories, clinicians and public health services. This evaluation applied the PROGRESS Plus framework (PROGRESS-Plus | Cochrane Equity), a structured analytical tool for monitoring and addressing health inequities and included stakeholder (i.e. members of the NSIO Social Inclusion Forum) input via a Qualtrics survey.

A wide range of equity stratifiers aligned with the PROGRESS Plus framework are already collected through routine and enhanced surveillance datasets. However, completion rates and data availability for various equity stratifiers currently collected on CIDR are significantly dependant whether they are collected as part of the core data set (variables collected for all patients), disease specific enhanced surveillance (covering 40 notifiable diseases), or as part of the outbreak enhanced surveillance.

Findings from this work included that approximately 3% of all CIDR events (based on data collected from January 2018 to February 2025) were linked to outbreaks, therefore significantly limiting data representativeness and reducing the accuracy of analysis aimed at monitoring of health inequities in risk of infectious diseases. Some key equity stratifiers such as country of birth and ethnicity have relatively high completion rates (54.2% and 55.6% respectively), with the highest completion rates observed for high-priority diseases that require public health action (such as incident or outbreak response and/or contact tracing activity). However, other important equity stratifiers such as living situation, migrant status, and substance use are inconsistently captured only for specific high priority diseases or during outbreak investigations. Socioeconomic status is not directly recorded on CIDR. However, patient address and Eircode can be used to estimate deprivation using the Pobal HP Deprivation Index.

Innovative and Collaborative Solutions:

HPSC developed a **Social Inclusion Population Identification Algorithm** and **Vulnerability Scoring System** to enhance identification of vulnerable and marginalised populations, using input from available frameworks and working with the main stakeholders. Application of these tools to 225,640 events (excluding COVID-19, influenza, RSV) increased the identified cases of vulnerable and marginalised populations from 141 to 4,097-nearly a **thirtyfold improvement.**

This project concluded that systematic and consistent collection of a targeted set of equity stratifiers is essential for accurately identifying vulnerable and marginalised populations. The combined algorithmic approach significantly enhances identification of the required equity stratifiers to inform epidemiological insights and to support more targeted public health interventions. HPSC will continue work to further validate this methodology and its use in practice during the coming year. Insights from this work and the use of equity stratifiers is also informing work to develop the new **Outbreak, Case, Incident Management and Surveillance (OCIMS) Programme** and the **National Immunisation Information System (NIIS)**, both in development during this reporting year and which will be deployed from late 2025 onwards. These new data collection and reporting systems, and a new approach to collecting equity stratifiers, will support work to tackle inequities and inequalities in health.

Spotlight on health inequities & partnership work: People in prison

This year, the National Health Protection Office and the Chief Clinical Officer (CCO), Dr Colm Henry, led engagement work for HSE with the **Irish Prison Service (IPS)** which included a visit to Mountjoy Prison on July 10th, 2025. This was prompted by increasing awareness of the challenges facing prison populations in Ireland, driven in part by policy work by the **Department of Health** who have brought focus to Prison Health within the **Healthy Ireland programme** (Healthy Ireland Framework 2019-2025) and hosted a multiagency workshop in April 2025, including HSE and the IPS as well as international experts and academics working in Health & Justice.

People in prison, in Ireland and internationally, have higher level of health needs than their peers in the community, including poorer physical health, higher levels of chronic disease, higher risks of some infectious diseases (including TB, bloodborne viruses (BBVs) & sexually transmitted infections), have poorer vaccine coverage, poorer mental health and higher levels of substance use and addiction. Such health needs are often compounded by social and economic challenges, including homelessness, joblessness and lack of education (See **Figure 8**).

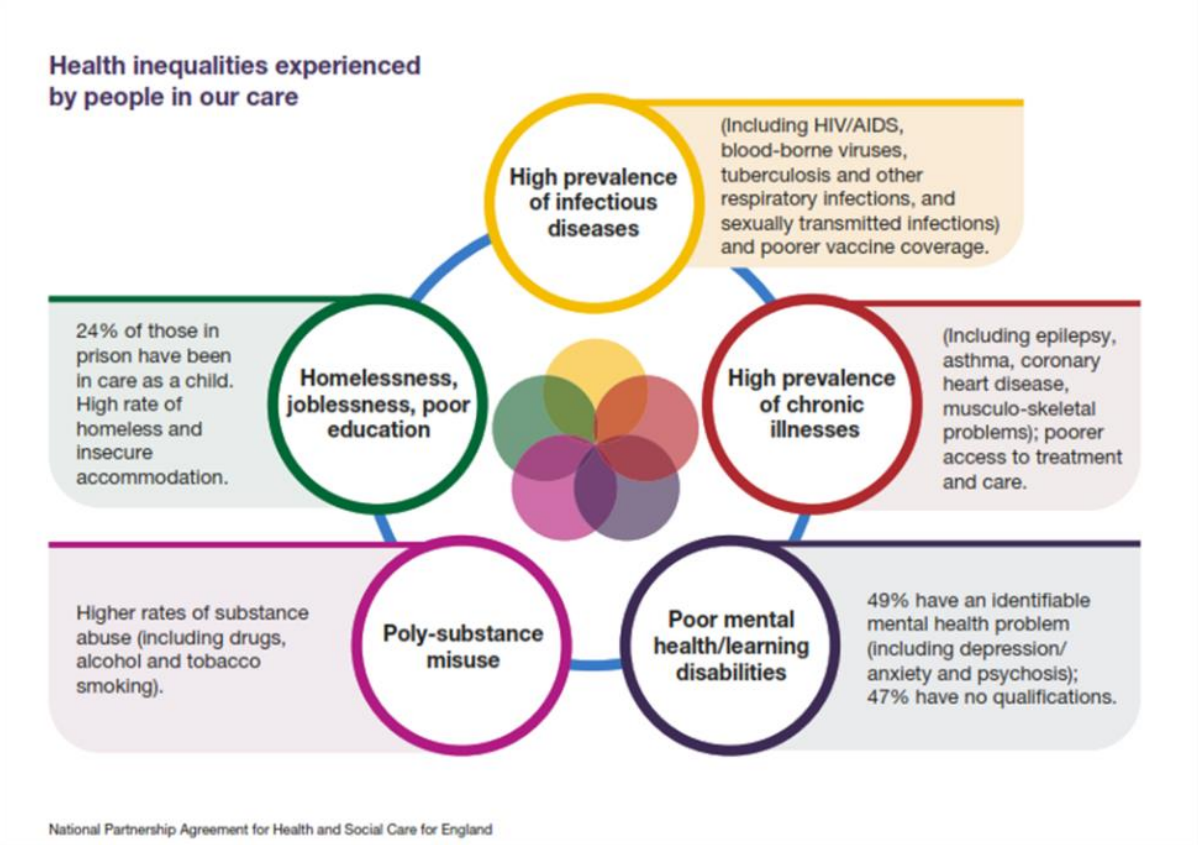


Figure 8: Multiple and complex health and social care needs among people in prison.

We have also seen increasing numbers of people in the Irish Prison estate, with overcrowding in our prisons now a key factor in managing healthcare and other needs. Recognising the challenges and with a shared mission to understand and meet the healthcare needs of people in prison, HSE and the IPS have begun a series of joint engagement events to look at ways we can work more effectively together, ensuring that people in prison receive access to healthcare of a standard available in the wider community, and mindful of the specific circumstances of imprisonment. This work is specifically looking at challenges around continuity of care, from custody to community, including how information flows between the community and prison health

services. Further, the work will consider how **telemedicine** may provide access to specialist and secondary care services to people in prison to improve the quality of care and reduce need to transfer prisoners to hospitals, often some distance away, which impacts also on prison staffing levels, potentially with impacts on access to services for other prisoners.

