



2024-2025

Vision & Strategic Approach to Adult Immunisation in Ireland

Position Paper

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Abbreviations

AMR	Anti-microbial resistance	LGBTQI+	Lesbian, gay, bisexual, transgender, queer and intersex
CHOs	Community health organisations	MMR	Measles, mumps and rubella
CMO	Chief Medical Officer	MSMs	Men who have sex with men
COPD	Chronic Obstructive Pulmonary Disease	NIAC	National Immunisation Advisory Committee
DALYs	Disability-adjusted life years	NIIS	National Immunisation Information System
DoH	Department of Health	NIO	HSE National Immunisation Office
ECDC	European Centre for Disease Control	NITAG	National Immunisation Technical Advisory Group
EHR	Electronic Health Record	OHE	Office of Health Economics
EMA	European Medicines Agency	PHCTPs	Primary Healthcare for Traveller Projects
EU	European Union	PMS	GP Practice Management System
GPA	General practice assistant	PSI	Pharmaceutical Society of Ireland
GPN	General practice nurse	RCPI	Royal College of Physicians of Ireland
HCPs	Healthcare professionals	REO	Regional Executive Officer
HIQA	Health Information Quality Authority	RHAs	Regional Health Areas
HPRA	Health Products Regulatory Authority	RSV	Respiratory syncytial virus
HPSC	Health Protection Surveillance Centre	RWE	Real world evidence
HPV	Human papilloma virus	TCHWs	Traveller Community Health Workers
HSE	Health Service Executive	TILDA	The Irish longitudinal study on ageing
HTA	Health Technology Assessment	VICP	Vaccine injury compensation scheme
IHI	Individual Health Identifier	VPDs	Vaccine-preventable diseases
IOP	Irish Institute of Pharmacy	WHO	World Health Organisation
KPIs	Key performance indicators		

Acknowledgement

This position paper outlines the current landscape of adult immunisation in Ireland, highlights existing challenges, and identifies key priority areas for recommendation in the development of a comprehensive adult immunisation programme.

To inform the position paper, a diverse group of experts in healthcare and immunisation across Ireland, the United Kingdom (UK) and New Zealand were engaged. This included 17 professionals with expertise in immunisation policy, vaccination programme delivery, public health, infectious diseases, respiratory and gastroenterology specialities, behavioural science, ethics, research, communications, and vulnerable patient groups. Their valuable insights were gathered through stakeholder interviews and an in-person advisory board meeting, which played a crucial role in highlighting current challenges within adult immunisation in Ireland, identifying opportunities and formulating recommendations for an effective adult immunisation programme in Ireland. Beyond primary research, insights were incorporated from publicly available sources, including academic publications and government websites. This comprehensive approach facilitated a thorough evaluation of Ireland's current immunisation landscape, aiming to build a holistic understanding of the existing challenges and future needs.

This position paper was prepared by EY^a for GSK. This position paper is based on expert interviews and secondary research. The perspectives presented in this document are synthesised from expert commentary. The views and opinions expressed herein do not represent or reflect the position or opinions of the Government or its members.

Objective

The objectives of this position paper are two-fold; firstly, to underscore the necessity of and secondly, to outline the essential requirements for instituting a national, comprehensive, and fit-for-future adult immunisation programme in Ireland.

The overall aim of the position paper is to provide a detailed analysis and strategic roadmap that will support the case for redirecting funding towards preventative care in the form of vaccination and ensuring equitable access to vaccines across the entire adult population.

This paper includes:

- An outline of the current approach to adult immunisation in Ireland, including expert perspectives
- Global best practice case studies in immunisation approaches
- Strategic goals and key recommendations for inclusion in advancing the development of a comprehensive national approach to adult immunisation in Ireland
- Strategic roadmap for implementation

^a In carrying out the work and preparing the report, EY have worked solely on the instructions of GSK and for GSK's purposes. The report may not have considered issues relevant to any third parties, and any use such third parties may choose to make of the report is entirely at their own risk and EY shall have no responsibility whatsoever in relation to any such use.

Executive Summary

Vaccination stands as the most effective public health intervention available, second only to clean water in preventing disease. With vaccines available to prevent or ameliorate over 20 life-threatening diseases, immunisation has the potential to reach more people than any other health and social service, forming a cornerstone of primary healthcare and driving universal health coverage [1]. A 2024 study by the Lancet demonstrated that immunisation efforts have saved an estimated 154 million lives over the past 50 years, equivalent to saving six lives every minute [2]. The COVID-19 pandemic further underscored the vital role of vaccines in public health, with COVID-19 vaccines reducing deaths by at least 57% in the World Health Organisation (WHO) European Region since their introduction in December 2020 [3]. Between the years 2020 and 2023, COVID-19 vaccines saved ~9,571 lives in Ireland alone [4].

While vaccination programmes have traditionally focused on paediatric populations, there is a growing recognition of the need to bridge the vaccine gap for adults. This is reflected in the WHO's Immunisation Agenda 2030, which envisions a world where everyone benefits from vaccines at every age [1]. Recognising the benefits of a structured approach to adult immunisation, many countries have adopted a 'life course' approach, emphasising the importance of immunisation at all life stages [5]. It is vital that we ensure that the success observed in our paediatric programmes follows through to the adult population to promote an equitable, life-course approach to vaccination.

As Ireland experiences a demographic shift towards an ageing population, the importance of a proactive, strategic approach to adult immunisation becomes increasingly critical. The number of people aged 65 and over is expected to double by 2051 [6], and the prevalence of chronic diseases is rising, putting pressure on healthcare systems globally.

Adult immunisation programmes provide significant economic benefits, with studies showing a high return on investment [7]. Vaccines can play a crucial role in promoting healthy ageing, protecting against morbidity and mortality, and supporting healthcare sustainability [8]. Vaccines protect older adults and enable them to remain active in their communities, thereby making a significant contribution to the informal economy, with positive effects on caregivers, families, employers and wider society. In addition, vaccines help mitigate the risk of antimicrobial resistance (AMR) by preventing infections and reducing the use of antimicrobials [9].

There are currently ~286 vaccines in development worldwide [10], with 80% of these developments aimed towards the adult population [11]. The next decade will likely see the availability of these new vaccines targeting different age groups, requiring healthcare systems and policies to evolve concurrently to ensure these innovations effectively get into the hands of individuals.



Vision For Ireland

Aligned with the WHO's Immunisation Agenda 2030 (IA2030), this paper sets out the vision for **'an Ireland where everyone, everywhere, at every age, fully benefits from vaccines for good health and well-being'**.

In order to achieve this vision, we recommend **the development of a comprehensive national immunisation strategy for Ireland**, promoting a life-course framework and a whole-of-government approach to immunisation.

This report outlines the current approach to adult immunisation in Ireland, explores key themes such as governance, technology, workforce, and equity, and highlights challenges and opportunities through expert interviews. The report proposes that the strategy should focus on four key priority areas, each with specific recommendations to enhance public health and protect those who are most vulnerable to vaccine preventable diseases.

STRATEGIC APPROACH TO ADULT IMMUNISATION IN IRELAND

It is recommended that a comprehensive, stand-alone national immunisation strategy that promotes a life-course framework and adopts a whole of government approach to vaccination is developed



TRUSTWORTHY

Build trustworthy vaccination programmes supported by systems grounded in informed consent and transparent, evidence-based information, offering clear opportunities for individuals to ask questions and fully understand the benefits and risks, thereby supporting widespread acceptance and participation, ultimately enhancing community immunity and protecting public health



EQUITABLE

Ensure equitable access to adult immunisation which reflects NIAC recommendations, considers the diverse needs of the entire population, focused on maximising convenience for individuals and delivered in an integrated manner, thereby protecting the most vulnerable and enhancing public health



DATA ENABLED

Leverage a data-driven approach to immunisation, utilising accurate vaccination and population data to empower individuals and inform timely public-health decision-making



FUTURE FIT

Ensure Ireland is optimally positioned to leverage future vaccine innovations, thereby protecting public health, while supporting the sustainability of the healthcare system and wider economy



Strategic Priority One: Build Trustworthy Vaccination Programmes

The first priority is to build trustworthy vaccination programmes grounded in informed consent and transparent, evidence-based information. This involves resourcing the Health Service Executive's (HSE's) National Immunisation Office (NIO) to standardise vaccine messaging, create accessible information on vaccination schedules, and promote vaccine literacy through educational campaigns. Additionally, the report recommends the recommencement of the National Vaccine Alliance to foster evidence-based communication on adult immunisation. Funding should be allocated to research public attitudes towards immunisation and combat misinformation, and communication on immunisation should be integrated into existing HSE programmes. Furthermore, a consistent approach to education on immunisation should be adopted in undergraduate courses and professional development programmes for healthcare providers (HCPs) and the benefits of immunisation should be communicated as part of school curricula. Transparency in vaccine safety monitoring should be promoted and a vaccine injury redress programme should be established with clear legal frameworks and eligibility criteria.



Strategic Priority Two: Ensure Equitable Access to Immunisation

The second priority focuses on ensuring equitable access to adult immunisation, reflecting the National Immunisation Advisory Committee (NIAC) recommendations and addressing the diverse needs of the whole population. A whole-of-government approach is recommended to engage underserved populations and to ensure equitable access across all demographic groups. Immunisation champions should be designated in each HSE health region to ensure cohesive communication and implementation of immunisation programmes. A service delivery model prioritising equitable access should be developed, offering multiple entry points to vaccination, including pharmacies, workplaces, hospitals, and mobile clinics. Vaccination plans should be created and regularly updated, leveraging quantitative and qualitative data, including from existing networks and patient advocacy groups. A more coordinated approach to vaccination of immunocompromised individuals should be developed, including clear guidelines for HCPs. The vaccinator workforce should be developed with flexibility and agility in mind and a standardised approach to training and accreditation should be developed for all vaccinators.



Strategic Priority Three: Leverage a Data-Driven Approach

The third priority is to leverage a data-driven approach to immunisation, utilising accurate vaccination and population data to empower individuals and inform public-health decision-making. A comprehensive immunisation information system should be implemented, integrating data from all settings and providing access to individual vaccination records. A reminder and recall messaging system should be instituted to prompt individuals for vaccination based on age, medical history and other criteria. Vaccination data should be integrated with demographic and clinical information for detailed analysis and targeted promotion to specific cohorts of people. Access to timely vaccination data should be ensured to guide effective service delivery and rapid public health response to emerging threats. The Health Information Bill should be progressed and the integration of immunisation data within the planned Shared Care Record and/or Electronic Health Records (EHRs) should be prioritised as should the inclusion of an immunisation module on the HSE's Patient App.



Strategic Priority Four: Position Ireland for Future Vaccine Innovations

The fourth priority aims to position Ireland optimally for future vaccine innovations, supporting public health and the sustainability of the healthcare system and wider economy. A sustainable funding model for the adult immunisation programme should be agreed upon, removing financial barriers and ensuring appropriate support for HCPs who participate in immunisation. NIAC should be recognised as a National Immunisation Technical Advisory Group (NITAG) to align with European and WHO standards. A formal horizon scanning process should be established, with the NIAC, NIO and Department of Health (DoH) publishing an updated immunisation roadmap on accessible platforms, ensuring transparency for all stakeholders. A streamlined process for faster decision-making on funding for adult vaccines should be developed incorporating a flexible health technology assessment (HTA) process that considers the wider societal benefits of vaccines. Key performance indicators (KPIs) should be developed and monitored to track strategy implementation and programme performance. Finally, robust outbreak response and pandemic preparedness should be ensured through proactive surveillance, health protection resource allocation and cross-sector collaboration.

By implementing these recommendations, Ireland can develop a comprehensive national approach to adult immunisation, enhancing public health and protecting the most vulnerable populations.



Introduction

Vaccination is the most effective public health intervention available, ranking second only to clean water for disease prevention. With the availability of vaccines to prevent or ameliorate more than 20 life-threatening diseases, immunisation has the potential to reach more people than any other health and social service, making it a foundation stone of primary healthcare and a key driver toward universal health coverage [1]. Indeed, a 2024 study by the Lancet has demonstrated that immunisation efforts have saved an estimated 154 million lives - the equivalent of 6 lives very minute of every year – over the past 50 years [2].

The COVID-19 pandemic underscored the vital role of vaccines in public health. Vaccines, in combination with other public health measures, allowed the formation of a stronger response against the pandemic and the rise of more contagious variants. Since their introduction in December 2020, COVID-19 vaccines have reduced deaths due to the pandemic by at least 57%, saving more than 1.4 million lives in the WHO European Region. Most of those saved were aged 60 or older, the group at highest risk of severe illness and death from the SARS-CoV-2 virus [3]. Between the years 2020 and 2023, COVID-19 vaccines saved ~9,571 lives in Ireland alone [4]. However, COVID-19 also highlighted the impact of misinformation and vaccine hesitancy with reports suggesting that over 800 individuals worldwide died in the first three months of 2020 due to COVID-19 related misinformation [12].