Prison Health is Public Health (Declaration on prison health as part of public health: adopted in Moscow on 24 October 2003): by addressing the health needs of people in prison, we can reduce the costs to the Irish health services of treating diseases by preventing or diagnosing at a much earlier stage; we can prevent prisons being a source of infectious disease amplification, which can risk outbreaks not only in prisons but also in the wider population; we can address health-related drivers of offending behaviour (including substance use and mental health needs), and we can ultimately reduce the cost to both health and justice systems.

Objective Seven: Global Health

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

Partnership Work on a Global Scale

No one is safe until everyone is safe: Health protection threats can emerge anywhere in the world and Ireland can be impacted by such risks. It is in our interest to collaborate with other countries to enhance global health security as well as to protect our own population who may be impacted by exposure to health hazards internationally (while travelling, working or studying overseas, for example) or through imported infections. Furthermore, public health practice is internationalist by nature as the interconnectedness of people, countries, economies and cultures are all important elements of the wider determinants of health which also means that action to address health threats and health inequalities in any country often has to take account of the global context and certainly the situation in neighbouring countries.

HSE's Global Health Programme[7] has produced a **new Strategic Framework for 2025 – 2027** which describes our organisation's mission to work in solidarity and partnership with low- and middle-income countries (LMICs), other countries in crisis and in Ireland, to improve health services and health outcomes. The Global Health Programme Strategic Framework 2025–2027 was developed by taking an evidence based and contextualised approach, including situation analysis and evaluation, horizon scanning, engagement with partners, stakeholders and leaders, and aligning with national and international healthcare strategies and policy. This new strategic framework is in alignment with the overarching strategies, priorities and commitments of the HSE including the **HSE Public Health Strategy** (2025 onwards), to promote equitable health outcomes and address emerging health challenges. The programme serves as Ireland's dedicated point of coordination for global health within the health service and extends beyond traditional public health functions to encompass clinical, educational, and

system-strengthening partnerships. The programme also supports Ireland's role in **international Health Security** by supporting greater resilience of partner health systems to manage future health crises and public health threats. Part of the programme includes **capacity building in partner countries** including offer of **training and educational placements** for post-graduates in higher specialist training in **public health medicine and Masters programmes**. In this way, Public Health is supporting development of Global Public Health and Health Security Programmes internationally. Further, Ireland will benefit from this work directly as the Global Health Programme will engage with public health and other services in regions and at corporate level, including social inclusion and migrant services, to apply global health experience, learning and evidence to planning and delivery of healthcare in Ireland.

Ireland formally collaborates on international health security through the WHO's International health regulations (IHR) and HPSC has a specific role as National IHR Focal Point which is described below. Ireland also contributes to the work of WHO**,** particularly through the **WHO Regional Office for Europe**[8] on issues such as emergency preparedness, noncommunicable diseases, and health equity. In relation specifically to health protection, Ireland is an active member of the **European Centre for Disease Prevention and Control (ECDC)**[9], leading and contributing to programmatic and reactive work on disease surveillance, risk assessment, and response coordination for infectious diseases across the EU. Experts from HSE's National Health Protection services contribute extensively to a wider range of work delivered in partnership with other Member States (MSs) in WHO, ECDC and associated organisations and structures, a contribution which is highly valued and respected by our partners.

Overview of work in 2024/25 in Global Health/International Health Security

In Year Three of implementation of the National Health Protection Strategy, further progress has been made to advance global health initiatives, with a focus on understanding and addressing the impact of global health issues on Ireland. Achievements focused on key objectives in the National Health Protection Strategy, including **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**,
- **enhancing preparedness and response capacities,**
- **efforts to reduce health inequities and improve vaccine equity.**

During 2025/25, the National Health Protection Office and HPSC have delivered key actions including:

- **Delivering on Ireland's IHR Responsibilities:** The **International Health Regulations (IHR)** are a legally binding framework established by the World Health Organization (WHO) to help countries prevent and respond to acute public health risks that have the potential to cross borders and threaten people worldwide. Originally adopted in 1969 and significantly revised in 2005, the IHR aim to:

a. **Strengthen global health security.**

b. **Improve countries' capacities** to detect, assess, report, and respond to public health emergencies.

c. **Ensure timely and transparent communication** of health threats.

Key features of the IHR (2005):

- **Notification obligations**: Countries **must notify WHO** of events that may constitute a **public health emergency of international concern (PHEIC).**
- **Core capacities**: Countries are required to develop minimum public health capacities at points of entry and within their health systems.
- **Human rights protections**: Measures taken must respect the dignity, human rights, and fundamental freedoms of persons.

The National IHR Focal Point (NFP) for Ireland currently sits within the HSE's Health Protection Surveillance Centre (HPSC). The role and obligations of NFPs are outlined in *Article 4 "Responsible Authorities"* of the International Health Regulations (IHR) (2005). The IHR NFP is responsible for **communicating serious cross border threats to health** (SCBTH) to WHO and international and national colleagues 24/7/365. HPSC is responsible for auditing international alerts from **WHO Event Information site (EIS)** that were received, risk assessed and actioned as appropriate within 24 hours. The KPI is completed quarterly and submitted to the National Director of Public Health's Office:

- In the first six months of 2025 (01/01/2025 and 30/06/2025) Ireland received 21 email notifications from other member states' NFPs relating to SCBTH.
- During this period Ireland's IHR NFP sent 18 notifications regarding SCBTH by encrypted email to other NFPs. A further 82 notification communications were sent by WHO - including updated information on ongoing **public health emergencies of international concern (PHEICs)** such as IHR Emergency Committee meeting statements and recommendations, Medical Product Alerts

and general technical updates regarding the WHO event system. These alerts were assessed and communicated to relevant national partners.

Recent Amendments to the IHR (2024–2025)

In response to lessons learned from the COVID-19 pandemic, WHO Member States agreed to amend the IHR in **May 2024**. The package of amendments to the IHR (2005), was agreed by Member States during the 77th World Health Assembly in June 2024. These amendments aim to improve global preparedness and response to future pandemics. Key changes include:

Shortened timelines for reporting:

- Countries must now notify WHO of potential PHEICs within **48 hours**, down from the previous 72 hours.

Establishment of National IHR Authorities:

- Each country must designate a national authority responsible for IHR implementation and coordination.

Equity and access provisions:

- New language emphasizes equitable access to medical countermeasures (e.g., vaccines, diagnostics, therapeutics) during health emergencies.

Digital health and data sharing:

- Encourages timely sharing of genomic and epidemiological data using digital platforms.

Accountability and compliance:

- Introduces mechanisms for monitoring and evaluating countries' compliance with IHR obligations.

Expanded scope of health threats:

- Recognizes broader categories of public health risks, including antimicrobial resistance and climate-related health threats.

The IHR amendments also include the establishment of a **National IHR Authority (NIA)** under Article 4. As outlined in the WHO draft document "*Considerations regarding the designation or establishment of the National* Authority *for the International Health Regulations (2005)"* this amendment intends to provide greater clarity on the attribution of functions mandated under IHR and to address the potential assumption held that the NFP is responsible for the implementation of provisions not explicitly mandated to them

under the current IHR (2005). NHPO/HPSC have also been involved in the ongoing development and revision of the International Health Regulations, including working with DoH and WHO to establish **a new role of national IHR authority for Ireland, whose role is to implement the provisions of the IHR**.

Enhancing Global Health Security and Preparedness: Improving communication for health security:

Within the European Union, member states use an **Early Warning and Response System (EWRS)** to facilitate communication for IHR purposes in accordance with Regulation (EU) 2022/2371 on serious cross-border threats to health. This system allows sharing of information relating to SCBTH directly via a secure online portal and provides a mechanism for notifications to all members of potential threats.

- In the first six months of 2025 (01/01/2025 and 30/06/2025) there were 54 notifications received through the EWRS platform
- There were 42 selective exchange (direct communications to Ireland) messages received.

NPHO and HPSC review and circulate relevant alerts from ECDC **Communicable disease threats reports;** ECDC notifications, WHO Event information alerts, Global Outbreak Alert and Response Network (GOARN) threat reports and UKHSA alerts.

NPHO and HPSC representatives act as nominated **Operational Contact Points (OCP) for Epidemic Intelligence in ECDC** and attend fortnightly meetings with ECDC and other MS to discuss events relevant to the EU.

NPHO and HPSC representatives act as NFP for **GOARN** (the **Global Outbreak Alert and Response Network)**, which is a collaborative mechanism coordinated by **WHO** that brings together technical institutions, networks, and organizations to respond rapidly to public health emergencies, especially infectious disease outbreaks. NHPO and HPSC representatives attend weekly operational calls to gather intelligence from outbreak response missions, network activities and communications for the Network

Fostering International Collaboration and Networks

NPHO and HPSC representatives continue to work in partnership with IHR NFPs of other WHO and ECDC member states and are active in global epidemic intelligence, response, and preparedness networks. They maintain close collaborative working relationships with domestic; close international (Northern Ireland and UK); and European regional colleagues.

Within the past year NHPO representatives have also worked to foster international collaboration and networks though participation in:

- **EPIC11/ECDC Pandemic preparedness exchange visit** in Lisbon to discuss the impact of Article 6 of Regulation (EU) 2022/2371 on Serious Cross Border Threats to Health (SCBTH)
- Aiding the development of the first **ECDC Public Health Preparedness and Response Training Programme**
- **ECDC and EU Health Task Force training in Epidemic Intelligence and Rapid Risk Assessment** for colleagues from Moldova, Georgia, Azerbaijan and Armenia. Training was facilitated in Moldova.
- **WHO Joint Assessment and Detection of Events (JADE) simulation exercise** to test national and international communication pathways.
- **ECDC Epidemic Intelligence Network meetings**
- **ECDC Workshop on Artificial Intelligence awareness** for threat detection and epidemic intelligence, Stockholm
- **European Programme for Intervention Epidemiology Training (EPIET)** - HPSC is current hosting and supervising two EPIET fellows from two overlapping cohorts (c2024 and c2023).
- **Two HPSC staff have been appointed as members of ECDC Disease Network Coordination Committees:** specifically, the **ECDC Food- and waterborne diseases and Zoonoses (EPR) Programme** and the **ECDC Viral respiratory diseases (VPI) Programme**. Coordination committee members are selected from among the main network members to support further development of the networks, by providing advice in relation to ECDC's work on surveillance, prevention and control and other technical, epidemiological or scientific aspects, thus enabling the network to improve its effectiveness and added value.

Spotlight: HPSC EPIET Fellow supports GOARN response to war in Gaza:

ECDC's **European Programme for Intervention Epidemiology Training (EPIET)** programme provides fellows with a unique opportunity to conduct a field assignment overseas. As a designated EPIET training site, HPSC is supportive of fellows availing of such opportunities. On 20 November 2023, the **United Nations Relief and Works Agency for Palestinian Refugees in the Near East (UNRWA)** submitted a request for assistance from the **Global Outbreak Alert and Response Network (GOARN)** for an epidemiologist to support with disease surveillance, outbreak investigation, and data analysis in response to the war in Gaza, Palestine.

Laura Paris, EPIET fellow at HPSC (Cohort 2023) was selected to go on this GOARN deployment. She was based in UNRWA Headquarters Office, Amman, Jordan from 10 March to 8 May 2024. As an epidemiologist, she contributed to enhancing the collection, analysis and reporting of infectious disease data at primary care level across the Gaza strip through UNRWA health centres and shelter medical points. This included the management and maintenance of UNRWA's infectious disease dashboard monitoring 10 diseases of epidemic potential including polio and cholera, verifying alerts, and conducting risk assessments in close collaboration with the field team. She regularly presented UNRWA data at Health and WASH Cluster meetings to inform coordinated and targeted humanitarian responses. In addition, she was involved in

UNRWA's internal evaluation of the WHO Early Warning, Alert and Response System (EWARS) at its health facilities.

A more detailed account of Laura Paris's contribution during her deployment is available at ECDC: Postcard from the field and at Epi-Insight.

Laura Paris had her report on the health crisis in Gaza published in *The Lancet*.

Deterioration of health outcomes in Gaza: 19 months of protracted conflict and also presented a poster on the crisis at ESCAIDE 2024.

Spotlight: Health Protection staff attend Five Nations Health Protection Conference, Birmingham, UK, May 2025.

Health Protection staff from the HSE flew the flag for Ireland and had a wonderful and educational experience attending the **Five Nations Health Protection in Birmingham, in May 2025**, sharing work from Ireland whilst also taking away lots of valuable learning from the four UK nations, and building on pre-existing relationships with UK partners and friends.

The conference heard presentations from a broad range of our Specialist Registrars, Consultants, and Nurses, working in central and Regional Teams including: **Dr Fiona McGuire,** Specialist Registrar in Public Health Medicine: Unboxing Ireland's Pandemic Preparedness with Exercise PANDORA: A National Command Post Exercise to Test the Operational Pandemic Plan; **Dr Michael Hanrahan,** Specialist Registrar in Public Health Medicine: Impact of the RSV Immunisation Pathfinder Programme in the Republic of Ireland; **Dr Allison Deane**, Specialist Registrar in Public Health Medicine: The Impact of HPV Vaccine Disinformation and Misinformation in Disadvantaged Educational Settings in Ireland: A Multi-year Analysis of a School Immunisation System; **Dr Claire Sharkey**, Specialist Registrar in Public Health Medicine poster: HPV Catch Up Campaign in the Mid-West of Ireland; **Hannah Meehan**,

CNM 2 poster: Winter Hospitalisation for Emergency Respiratory Conditions, HSE Dublin and South East 2020-2023; **Michelle Connolly**, Assistant Director of Nursing, HSE Public Health - Building up a resilient health protection workforce, and **Laura Fennell**, CNM 2 poster - An evaluation of acute respiratory illness outbreaks in residential care facilities in the HSE Dublin and Southeast Region in January 2025. We aim to continue to collaborate with our Five Nations' Partners and hope to host this event in Dublin in the near future.