From an Irish perspective, public health vaccination programmes have been in place for over 180 years, with vaccination against smallpox made compulsory for all children born in Ireland in 1863. The 1930's and 1940's saw the introduction of vaccines for diphtheria and tetanus, dramatically reducing child mortality from these diseases [13]. The mid-20th century also saw the introduction of vaccines for pertussis (whooping cough) and polio, significantly reducing mortality and morbidity from these diseases. The rubella vaccine was introduced in 1971, followed by the measles vaccine in 1985 and the measles, mumps and rubella (MMR) and Influenza vaccines in 1988. Over the past 25 years, we have seen the progressive introduction of new vaccines for adults, including those which protect against meningococcal and pneumococcal disease, human papilloma virus (HPV), rotavirus and respiratory syncytial virus (RSV), further enhancing efforts to proactively protect public health [13].

Vaccination programmes have predominantly focused on paediatric populations, reflecting the critical importance of immunising children against a range of preventable diseases. However, changes in population demography, disease epidemiology and the availability

of new vaccines has led to a growing recognition of the need to bridge the vaccine gap for adults. This is reflected in the WHO's Immunisation Agenda 2030, which aims to achieve a vision of a world in which “everyone, everywhere, at every age, fully benefits from vaccines for good health and well-being” [1]. As noted by the WHO, the growing number of new vaccines administered after childhood is opening frontiers for national immunisation programmes and will require new methods for delivery [1]. The rationale for adult immunisation includes addressing waning immunity, reducing the increased morbidity and mortality associated with several VPDs in adulthood, counteracting the age-related decline and dysregulation of the immune system in older adults (known as ‘immunosenescence’), and managing co-morbidities that come with ageing [14].

The importance of adopting a proactive, strategic approach to adult immunisation will continue to increase as Ireland, like many developed nations, continues to experience a profound demographic shift towards an ageing population. To put this in context, the number of people aged 65 years and over is estimated to have risen by over 40% between 2013 and 2023 and is expected to double again to 1.6 million by 2051 [6]. Ireland has one of the fastest ageing populations in the European Union (EU), with the over-65 population reported to have grown 35% over the past decade, more than three times the rate of growth in the overall population [15]. Already today, there are approximately 1 million people in Ireland living with Diabetes, Asthma, Chronic Obstructive Pulmonary Disease (COPD) or cardiovascular disease [16]. The Irish longitudinal study on ageing (TILDA) reports that 74% of adults aged 58 years and older live with co-morbidity [17], a significant issue given that evidence demonstrates that people with chronic medical conditions are at higher risk of severe illness from vaccine preventable diseases.

This combination of a rapidly ageing and growing population, together with the increasing prevalence of chronic diseases, will put increasing pressure on the healthcare system; indeed, we are already seeing a 5% to 6% increase in presentations to our emergency departments year-on-year and the impact that this is having on our acute hospital system and, in particular, available bed capacity for elective activity [16]. In this context, vaccines emerge as a critical component of strategies to promote healthy ageing, protecting against morbidity and mortality, improving quality of life and supporting the sustainable delivery of healthcare for those who need it most.



Vaccines are also crucial in mitigating the risk of AMR which occurs when bacteria, viruses, fungi and parasites change over time and no longer respond to medicines, making infections harder to treat and increasing the risk of disease spread, severe illness and death [9]. Each year, more than 35,000 people die from antibiotic-resistant infections in the EU, Iceland and Norway [18]. According to a report by the European Centre for Disease Control (ECDC), antibiotic use in Ireland continues to rise despite efforts to reduce it. Between 2019 and 2022, antibiotic consumption in Ireland rose by 1.5%. This trend contradicts a plan aiming for a 20% reduction in antibiotic use across Europe by 2030 [19]. Vaccines are an essential part of the response to reduce AMR as they prevent infections, reduce the use and overuse of antimicrobials, and slow the emergence and spread of drug-resistant pathogens [20]. A 2024 report from the WHO noted that, while the role of vaccines in reducing AMR has been under-recognised, globally, if current vaccines were used optimally and vaccine coverage reached 90%, vaccines could avert annually up to 106 000 deaths, 9.1 million disability-adjusted life years (DALYs), US\$861 million

in hospital costs and US\$5.9 billion in productivity losses, all associated with AMR. The report further noted that vaccines in late-stage clinical development could avert annually up to 135,000 deaths, 5.0 million DALYs, US\$1.2 billion in hospital costs and US\$2.2 billion in productivity losses, all associated with AMR [21].

In addition, adult immunisation programmes provide significant economic benefits. A 2024 report from the Office of Health Economics (OHE), for example, estimated that full implementation of NIAC recommendations for influenza, pneumococcal disease, herpes zoster, and RSV would together generate a return of €23 in socioeconomic benefit for every €1 spent [7]. This would correspond to approximately €4.8 billion in net monetary benefits, equating to up to €7,031 in net benefits for each person's individual vaccination course. Reiterating the potential positive impact of immunisation on promoting health system sustainability, the analysis further estimated that implementation of these programmes would prevent approximately 376,000 disease cases, avoid 74,000 hospitalisations and avert around 1,400 disease related deaths [7].

The beneficial impact of adult immunisation extends beyond readily quantifiable economic impacts. **Vaccines protect older adults and enable them to remain active in their communities, thereby making a significant contribution to the informal economy, with positive effects on caregivers, families, employers and wider society.** A recent systematic review reveals that annually, 50-70% of employees miss work to care for family members, both adults and children, suffering from influenza or influenza-like illnesses. This underscores the significant impact on the productivity of caregivers for infected individuals and highlights the importance of vaccination [22]. Although adult immunisation demonstrates comparable cost-effectiveness to other preventative health measures like cancer screening and proactive management of hypertension, evidence suggests that these latter measures often receive higher priority in clinical practice [23].

The next decade will likely see the increasing availability of new vaccines which will increase the need to reach different age groups across the life course [24]. Indeed, there are approximately 286 vaccines in development worldwide [10], with around 80% of these efforts aimed towards the adult population [11]. These include vaccines in development for the treatment of Alzheimer's disease, protection against E. coli, and treatment of pancreatic ductal adenocarcinoma [10]. Vaccine innovation in recent years has seen the advent of passive maternal immunisation (e.g., maternal RSV vaccination) [25], nucleic acid antigen development (e.g., COVID-19 mRNA vaccine) and mucosal delivery systems (e.g., nasal flu vaccination) [26]. Other novel vaccine delivery systems are currently in development. **These innovations signal a shift in immunisation, which will require healthcare systems and supporting policies, both globally and in Ireland, to evolve to facilitate these new vaccines reaching individuals in the future.**

Therefore, it is important to consider the types of vaccines currently in development and their potential impact on future adult immunisation programmes to ensure the appropriate policies and funding structures are in place to enable equitable access to all individuals.