Spotlight on international collaboration to eliminate hepatitis B & C in prison settings:

- The **UN Sustainable Development Target 3.3** calls for the **elimination of viral hepatitis as a public health threat by 2030.** Experts from the National Health Protection Office (Dr Éamonn O'Moore, Dr Derval Igoe) working with colleagues from the Irish Prison Service, made a significant contribution to the development of a new **European toolkit for the elimination of viral hepatitis in prisons,** jointly produced by the **European Union Drugs Agency (EUDA)** and the **European Centre for Disease Prevention and Control (ECDC).**
- This new practical online resource, launched ahead of **Prisoners' Justice Day** on 10 August 2025, aims to support the implementation and scale-up of hepatitis B and C interventions in prisons across Europe. It also reinforces the principle of 'equivalence of care', ensuring that people in prison receive healthcare comparable to that available in the community.
- People in prison experience higher levels of viral hepatitis than the general population, making them a key group for targeted prevention and treatment. In Europe, individuals entering prison are also more likely to have a history of injecting drug use — a major risk factor for hepatitis B and C virus transmission. Sharing of injecting equipment and other risk factors — such as unsafe tattooing or body piercing practices, sharing of razors and unprotected sex — making prisons a priority setting for targeted viral hepatitis prevention and treatment interventions. In the toolkit, the EUDA and ECDC provide practical, evidence-based information for those working in prison healthcare on how to set up interventions to prevent and control viral hepatitis in these settings.
- Short sentences and repeat incarcerations mean that same group of people often move between prison and the community. For this reason, tackling health problems such as viral hepatitis in prison settings can also deliver health

benefits to the wider community by driving down the overall disease burden and preventing future transmission of infections. This is known as the '**community dividend**'.

The toolkit consists of four key sections: background, strategy development, strategy implementation and monitoring and evaluation. It includes **links to relevant public health guidance**, and **practical tools** to understand the context, and define and implement an elimination strategy inside prisons. Examples from prisons in Germany, Spain, France, Italy and Luxembourg, are provided, illustrating models of care.

Spotlight on Ireland's response to mpox Public Health Emergency of International Concern (PHEIC)

Global health protection and disease control require collaborative efforts among countries and institutions, coordinated by organizations like WHO and national public health agencies. In August 2024, WHO declared mpox a Public Health Emergency of International Concern (PHEIC) for the second time in just over two years, citing new clade transmission in some African nations. Emerging infections such as mpox can quickly spread internationally.

In response, Ireland's National Health Protection Office led several actions:

1. Through the National Immunisation Office, supported an Irish government donation of **3,000 vaccines to Sierra Leone in August 2025**, reflecting Ireland and HSE's commitment to vaccine equity.
2. Managed Ireland's (and Europe's) **first case of clade Ia mpox outside Africa,** detected in February 2025 in a traveller from the Democratic Republic of Congo (DRC). The coordinated public health response ensured the patient recovered with no secondary cases; phylogenetic analysis linked the virus to ongoing transmission in Kinshasa.
3. **Collaborated with WHO Europe** to alert all State Parties regarding clade Ia exportation risks and consulted with **ECDC and CDC** on international epidemiology and clinical management.
4. Prepared a peer-reviewed publication on the incident, led by **Dr Cian Dowling-Cullen, SpR.**
5. Made the case's **genome sequence publicly available** on Pathoplexus and GenBank.
6. Fostered cross-border collaboration via participation i**n UK mpox incident management teams**, and with **Northern Ireland** observers on our N-IMT, enhancing all-island and east-west health security.

Objective Eight: Research Strategy

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

Overview

Applying and developing an evidence-base is central to the operations of HSE's National Health Protection Office. The Strategy outlines several actions related to research, including:

- Supporting a research culture in health protection.
- Resourcing evidence generation and synthesis capacity.
- Engaging with Higher Education Institutions (HEIs) to provide continuing professional development programmes on health protection research for staff aligned with service needs.
- Collaborating with academic and strategic partners to develop a health protection research strategy.
- Developing multidisciplinary joint health protection/academic posts with academic partners.
- Facilitating multisectoral working and protected time for publication.
- Promoting Ireland as a partner for European research studies relevant to health protection.

In Year Three, the **Research and Guideline Development Unit (RGDU)** of the NHPO focused on enhancing its internal research environment, investing in critical initiatives, and cultivating collaborations with both national and international academic institutions. The introduction of multidisciplinary positions and the advancement of Ireland's profile as a collaborator in European research initiatives further contributed to the strategic objective of building a robust health protection research infrastructure.

Spotlight on the Research and Guideline Development Unit (RGDU)

The RGDU manages the process for maintaining the quality of guidance produced by the NHPO and its partners. Its main function is to support consistent standards in Health Protection practice by fostering a multidisciplinary approach in developing quality-assured guidance. The RGDU aims to provide guidance that uses current evidence-based methodologies and aligns with HSE values and priorities. Guidance is developed through collaborative efforts, shared resources, and expert input. Implementing evidence-informed guidance helps standardise practice, improve clinical decision-making, and impact health outcomes for both patients and the public.

The Research and Guideline Development Unit (RGDU) fosters a research culture through national and international collaboration. Over the past year, the RGDU identified **health protection research priorities for Ireland**[10] with input from diverse subject matter experts and key opinion leaders. This work will:

- Guide the health protection research agenda for the next five years to meet public health challenges in Ireland.
- Strengthen national public health functions by advancing research and health intelligence, improving public health service delivery.
- Ensure public health actions are evidence-based, lead to better outcomes, support best practice, and promote collaboration among professionals.
- Align research priorities with wider public health issues identified in the literature.

Dr Keith Ian Quintyne, Lead in Evidence Based Medicine, Research & Quality, currently provides oversight to the work of the RDGU.

Year Three Achievements: What we accomplished

Leadership and Unit Development

- The RGDU has established a **suite of guidance methodology** documents, which will underpin future guideline development processes. These include a Health Protection Guidance Development - Standard Operating Procedure; **Framework for Health Protection Guidance Development in Ireland**; **Good Practice Guidance Methodology; and Consensus Based Recommendations Protocol**. (**Action 2**).
- During 2024/2025, 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, The Health Research Board (HRB), Royal College of Surgeons in Ireland (RCSI), Evidence Synthesis Ireland, Cochrane Ireland, United Kingdom Health Security Agency (UKHSA), National Institute for Health and Care Excellence (UK), HSC Public Health Agency, Public Health Scotland and European Centre for Disease Prevention and Control (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 has developed and published an **evidence-based Health Protection Guidance Development - Standard Operating Procedure** (**Actions 1 and 2**).
- Dr Randal Parlour attended **Methods and tools for evidence-based public health with a focus on infectious disease epidemiology, prevention, and control – Stockholm, 24-27 Sep 2024**.
- Ms Claire Gilbourne and Dr Michelle Williams (RGDU) have attended **HSE First Time Managers Programme** (**Actions 1 and 2**).
- RGDU is currently exploring the **potential for multidisciplinary joint health protection/academic posts** and **academic/operational secondments** between the RGDU and academic institutions (**Action 5**).
- Dr Ian Quintyne and Dr Randal Parlour have had proposals for applied projects accepted and will supervise students on the **MSc in Population Health Leadership at RCSI** (**Action 5**).

Spotlight on Development of Evidence-based Guidelines/Guidance (Actions 1 and 2)

From September 2024 – July 2025, the RGDU has published the following guidance documents supporting health protection responses to emergent threats, outbreaks and incidents including:

- **Parvovirus B19**
  - Algorithm for Testing and Management of Pregnant Women (< 22 weeks' gestation) who are contacts exposed to Parvovirus B19: Healthcare Setting
  - Algorithm for Testing and Management of Pregnant Women (< 22 weeks' gestation) who are contacts exposed to Parvovirus B19: Non-Healthcare Setting

- Parvovirus B19 (B19) Infection during pregnancy - Patient Information Leaflet

- **Mpox**

- Mpox in pregnancy - Guidance for maternity services
- Laboratory testing in patients with suspected or confirmed mpox
- MPXV Risk Assessment for Ambulance Service
- Interim MPXV Clade I & II Assessment and Testing Pathway for use in Acute Settings and HIV/STI/ID clinics
- Interim MPXV Clade I & II Assessment and Testing Pathway for use in Paediatric Setting
- Interim MPXV Clade I & II Assessment Pathway for Clinical Settings in the Community
- Interim Guidance for the Public Health Management of Cases and Contacts of mpox – Chapter 1 (Introduction)
- Interim Guidance for the Public Health Management of Cases and Contacts of mpox – Chapter 3 (Clade II Cases and their Contacts)
- Interim Guidance for the Public Health Management of Cases and Contacts of mpox in Ireland Chapter 4: Contact Tracing Matrix (Clade I and Clade II)
- Interim Guidance for the Public Health Management of Cases and Contacts of mpox – Chapter 5 (Clades I & II: School & Childcare facilities)
- Interim Public Health Risk Assessment for Humanitarian Aid Worker returning from MPXV Clade I Areas

- **Acute Respiratory Infection**

- Guidance on testing for Acute Respiratory Infection (ARI) in Residential Care Facilities (RCF) - Winter 2024/2025
- Algorithm: Guidance on testing for Acute Respiratory Infection (ARI) in Residential Care Facilities (RCF) Winter 2024/2025
- Management of adults and children presenting with symptoms of acute respiratory infections (ARI) at Primary Care Facilities when influenza is circulating
- Guidance on the use of antiviral agents for the treatment and prophylaxis of influenza

- Guidance on the management of pregnant and post-partum women with suspected influenza

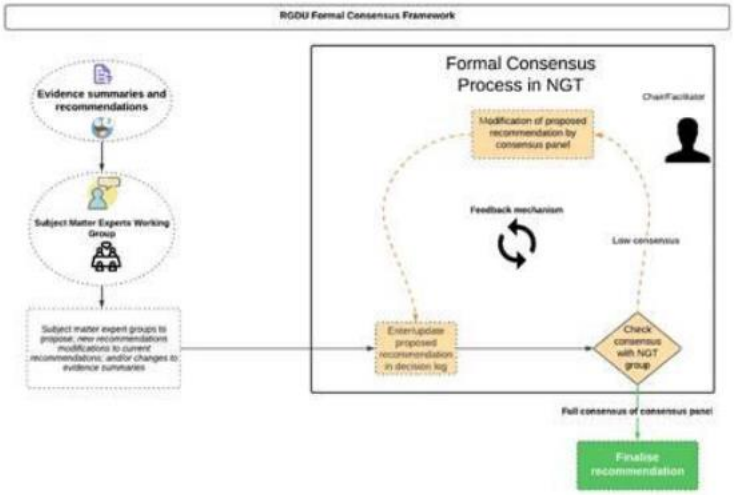
- **National Tuberculosis (TB) Guidelines for Ireland**
  - Chapter 3: Diagnosing and Managing TB Infection
  - Chapter 4: Tuberculosis (TB) Disease
  - Chapter 5: Treatment of Cases with Drug-resistant Tuberculosis (DR-TB)
  - Chapter 6: Tuberculosis (TB) in Children and Adolescents
  - Chapter 7: Contact Tracing and Case Finding
  - Appendix 1: Tuberculin Skin Testing Contraindications, Administration and Interpretation
- **Measles**
  - Guidelines for the Public Health Management of Measles in Ireland
  - Public Health Risk Assessment of Suspect Measles Cases Part I
  - Public Health Risk Assessment of Suspect Measles Case Part II
  - Information for contacts exposed to measles on a flight
  - Measles exposure during pregnancy - obstetric guidelines
  - Post-measles exposure Immunoglobulin Pathway
  - Information for close contacts of measles cases who require Human Normal Immunoglobulin (HNIG)
  - Laboratory investigation of measles infection in NVRL
- **Pertussis**
  - Identification and management of Pertussis in Primary care and other ambulatory care settings – Algorithm
  - Laboratory Test Selection Algorithm for Confirmation of Clinically Suspected Cases of Pertussis
  - Algorithm for the management of close contacts of Pertussis
  - Pertussis Oral Antibiotic Treatment and Chemoprophylaxis Recommendations
  - Guidance for Public Health Management of Pertussis

The **Research and Guideline Development Unit (RGDU)** has developed a comprehensive suite of guidance documents to update and support the **Public Health Management of Acute Respiratory Infections (ARI)**. These resources aim to strengthen national preparedness and response, particularly in the context of seasonal respiratory virus circulation and emerging threats. In addition, RGDU is currently developing **new integrated guidance** on the **health clearance of healthcare workers** and the **management of healthcare workers living with bloodborne viruses**, including **hepatitis B, hepatitis C, and HIV**. This work supports a consistent, evidence-based approach to occupational health and infection prevention across healthcare settings.

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 approach to guideline development is shaped around the guideline international network **(GIN) - McMaster guidelines development checklist (GDC)**, which reinforces the guideline development process, and underpins the development and implementation of authentic public health guidelines for Ireland. The RGDU have adopted **"GRADE-ADOLOPMENT" methodology** for this purpose and this framework is endorsed by organisations including WHO, ECDC and the National Institute for Health and Care Excellence (NICE). This

framework complements the **formal consensus methods**, incorporated by the RGDU, that are effective in fusing the requisite evidence sources for ensuring a rigorous, comprehensive and equitable evidence base for public health practice. (**Actions 1 and 2**).



Research, Publications, and Presentations

On **19th March 2025** the RGDU delivered an SpR study day at **Faculty of Public Health Medicine of Ireland, Royal College of Physicians of Ireland**. The study day was attended by twenty-four participants, and the post training evaluation was particularly positive on both content delivered and programme facilitation.

Presentations

Faculty of Public Health Summer Scientific Meeting

The RDGU contributed to abstracts and posters at the Faculty of Public Health Medicine Summer Scientific Meeting on 20th and 21st May 2025.

These included:

- **Review on the evolution of WHO recommendations and evidence base for oseltamivir (Tamiflu) for treatment and prevention of Influenza**
- **Artificial intelligence for pandemic preparedness: bridging the gap between promise and practice**
- **The itch that needed scratching": Using a Good Practice Guidance methodology to develop a standardised approach to support effective management of scabies cases and outbreaks**

- **Leveraging Consumer Purchase Data (CPD) for Effective Contact Tracing: Balancing Public Health Benefits and Privacy Concerns.** (**Actions 3 and 4**).

Publications

The number of academic publications co-authored by RGDU members has significantly increased during 2024/2025 and this is indicative of heightened research engagement among team members and collaborators.