Recognising the benefits of a structured approach to adult immunisation, many countries, including Australia [27] and the United Kingdom [28], have adopted a 'life course' approach to immunisation, which stresses the importance and interconnectivity of all stages of life, supporting health promotion, disease prevention and management throughout the life course. From an immunisation perspective, this suggests that the value of vaccines should not be narrowly defined by age-specific life stages nor solely on the prevention of specific VPDs [5]. Instead, their evaluation should encompass the broader positive effects on the prevention or amelioration of coexisting or subsequent diseases and pathogens within the population [5]. **Adopting a life course approach to immunisation may help maximise the benefits of vaccination for individuals, public health and society in general.**

Within this report, we aim to outline the current approach to adult immunisation in Ireland, exploring several key themes central to immunisation (e.g., governance and policy, technology and data, vaccinator workforce, equity and access) and highlighting key challenges noted through expert interviews within these themes.

We seek to underscore the critical need for a robust adult immunisation programme in Ireland. By highlighting the challenges noted through expert interviews, this report outlines key recommendations to consider for the implementation of such a programme, with the central aim of encouraging policymakers to reallocate resources and funding towards preventative healthcare measures.

Current Approach to Adult Immunisation in Ireland

In the following section, an overview of Ireland's current approach to adult immunisation across several key themes is presented. Each theme is supplemented with insights gathered through expert interviews detailing current challenges and opportunities within the system. Additionally, this section includes several case studies that showcase examples of global best practice across the various themes.

Policy and Governance Structures

Policy

Ireland currently does not have a stand-alone, whole-of-government national adult immunisation strategy, despite reference to immunisation in several government strategy documents, including the HSE's National Service Plan. Following the COVID-19 pandemic, the HSE developed the National Health Protection Strategy 2022-27 [29]. This strategy centres on ten strategic objectives, one of which directly focuses on VPDs and immunisation. Objective five specifically commits to delivering a high level of protection and control of VPDs across population groups through immunisation programmes [29]. This objective, with corresponding KPIs and seven priority actions surrounding it (e.g., the development of the national immunisation

information system (NIIS)), acknowledges the challenges facing Ireland's immunisation system and signals a commitment to tackling these issues from a public health perspective.

Following on from this strategy, the NIO has published their strategic plan for 2024-27, which centres around six key objectives, one of which is specifically aimed at the adult population [30]. The strategy outlines a framework for the delivery of these objectives over the next four years. It identifies several key elements that need to be achieved to enable delivery of the six objectives and notes that next steps will include the development of an implementation plan for the delivery of this strategic plan, with assigned roles and responsibilities.



Expert Perspectives

'Enhancing Policy Implementation and Evaluation'

Ireland exhibits many strengths in developing robust policies, including the NIO's strategic vision to enhance immunisation programmes and vaccine equity. However, there are shortfalls in policy implementation and evaluation. To improve, Ireland should adopt an integrated approach that includes input from all stakeholders (e.g. GPs, pharmacists, policy makers, NIAC etc.) involved in immunisation and define clear KPIs for stronger execution and review of policies.



Expert Perspectives

'Learnings from COVID-19'

It's important to build on the pandemic lessons, addressing gaps to create a more resilient and effective healthcare system. The pandemic catalysed a series of commendable achievements within the healthcare system, largely due to the ability to be appropriately flexible where certain regulatory and governance processes were concerned and to accelerate reform. One example is the rapid roll-out of Individual Health Identifiers (IHIs) during the COVID-19 vaccination programme, the development and implementation of which had been in a state of 'in progress' since 2014.

Governance Structure

NIAC is responsible for providing evidence-based advice on immunisation and related health matters to the Chief Medical Officer (CMO) and the DoH, prepared through extensive review of the latest clinical and scientific information [31]. NIAC is also responsible for:

- Evaluating newly authorised vaccines and vaccine technologies to determine their applicability in Ireland
- Updating the Immunisation Guidelines for Ireland

- Responding to inquiries from HCPs and the DoH
- Promoting best practices in immunisation.

NIAC started as a small voluntary expert group with a focus on paediatrics and now includes experts in immunisation, public health, infectious diseases and healthcare ethics. Members are nominated by healthcare organisations or co-opted. NIAC currently operates under the governance of the Royal College of Physicians of Ireland (RCPI). Additional information on NIAC's membership, purpose, governance and responsibilities is outlined in their [Terms of Reference](#).



Expert Perspectives:

'NIAC recognition as a NITAG'

Currently, unlike other countries, NIAC has not yet been formally recognised as a NITAG. NITAGs are multidisciplinary groups of national experts responsible for providing independent, evidence-informed advice to policy makers and programme managers on policy issues related to immunisation and vaccines [32]. There are seven functionality criteria to become recognised as a NITAG and currently Ireland is missing two of these criteria: guaranteed financing for the NITAG's operations and establishment of the NITAG through a formal mechanism such as a ministerial decree or other appropriate means.

'Funding and resource restraints at NIAC'

The current structure of NIAC - i.e., a variety of experts working as the committee on a voluntary basis, a funded academic secretariat and reliance on the RCPI to provide administration support – is not sustainable. There are significant time and resource limitations placed on members, due to the voluntary nature of the role. This impacts on delivery within the backdrop of increased demands such as intensified scrutiny of NIAC decisions by the public, pharmaceutical industry and anti-vaccine lobbyists. Multi-annual funding of the secretariat is not provided leading to ongoing uncertainty with regard to the sustainability of the function.

Following receipt of NIAC recommendations, the **DoH** may consider whether to update immunisation policy in line with that advice. To support this process, the DoH may request the **Health Information and Quality Authority (HIQA)** to perform HTAs to assess the cost-effectiveness, clinical effectiveness and safety or otherwise of recommended vaccines.

The HSE, through the **NIO**, is tasked with implementation of the immunisation programme. The **NIO** coordinates immunisation efforts for all publicly funded programmes, manages vaccine procurement and distribution, and develops training and communication materials for the public and HCPs - in line with the developed DoH Immunisation policy [33]. The NIO and NIAC work closely together but operate independently, under a 'phased' governance process.