- **Parlour R, Gilbourne C, Williams M, Quintyne KI**, O'Moore É. **Applying formal consensus methods to enhance the credibility of public health guideline development – a case study**. The Open Public Health Journal. 2025 (In press)
- **Gilbourne G, Parlour R**, Boland M, O'Moore É, **Williams M, Kiersey R**. **Determining Health Protection Research Priorities for Ireland**. Global Public Health. 2025 (In press)
- Saif-Ur-Rahman K, Burke NN, Murphy L, **Parlour R**, Boland M, Taneri PE, et al. **Synthesizing Public Health Preparedness Mechanisms for High-Impact Infectious Disease Threats: a Jurisdictional scan**. Journal of Evidence-Based Medicine [Internet]. 2025 Mar 28;18(2). Available from: https://doi.org/10.1111/jebm.70019
- Marron L, Gilroy J, **Williams M, Parlour R**, Boland M. **A narrative literature review to inform the development of a health threats preparedness framework in Ireland**. Frontiers in Public Health [Internet]. 2025 Feb 6;13. Available from: https://doi.org/10.3389/fpubh.2025.1490850
- Gilmore J, Comer D, Field DJ, **Parlour R**, Shanley A, Noone C. **Recognising and responding to the community needs of gay and bisexual men around mpox**. PLoS ONE [Internet]. 2024 Nov 12;19(11):e0313325. Available from: https://doi.org/10.1371/journal.pone.0313325
- Dillon C, O'Donnell K, McKeown P, Lyons F, Browne C, Fallon U, Keegan A, Timoney K, Bruton O, Downes P, Mullane P, Carroll C, Doyle S, Barrett P, Cosgrave B, Kieran R, Shanley A, **Parlour R**, Igoe D, Robinson E. **Mpox outbreak - Response and epidemiology of confirmed cases in Ireland from May 2022 to May 2023**. Ir Med J. 2024 Jun 27;117(6):975. PMID: 39041467.
- **Quintyne KI**, Franca R. **Leveraging consumer purchase data (CPD) for effective contact tracing: balancing public health benefits and privacy concerns.** Ir Med J. 2025 (In press)

- **Quintyne KI**, Reilly C, Carpenter C, McNally S, Kearney J. **Attitudes towards COVID-19 and influenza vaccination in healthcare workers**. Ir Med J. 2024 Jul;117(7):P1002.
- Carroll Ciara, Meehan Mary, Connolly Roisin, Prendergast Jayne, Magnone Colette, Meehan Aine, Migone Chantal, **Quintyne Keith Ian**, Carpenter Caroline, Byrne Helen, Cunney Robert, Mullane Paul. **Outbreak of invasive Group A streptococcus disease in a nursing home in Ireland in February 2023 caused by emm type 18**. Euro Surveill. 2024;29(17):pii=2300609. https://doi.org/10.2807/1560-7917.ES.2024.29.17.2300609

Spotlight on academic collaborations

RGDU/RCSI Collaboration

The strengthening collaboration between the **Research and Guideline Development Unit (RGDU)** and the **Royal College of Surgeons in Ireland (RCSI)** has been a notable success throughout 2025. Quarterly strategic meetings involving **Dr Keith Ian Quintyne**, **Dr Randal Parlour**, and members of the RCSI Faculty have laid a strong foundation for deeper collaborative engagement in the months ahead.

As part of this partnership, **Dr Quintyne and Dr Parlour** have successfully submitted research proposals that will be undertaken by students enrolled in the **MSc in Population Health Leadership** programme during the 2025/2026 academic year. These projects will focus on priority areas in public health practice and policy, contributing to evidence generation and capacity building.

In addition to academic supervision, the collaboration has also facilitated joint exploration of **research opportunities**, **guideline development**, and **knowledge translation activities**, with the aim of aligning academic outputs with national health protection priorities. Further initiatives are being scoped to expand interdisciplinary engagement and support innovation in population health leadership.

Objective Nine: A Multidisciplinary Health Protection Workforce

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

Health Protection is a collaborative endeavour. Achieving optimal results requires building a diverse team with the necessary expertise and ensuring full utilisation of all our organisation's talent pool. Our **Health Protection Strategy** sets out key steps to build a multidisciplinary approach, including:

1. Determining necessary skills and capabilities within the HSE health protection workforce

2. Creating and implementing an ongoing education and training plan, covering leadership, management, teamwork, communication, governance, and quality

3. Advancing Specialist Registrar Public Health Medicine training with RCPI to cover all health protection areas

4. Expanding participation in European multidisciplinary health protection programmes; and

5. Ensuring job planning and appraisals align with service goals.

Spotlight on Health Protection Nurses

Health Protection teams, both central and regional, work daily to deliver our strategic objectives in an environment that encourages multidisciplinary collaboration and continuous learning. Central to this is our nursing workforce, led by Dr Toney Thomas, Director of Nursing in the NHPO, who oversees a comprehensive programme of

professional development and training with colleagues across Regional teams and HSE central functions.

At a glance: key numbers in 2024

Year Three health protection nursing highlights:

- Established the Health Protection Nursing TB Nurse Network (TNN) to enhance workforce skills and support the National TB Strategy.
- Audited new TB cases and clinical documentation for adherence to best practice and NMBI (2015) guidelines.
- Contributed to bed utilisation and hospital day case audits.
- Surveyed nurse managers on **Nursing Management Competency**.
- Supported winter preparedness with 14 webinars/study days across six PH Areas focused on influenza, COVID-19, and ARIs.
- Improved immunisation uptake through regional GP nurse conferences and educational sessions with the National Social Inclusion Office.
- Participated in the **EuroCAT** congenital anomalies registry.
- Collaborated with the HSE Stirling Research group on policy guidance for engaging with unhealthy industries.

- Launched a public-facing Health Protection Nursing webpage to inform stakeholders.
- Organised **11 CPD events** covering various topics (see Table 1).
- Supported nurses' professional development through targeted course enrolment.

	Title of CPD Session:
1	Sexual Health in the Midwest
2	Healthcare Workers attitudes to COVID-19 and Influenza vaccination
3	An overview of Influenza vaccination rates among cases in HSE South-West
4	Learning From Incidents to Prevent Waterborne Outbreaks
5	Health Improvement
6	Bioterrorism in the context of Public Health
7	Health Impact Assessment
8	Primum non Nocera. Vaccination to Prevent Influenza
9	Polio and Acute Flaccid Paralysis Surveillance
10	ID Modelling. Applying modelling to interpret disease data
11	Updated Guidelines for Public Health Response to Chemical Incidents

Table 1: List of CPD Sessions delivered by the National Health Protection Office to support Continuous Professional Development (CPD) of multi-disciplinary teams in health protection centrally & regionally

Achievements

- Created the Irish TB Nurse competency framework.
- Launched the TNN forum with clear terms of reference to support training.
- Organised regular CPD events, tracked attendance, and issued certificates.
- Managed mandatory training and maintained compliance above 85%.

Celebrating Success

- Oral presentation given at the **Five Nations HP conference, UK, 2025**.

- Oral presentation delivered at the 2nd Health Protection Conference, Dublin, 2024.
- A total of 26 poster presentations led or contributed to by HP Nurses at these conferences.

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

The **National Health Protection Office (NHPO)**, led by the Director of National Health Protection (DNHP), coordinates a **multidisciplinary team** to address health threats in Ireland. It oversees the **Health Protection Surveillance Centre (HPSC)**, which monitors communicable diseases & non-infectious environmental health threats, and the **National Immunisation Office (NIO)**, which manages vaccine programs and public health communication, ensuring evidence-based, high-quality immunisation services. Over the last three years since the establishment of the **National Health Protection Office** (NHPO), and in accordance with the objectives outlined in the **National Health Protection Strategy,** we have been diligently developing a **cohesive brand identity** for an integrated, all-hazards national health protection service. This process has involved developing robust governance frameworks within the NHPO and its constituent bodies (HPSC & NIO), as well as clarifying the relationship between our central (national) functions and the **Regional Health Areas**, particularly considering recent changes to HSE organisational governance.

Within the past year, the NHPO has taken several key steps to **develop organisational function**:

- Enhanced **Senior Management Team** structures to facilitate more efficient and effective collaboration across NHPO, HPSC, and NIO teams
- Advanced the adoption of '**lean and agile working'** practices to optimise resource utilisation—including our specialist workforce—and ensure closer alignment with strategic and operational priorities for improved efficiency, effectiveness, and impact
- Established a multi-disciplinary **Senior Leadership Group** to support the Senior Management Team's objectives, foster greater collaboration among staff, and drive our quality improvement agenda throughout the organisation

- Provided **system leadership in health protection** through close collaboration with Regional colleagues on both reactive and programmatic initiatives, using and expanding the evidence base to enhance response quality, partner engagement (both internal and external), and overall national health security
- Contributed actively to the wider Public Health Reform Programme, including development of the new **National Public Health Strategy**, thereby supporting the vision of better health and wellbeing for all individuals in Ireland, with a specific focus on **protecting the population from all health threats**.

Figure 9: Key Strategic Objectives in the HSE National Public Health Strategy

Protecting Our Population from All Health Threats:

Within the new **Public Health Strategy**, under the domain of **Health Protection**, we describe our ambitions to:

- Promote evidence-based collaboration to prevent, monitor, and manage health threats—including climate change and all hazards.
- Strengthen readiness for, response to, and recovery from public health emergencies, while applying lessons learned.

- Serve as a reliable source of health information to combat misinformation and enhance health literacy.
- Work with stakeholders to address climate and environmental health impacts, focusing on adaptation and sustainability.
- Foster One Health partnerships to tackle challenges like zoonotic infections and antimicrobial resistance affecting people and animals.

We will achieve this by:

- Ensuring effective preparedness, response, and recovery from public health incidents, and applying lessons learned to future events.
- Maintaining comprehensive emergency preparedness plans and contributing to broader public health incident planning.
- Enhancing early detection and rapid response capabilities.
- Collaborating with stakeholders to deliver regular training and simulations to improve readiness.
- Advocating for policies and legislation that support public health preparedness and response.
- Supporting ongoing stakeholder engagement and planned recovery, acknowledging recovery as the longest emergency phase.
- Systematically capturing lessons from past and current incidents, such as COVID-19, through reports and reviews to strengthen future preparedness and develop evidence-based guidance.

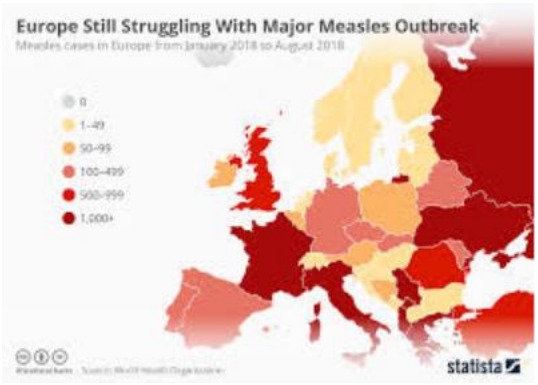
Spotlight on developing an All-Hazards Approach to Health Protection in Ireland: The Second National Health Protection Conference, Dublin.

In **October 2024,** in Dublin Castle, we brought together our friends and colleagues from across Ireland, including Northern Ireland, with others from Great Britain, to deliver the first ever national Health Protection Conference focused on the issues of Environment and Health. This landmark event created a learning opportunity for us all and provided much-needed focus on the challenges we face in

relation to threats associated with climate change, environmental health threats, and chemical hazards. This built on work done through 2024, including training delivered in partnership with the **UK Health Security Agency** (UK HSA) on chemical and radionuclear hazard management. We were honoured at that event to have a keynote presentation delivered by **Dr Ed Wynne-Evans** (Director of Radiation, Chemical and Environmental Hazards Directorate, UK Health Security Agency) who emphasised the need for close cooperation between UK and Ireland in preparing for and responding to threats from climate change and other environmental threats, reflecting that such incidents know no borders and it is in our mutual interest to share intelligence, support capacity and capability building, and develop joint approaches where they are appropriate and deliverable. We also had a presentation from **Professor Mary Horgan** (Chief Medical Officer, Department of Health) who described the work just completed around that time on preparing Ireland to deal with emergent health threats across all hazards, which was published not long after this conference at Report of the Emerging Health Threats Function Expert Steering Group. The programme from the event can be revisited at Health Protection Conference 2024. Reflections from participants in the event on the day can be watched at: HSE Health Protection conference 2024: Managing Environmental Hazards in a Changing Climate.

Spotlight on Providing System Leadership to National Health Protection: Responding to the threat from measles in Ireland:

During **2024-2025**, several incidents and events required national leadership through structures such as National Incident Management Teams (NIMTs) or National Task & Finish Groups, including a response to **measles & pertussis outbreak** and the WHO **mpox PHEIC**:



National Incident Management Team in response to threat from measles: In 2024, and continuing into 2025, many countries in Europe and elsewhere experienced significant rises in cases of measles, a highly infectious disease which sometimes serious outcomes for adults and children- in Ireland in 2024 we had the death of an adult from measles reported. The most effective public health intervention is **vaccination** with two doses of measles-containing vaccine- in Ireland, this is usually through administration of the **MMR vaccine**. At point of initiation of the work in January 2024, coverage of MMR vaccine, administered through the Primary

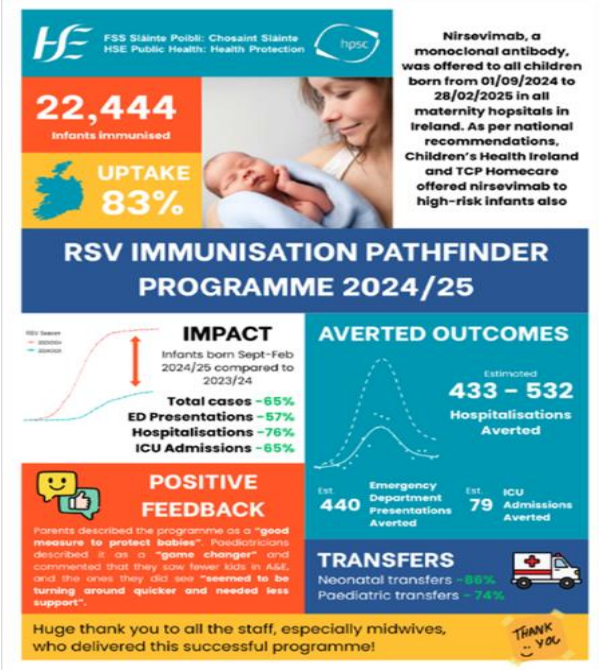
Childhood Immunisation (PCI) Programme was **well below the WHO recommended 95% coverage level** and had been consistently below 90% for several consecutive quarters, which initially was consequent to the COVID-19 pandemic disrupting many PCI vaccines delivered through primary care, but has continued since that time.

- Over the course of 2024 to mid-2025, there were **256 reported cases of measles in Ireland** (230 confirmed, 25 probable, 1 possible).
  - **Most cases** were found in people living in HSE Dublin Northeast (n=110, 43%) and HSE Dublin Midlands (n=80, 31%).
  - **Some ethnic populations were over-represented among cases**, with people from the Roma ethnic group making up 20% (52) of the total caseload, compared to White Irish people contributing 23% (60) of all cases reported.
  - Of note, there were 40 reported outbreaks, the majority in private households, associated with 172 cases.
  - **Among cases, 64% were either un- or under-vaccinated, where vaccine status was recorded**.
- The NHPO convened an NIMT to lead **a collaborative multidisciplinary approach to preventing and controlling risks of outbreaks of measles**, working in partnership effectively with **Regional and central teams** and a range of subject matter experts and organisations. The work of the NIMT included:
  - **delivering an MMR catch-up vaccine** programme to the target group of children aged 1-17 years, young adults 18-24 years, healthcare workers (HCWs), and specific underserved populations, delivered by GPs and HSE immunisation Teams. **Between March- September 2024, ~11,500 vaccines were administered**.
  - A **public-facing communication strategy** was developed to support the MMR Catch-up Campaign and raise awareness of measles symptoms and vaccination importance. There was close collaboration with the **National Social Inclusion Office** to develop information materials in multiple languages reflecting the target cohort which included vulnerable migrant populations and some ethnic populations traditionally more vaccine hesitant. In delivering the work, NHPO engaged with community groups and non-governmental organisations to promote MMR vaccination in target groups.
  - This work also led to the development of **new evidence-based guidance on measles** for Ireland Guidance - Health Protection Surveillance Centre.