Governance Process for Immunisation in Ireland

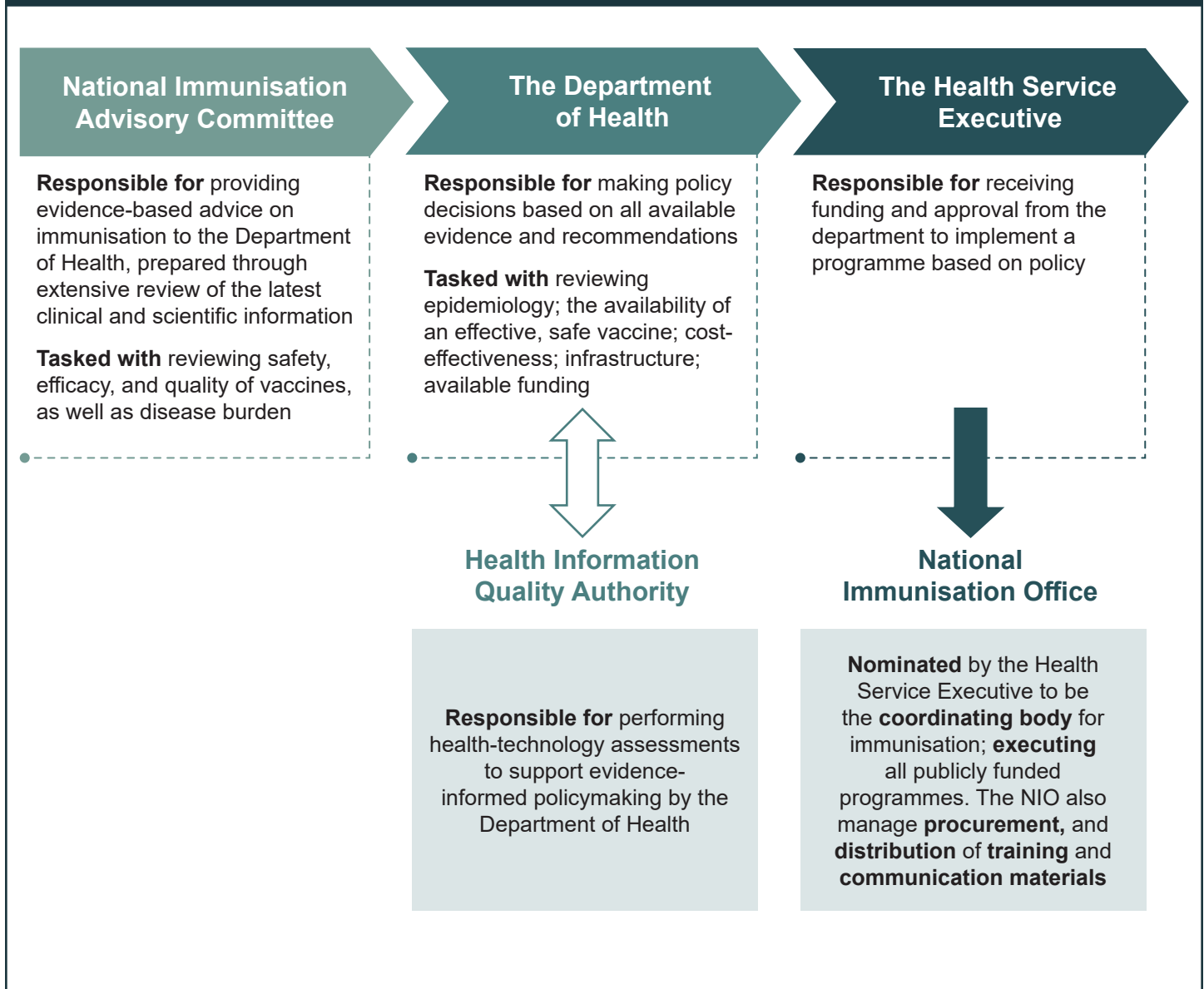


Figure 1: Governance Process for Immunisation in Ireland



Expert Perspectives

‘Governance Gaps’

The independent and ‘phased’ governance structure observed between NIAC, the DoH, and the HSE, may be seen to pose some challenges, particularly regarding the process from recommendation to funding decision and actual implementation of the programme. Ireland lacks a single entity responsible for immunisation, leading to a fragmented approach. A common vision between the DoH and other entities is needed for cohesive and effective vaccination programme advocacy and implementation. The DoH needs to play a more influential role as a crucial advocate for vaccines, emphasising their benefits including prevention of disease, reduction of healthcare costs and improvement of public health.

Delivery Structures

Procurement and Distribution of vaccines

As mentioned in the previous section, the **NIO** manages the implementation of the HSE’s national immunisation programmes. The NIO does not hold clinical or operational governance over the delivery of immunisation services. Instead, it collaborates with HSE colleagues and external stakeholders responsible for providing these services, including for example GPs, pharmacists, school immunisation teams [30].

The **HSE National Cold Chain Service** managed by United Drug distributors, stores and transports vaccines under temperature-controlled conditions. Approved healthcare professionals order vaccines online via ordervaccines.ie, which are delivered to various healthcare facilities e.g. GP surgeries, local HSE offices, pharmacies [34]. HSE community health organisations (CHOs) administer immunisations regionally, adhering to national frameworks and standardised care models. Due to the establishment of regional health areas (RHAs), these nine CHOs will move to six health regions [30].

Vaccine Uptake, Surveillance and Adverse Event Monitoring

The **Health Protection Surveillance Centre (HPSC)** monitors communicable diseases, collects and analyses VPD data, and reports on vaccine uptake rates from each HSE region. Additionally, through the monitoring of notifications of VPDs received from medical practitioners or diagnostic laboratories, the HPSC identifies areas with under-vaccinated individuals where catch-up programmes are potentially required [35].

The **Health Products Regulatory Authority (HPRA)** oversees pharmacovigilance and monitors adverse events following vaccination and liaises with marketing authorisation holders on product quality and supply matters to protect patient safety and optimise product supply.

Workforce

In Ireland, immunisation services are currently delivered via contracted external providers such as GPs and general practice nurses (GPNs); the HSE vaccination workforce (for COVID-19, influenza and school programmes); community pharmacists; and hospital peer vaccinators [30]. In addition, the HSE can access agency staff to supplement the COVID-19 vaccinator workforce as needed.



Expert Perspectives

‘Agility in the workforce’

In terms of pandemic preparedness and emergency response ability, Ireland’s current vaccinator workforce needs to be agile and adapt when necessary. Core immunisation services should not be affected, and instead the addition of any emergency programme should happen in parallel when needed.

General Practice Clinics

In Ireland, general practice is the primary vaccination route with GPs contracted by the HSE to deliver vaccines. GPNs form a key element of the vaccinator workforce delivering the majority of vaccines to the population [36]. The NIO outlines key vaccinator roles and responsibilities for GPs and GPNs which includes remaining up to date with NIAC guidelines [37]. The NIO has developed a Toolkit for GP practices to increase primary childhood schedule vaccine uptake in children however a similar toolkit is not available for adults [38]. The infrastructure of most general practices in Ireland (e.g. with electronic systems and patient records) as well as pre-established relationships and trust with patients, and the ability to obtain patient consent to transfer data, is favourable for efficient vaccine delivery. However, GP numbers are not keeping pace with Ireland’s rapidly

growing population, and particular deficits exist in rural areas [39], leading to under-resourced and overburdened clinics.



Expert Perspectives

‘Challenges in GP vaccination’

Underserved populations may face accessibility barriers through GP vaccination. Many in these communities, such as ethnic minorities or refugees, lack a designated GP due to transient living situations or other systemic barriers. Full GP lists, limited-service hours, and long waiting times further restrict access, especially for those with non-standard work hours. The role of General Practice Assistant (GPA) was created in 2023. At present GPAs are not permitted to administer vaccines; legislative change would be required to facilitate this. Expanding vaccinators across multiple channels is needed to ensure equitable access for all.

Pharmacies

Following legislative change in 2011 which facilitated pharmacist-led influenza vaccination [40], Ireland has been leveraging pharmacy-based vaccination services to the public. Pharmacists in Ireland are currently able to vaccinate adults with vaccines for COVID-19, influenza, pneumococcal disease and herpes zoster (shingles) [41]. This makes Ireland one of 15 countries in Europe where pharmacists are vaccinating against COVID-19 and influenza, and one of 9 countries who are vaccinating against diseases other than COVID-19 [42].



Croatia, Estonia and the Netherlands enable other HCPs such as physicians and nurses to provide vaccination services in pharmacies [43].

Prior to commencement of vaccination services, pharmacists must complete Pharmaceutical Society of Ireland (PSI) approved training. The Irish Institute of Pharmacy (IIOP) and PSI have developed a modular training system for the supply and administration of certain medicines, including vaccines [44].



Expert Perspectives

‘Challenges in pharmacy vaccination’

- Pharmacies often lack sufficient infrastructure to support the delivery of vaccination. The expansion of pharmacy vaccination services must be optimised by robust, interoperable immunisation information systems which would help to reduce duplicative data entry and facilitate seamless reporting, thus supporting both efficient workflows and data accuracy in the immunisation system.
- Despite approximately 1,900 pharmacists working in Ireland, pharmacists are often not represented in key decision making structures like, for example, at HSE Health Region level. The Irish Pharmacy Union (IPU) advocates for recognising the vital role pharmacies play in healthcare delivery, including immunisation, which requires parity with general practice. IPU works to include pharmacists in policy-making processes, advocacy and decisions about fees and vaccine availability, to effectively integrate pharmacy-led services within broader healthcare initiatives.



‘Impact of Pharmacy Vaccination’

- Since the introduction of pharmacy-based vaccination, **the number of people vaccinated by GPs has also increased** [45]. This may point to the indirect role pharmacists play in raising awareness of vaccination services, e.g., through advertising in windows/general awareness raising during consultations.
- Community pharmacists are the most frequently accessed and most accessible primary healthcare provider, with **over 78 million visitors per year in Ireland** [46]. The flexibility that pharmacy vaccination offers has shown to greatly increase uptake among the entire population, including hard-to-reach and underserved populations [42].
- According to the PSI, **95% of patients within Ireland reported a high level of satisfaction with the vaccination information provided by pharmacists**, and a similar proportion, 93%, gave the overall influenza vaccination service a high rating of nine or ten out of a possible ten [47].

Other channels

Apart from GP clinics and pharmacies, where the majority of adult vaccines are delivered, vaccines are also delivered through (some) hospital healthcare settings, employer programmes, sexual health clinics, travel clinics and programmes run by the Health Regions (e.g., catch-up programmes for new migrants).



Expert Perspectives

‘Missed vaccination opportunities’

Ireland currently misses the opportunity to engage in opportunistic vaccination for at-risk/immunocompromised patients in the hospital setting as the mechanism to do so is not available. Clarity is also needed on who holds responsibility for vaccination of these patients – whether that be the GP, consultant etc.



Case Study

‘Pharmacy Vaccination in Portugal’

Since 2007, Portuguese pharmacies have expanded to include vaccination services, starting with annual flu shots in 2008. They now administer vaccines for 15 diseases, including flu, pneumococcal, hepatitis, and HPV. Pharmacists must be certified by the Portuguese Pharmaceutical Society, requiring mandatory training which is then valid for five years. Over 2,500 pharmacies and 6,000 pharmacists currently offer these services. Since 2017, vaccine records from pharmacies have been integrated into the national e-Vaccination Bulletin, which reinforced the integration of pharmacies in primary health care. In 2023, the Ministry of Health expanded the National Vaccination Campaign to pharmacies, promoting co-administration of Influenza and COVID-19 vaccines and providing remuneration from the national health budget [43].

Technology & Data Infrastructure

In May 2024, the DoH published ‘Digital for Care: A Digital Health Framework for Ireland 2024-2030’ [48] outlining a roadmap for the future of Ireland’s digitised healthcare service, with forty-eight initiatives, including a patient portal, app, shared care record and EHR.

Ireland currently has no national computerised immunisation recording system in Ireland but instead relies upon multiple fragmented vaccination systems which lack interoperability, e.g., COVAX and PharmaVax (see below). In the adult population, collection on vaccine uptake is limited to COVID-19, influenza and pneumococcal and only for certain demographics [30]. This leads to significant gaps in the availability of data, with particular challenges in consistency, accuracy and real-time collection of data which is crucial in immunisation monitoring and surveillance efforts.

The 2024 Health Information Bill aims to establish a Digital Health Record for everyone, integrating health information across care settings including public, private, and voluntary [49]. For immunisation, data and technology services are vital if Ireland wants to maintain its stance as one of the countries with the highest vaccine coverage in Europe. Key to this, and according to the NIO, is having the best data available to be able to identify where Ireland’s population immunisation coverage is suboptimal and where State agencies need to focus and tailor their activities [30].