Since the completion of the MMR catch-up campaign in 2024, there continues to be provision of MMR vaccine to under-immunised individuals via GPs; provision of a single dose of MMR vaccine to infants aged 6-11 months prior to travel abroad, available at GPs, and **extensive ongoing communication** to the health professionals and the public on measles risks and promotion of MMR vaccine including through patient safety alerts, posters for public spaces in health facilities, regular communications to GPs via ICGP, and regular updates on the HPSC and HSE websites, social media accounts as well as print media.

Spotlight on NHPO leadership in national immunisation programmes: Delivering RSV immunisation Pathfinder Programmes.

Respiratory syncytial virus (RSV) is a common, highly contagious cause of respiratory infection in children and adults. Severe cases mainly affect older adults, immunocompromised individuals, and **young infants**—especially those born during periods of high RSV activity in late autumn and winter. Each winter in Ireland, about half of babies get RSV, with 4% hospitalised and some needing intensive care. In the **2023/2024 season,** 1,431 children under 1 were hospitalised (2.5% of Irish infants), and 118 required ICU treatment**.** Infants under 1 made up 78% of all RSV-related ICU admissions that year. **Nirsevimab** is a monoclonal antibody approved by the European Medicines Agency (EMA) in 2022, providing passive immunity against RSV for around 150 days. It is over 80% effective at preventing RSV-related lower respiratory tract infections and has a strong safety profile. Many countries, including Spain, France, the USA, Canada, Chile, and Australia, have adopted nirsevimab for infants. **In Ireland**, the NIAC recommended its use for all infants during their first RSV season in October 2023. The **NHPO** led out on the **HSE RSV Immunisation Pathfinder Programme**, launched in September 2024, which offered nirsevimab to infants born between 1st September 2024 and 28th February 2025, as well as clinically high-risk infants under 12



months, through hospitals and homecare services. The **RSV Steering Group** provided programme governance including overseeing the formal evaluation of the programme and its impact, which been described by paediatricians in Ireland as a 'game changer', resulting in significant drops in RSV-related infection rates and complications of infection in the birth-cohort exposed to nirsevimab. In the **nirsevimab-exposed cohort** during the 2024-25 season compared with 2023-24 season, we saw:

- a **65% reduction** in total cases of RSV
- a **57% reduction** in Emergency Department presentations
- a **76% reduction** in hospitalisations
- and a **65% reduction** in ICU admissions.

Following Ministerial approval in 2025, the NHPO has launched the **RSV Pathfinder Two** immunisation programme. This extends immunisation to a **catch-up group of infants under 6 months old as of September 1, 2025**, in addition to the cohort of newborns in maternity settings, and high-risk home infants as per the previous programme. The Pathfinder Two programme began on August 25, with online booking available for HSE community clinics from September 1 to early October, aiming to finish by mid-October ahead of the flu vaccine campaign. Modelling suggests this extension could prevent up to 800 hospitalisations if uptake matches last season (~80%). The HSE is awaiting Department of Health policy decisions, informed by HIQA's Health Technology Assessment, which will guide future immunisation planning from winter 2027 onward.

Spotlight on NHPO leadership in developing a new Regional model of care for post-exposure therapeutics (PET) services

Background: On 4 July 2025, **Cherry Orchard Hospital** in Dublin discontinued its acute clinical service for the assessment of patients and guidance on administering critical biologics used in acute **post-exposure treatment (PET)** and prophylaxis for rabies, botulism, and diphtheria. Although this service was not officially commissioned as a national resource, it effectively operated as one, with many patients previously referred to it coming from the eastern region of the country.

NHPO provided system leadership to a process to coordinate the regionalisation of the service in alignment with Sláintecare's goal to decentralise decision-making and care delivery. To support this effort, NHPO formed a **multidisciplinary Task & Finish Group (TFG)** that included participants at both national and regional levels to develop and implement a new regional service model. Initial efforts focused on **rabies** as coincidentally during this period, there was reported the death of an individual in the UK

from rabies after contact with a stray dog in Morocco, which heightened awareness of rabies and rabies-prone exposures (RPEs). Following this event, there was an increase in medical consultations regarding rabies, particularly among people returning to Ireland from regions where rabies is endemic. To date, the number of such presentations is about twice the level seen over the same period in previous years. Between May and August this year >200 doses rabies vaccine and 67 vials of Human Rabies Immunogloblin (HRIG) have been ordered, as compared with the typical average annual range of 10-40 vials.

Regionalisation process: Since 4/7/2025, the **rabies service** is being delivered at Regional level and supported by resources developed by the NHPO's TFG including:

- A rabies landing page with extensive clinical and public health guidance, source of biologics and advice for the public
- National development of rabies guidance for clinical and public health assessment of rabies-prone exposures (RPEs)
- New ordering procedures for accessing and delivery of PET (vaccine and Human Rabies Immunoglobulin (HRIG)) through the **National Cold Chain Service (NCCS)**
- A template national pathway for potential rabies exposure risk assessment and PET for adults and children who present to their GP or Emergency Department. This is to guide clinical decision making, and is designed to be adapted to local circumstances (resources and capacities) at regional level
- The establishment of **Regional multidisciplinary PET committees** to oversee local design and implementation
- The provision of **training material** to support clinical decision makers and others involved in service delivery.
- Liaison with the **National Immunisation Advisory Committee** to ensure that the guidance and N

- NIAC rabies chapter are aligned, and responsive to system needs on issues such as the degree of flexibility that is allowable regarding timelines between each dose in the rabies vaccination schedule.
- Continued and monitoring through stakeholder feedback via the TFG which continues to meet monthly until the service is safely and effectively bedded in.

Summary of patient pathway

Individuals with potential rabies exposures typically present to either an Emergency Department (ED) or General Practice. Risk assessment is conducted based on: 1) the type of exposure (contact between animal saliva and broken or penetrated skin, or mucous membranes, is considered the highest risk), and 2) the country of exposure (countries are categorised by risk for both terrestrial animals and bats; bats in all countries are classified as a rabies risk).

If a rabies post-exposure (RPE) situation is identified, post-exposure treatment (PET) is provided according to the risk ranking from the assessment. The regional Infectious Disease (ID) service manages additional vaccination and may coordinate a continuity plan with the GP if they are able to complete the course. Patients who begin PET abroad are referred directly to ID services or their GP.

Conclusions and Next Steps

Year Three 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, to highly pathogenic avian influenza. The year has also seen significant structural changes in HSE with the continued evolution 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 Three of the HSE Health Protection Strategy implementation continues to lay solid groundwork for advancing public health protection in Ireland. As the Strategy moves into its **fourth 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 2025/2026 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 Four Implementation Report in 2026**.