When registering for COVID-19 vaccination, individuals (with a PPSN) received a unique IHI, which now allows their health records to be found across different patient systems [50]. The HSE has previously set out its intention to integrate national screening and immunisation systems with the IHI system which will enable a patient’s EHR [50].

COVAX

Implemented in January 2021, the **COVAX Immunisation Information System** records all COVID-19 vaccinations, aids in planning vaccination clinics and facilitates analysis of vaccine uptake. [51]. It now also records influenza and pneumococcal vaccinations in Ireland. [52]. The system enables teams to [51]:

- Schedule vaccination appointments
- Communicate appointment details via SMS
- Obtain client consent to vaccinate
- Capture client medical eligibility
- Record vaccine details such as batch code
- Digitally capture client data to enable the vaccine certifications
- Provide support through case management
- Integrate data from GPs and Pharmacists

GPVax

GPVax is an IT portal that transfers immunisation records from GP clinics to the COVAX system. During the COVID-19 pandemic, there was a requirement that GPs use a recognised GP Practice Management System (PMS) to record COVID-19 vaccine administration records [53]. GPVax was developed by the HSE to facilitate GP clinics without a recognised PMS. Now, GPs must use either their PMS or GPVax to record COVID-19, influenza, and pneumococcal vaccine administration [53].

PharmaVax

HSE PharmaVax allows pharmacies to record details of COVID-19, influenza and pneumococcal vaccinations, feeding this data into the COVAX system [41]. It also facilitates pharmacist reimbursement for COVID-19 and influenza vaccines but does not support clinical decision making or scheduling.

CommunityVax

CommunityVax provides a vaccination event recording service for community organisations, care homes and private hospitals, etc. who administer Influenza vaccinations, as part of the yearly seasonal flu campaign [54].

National Immunisation Information System

In August 2024 the HSE published a public tender seeking support for the implementation and development of the NIIS on their behalf. It is the intention of the HSE to expand COVAX to become the NIIS and bring future development activities into a more normalised design, implementation and support cycle.



Expert Perspectives

‘Siloed data’

Although individual GP practices may operate under a system which tracks their patients’ entire immunisation schedule, as the immunisation workforce expands, the coordination of this data across different channels must be considered. Data should not be siloed, particularly when we consider that currently, if a patient’s GP retires, the patient’s data can often retire with them.



Expert Perspectives

‘The impact of a lack of robust data for policymakers’

A lack of robust data collection and harmonisation limits policymakers from effectively assessing the success or otherwise of vaccination programmes. This impacts on the information used to inform HTAs carried out on behalf of the DoH. Without quality data, the robustness of assessments such as HTAs are potentially compromised, as they rely on accurate and complete data to assess the effectiveness and efficiency of health interventions and make informed decisions regarding the allocation of public funds.

Adult Immunisation Schedule & Uptake

Ireland is estimated to spend about 0.27% of the total healthcare budget on immunisation services. Similar to this, 77% of EU and UK countries spend less than 0.5% of their healthcare budgets on immunisation [55]. Currently in Ireland, influenza, COVID-19 and pneumococcal vaccines are funded and available free of charge for adults aged ≥ 60 (≥ 65 years for pneumococcal). While the vaccines themselves are provided free, doctors and pharmacists may charge a consultation/administration fee to those without a medical card. Typically, a GP consultation fee of €50 - €60 is standard [56].

NIAC has also recommended RSV vaccination for those aged 65 years and older [57] and shingles vaccination for adults aged 65 years and older, immunocompromised individuals aged 50 and older and a variety of other at risk groups (see figure 2.), however these vaccines are not funded by the HSE and individuals who wish to receive these vaccines need to pay out of pocket for both the vaccine and its administration.



Expert Perspectives

'Challenges in Prioritising Vaccine Funding'

The DoH struggles to prioritise vaccine funding due to limited dedicated resources and competing financial demands. This results in funding requests being considered alongside more immediate issues, like emergency department overcrowding, which attract more public and government attention. Preventative measures, such as immunisation often lack immediate public support due to a lack of awareness of their long-term benefits. It is crucial for the public, government, and HCPs to collaborate and promote the financial and health benefits of preventing VPDs.



Vaccine(s)	NIAC recommendations	Funding
Tdap	Pregnant women should be offered Tdap vaccine between 16 – 36 weeks' gestation in each pregnancy [58]	Since 2018, the Tdap vaccine has been offered free of charge for pregnant women through an outbreak code [58]
HPV	<ul style="list-style-type: none"> • HPV catch-up vaccination is recommended for unvaccinated females and males under the age of 25 years [60] • HPV vaccine is recommended for men and women living with HIV up to and including 26 years of age and for MSM (including MSMs living with HIV) up to and including 45 years of age [59] 	The HPV vaccine is available for free for men up to age 21, and women up to age 24 under the Laura Brennan HPV catch-up vaccination programme [61]
Influenza	Influenza vaccine is recommended for adults aged 50+, healthcare workers, pregnant women, adults with certain health conditions, adults in regular contact with pigs, poultry or waterfowl, adults with certain health conditions, and adults living with/caring for someone with a health condition [62]	The influenza vaccine is available free for people aged 60+, healthcare workers, pregnant women, adults living in a nursing/care home, adults in regular contact with pigs, poultry or waterfowl, adults with certain health conditions, and adults living with/caring for someone with a health condition [66]
Pneumococcal	PPV is recommended for adults aged 65+ and adults in at-risk group [63]	PPV is available for free for adults aged 65+, and adults in an at-risk group [64]
COVID-19	COVID-19 vaccination is recommended for adults aged 60+, healthcare workers, pregnant women, and adults in an at-risk group [67]	COVID-19 vaccination is available for free for adults aged 60+, healthcare workers, pregnant women, and adults in an at-risk group [67]
Shingles	Shingles (Herpes Zoster) vaccination is recommended for adults aged 65+, immunocompromised adults aged 50+, HSCT recipients aged 18+, and certain at-risk adults in an immunocompromised group aged 18-49 [65]	Not funded on a NIP
RSV	NIAC recommends active immunisation of all adults aged 65+ [68]	Not funded on a NIP

Figure 2: Vaccines available to adults in Ireland [58] [59] [60] [61] [62] [62] [63] [63] [64] [65] [66] [67] [67] [68] [68]

Figure 2 outlines the vaccines recommended by the NIAC to adults in Ireland and whether they are funded by the HSE. Not included in this table are catch-up programmes available to new migrants etc., as well as vaccines such as pertussis which is available to certain groups working with children and hepatitis B, available to specified groups.

Influenza Vaccine Uptake

Ireland's uptake of adult vaccines is comparable to or better than international benchmarks.

In 2023, Ireland achieved a 75.7% coverage rate for influenza for older adults aged 65+ [69], making Ireland one of eleven countries worldwide to reach WHO recommended targets for this population ($\geq 75\%$), and one of only three countries in Europe (with Denmark achieving 81.2%, and the UK achieving 75.5%). While historically the uptake

of influenza vaccine has been less than the WHO target [70], the overall uptake has steadily increased since the introduction of pharmacy-based vaccination in Ireland. During the 2023/2024 influenza season, HSE PharmaVax data reported 1,175,672 influenza vaccine administrations across all sites (Community Pharmacies, GPs, Hospitals, and other sites) with 27.7% of these being administered by community pharmacists [71].



Expert Perspectives

'Impact of Funding on Vaccine Uptake'

While the uptake for influenza and HPV vaccines is generally high in Ireland, a significant contributing factor may be their prominence in the public consciousness coupled with governmental financial support for their distribution. In contrast, vaccines for shingles and RSV lack similar funding mechanisms which may contribute to lower uptake rates. Trends from other countries, highlight that vaccines which are not included and funded on a national immunisation programme have a lower uptake compared to those that are funded [72].

COVID-19 Vaccine Uptake

Ireland had one of the highest rates of COVID-19 vaccine uptake in the EU during the pandemic with over 90% of Irish people over the age of 16 being vaccinated [73]. In the current 2024 winter campaign, as of October 27th 2024, booster uptake was 16.1% for 60-69 year olds; 31% for 70-79 year olds; 40.9% for 80+ year olds. The majority (66%) of these vaccinations were administered in GP clinics [73].



Inequity in vaccine uptake

Several challenges affect the successful rollout and vaccination uptake of vaccination programmes among underserved populations. Low trust in authorities, vaccine hesitancy fuelled by misinformation and concerns about data sharing for undocumented individuals hinder uptake. Lack of endorsement from trusted providers and community leaders also reduces perceived importance [74]. Research in Ireland has shown that individuals of non-Irish ethnicity are more likely to resist vaccination [75].

Additionally, regional differences in vaccine uptake across Ireland have been noted. Recent data on seasonal influenza uptake across various HSE regions reveals that HSE West and Northwest have the lowest uptake rate (68.4%) among adults aged 65 and older [76]. Health inequalities are often prevalent in border areas such as HSE West and Northwest and compared to the national average this area overall has higher levels of deprivation [77] [78].





Case Study

'HPV Vaccine Campaign and Uptake Success'

The HPV national schools programme began in 2010 for first-year girls and expanded to boys in 2019. Uptake was at 87% in 2015, however an online campaign began to undermine the vaccine which led to a decrease in uptake rate to 50% [79]. To overcome this decline, the Irish Cancer Society developed an advocacy campaign which led to the development of the HPV Vaccination Alliance, a group of leading women's and health groups with the central aim of providing clear and consistent messages. The NIO and HSE communications Division teams also developed a social media campaign (#ProtectOurFuture). Following endorsements from several politicians, young women and the Minister of Health, uptake of the vaccine rose 12% in 2017 to 62% [79]. This highlights the success the effective communications and advocacy strategy had on HPV uptake rates. Since 2022, the HSE's Laura Brennan HPV Catch-Up Vaccination Programme offers free HPV vaccines to eligible men up to 21 and women up to 24 [80]. In the 2022/2023 academic year, HPV uptake was 80% for first-year girls and 76% for boys [81]. Ireland is currently on target to eliminate cervical cancer by 2040 [82].





Case Study

‘Life course approach to immunisation’

Italy is renowned for its comprehensive vaccination approach, featuring a ‘Calendar for Life’ with evidence-based vaccine recommendations for all age groups including children, adolescents, pregnant women and older people [5]. This calendar, introduced by four scientific societies, is part of the Ministry of Health’s vaccination plan and is accessible online [83]. Similarly, Australia has a detailed national immunisation programme schedule covering vaccinations throughout the life course made available through an easily digestible infographic [27]. These comprehensive vaccination strategies in both Italy and Australia detailing vaccinations available from infant to adolescent, adult and older adult highlight the importance of a life-course approach to immunisation in promoting public health and preventing disease across all age groups.

This is in contrast to Ireland’s current approach to adult immunisation which is defined by a set of recommendations and guidelines tailored to specific populations and individual vaccines. While this framework provides a foundational level of protection for targeted groups, including the vulnerable and at-risk population, it lacks a lifelong scheduled vaccination programme perspective that includes funding for recommended vaccines at all life stages. Figure three highlights publicly funded adult vaccines available across several countries.

	Recommended and funded for certain adults and at-risk adults >18+	Recommended and funded for older adults and/or risk groups		Recommended for older adults but not funded/only funded partially on NIP	Not currently included in the immunisation schedule/ recommended		
	Ireland	UK	Spain	Italy	Germany	New Zealand	Australia
Flu	60+ and at-risk [66]	65+ and at risk [28]	60+ and at-risk [84]	65+ and at-risk [83]	60+ and at-risk [87]	65+ and at-risk [89]	65+ and at-risk; >18 in some regions [27]
Pneumococcal	65+ and at-risk [64]	65 years old and at-risk [28]	65+ and at-risk [85]	65+ and at-risk [83]	60+ and at-risk [87]	65+ and at-risk [89]	70+ and 50+ for indigenous communities [27]
RSV	NIAC recommends adults 65+ [68]	75 years old [28]			75 years old [87]		
Shingles (Herpes zoster)	NIAC recommends adults 65+ and at-risk [65]	50+ at-risk; adults turning 65, and adults aged 70-79 [28]	65+; certain at-risk groups 18+ and certain at-risk groups 50+ [85] [86]	50+ at-risk; 65+ [83]	50+ at-risk; 60-74 years old; with catch-up from 75+ [87] [88]	Funded for 65+; 18+ at-risk Recommended but not funded for 50+ [90]	65+; and 18+ at-risk [27]
HPV (for adults)	Catch-up available up to 21 years (for men) and 24 years (for women) [61], and certain at-risk groups up to age 45 [91]	Offered to certain at-risk groups up to age 45 [92]	Offered to certain at-risk groups [93]	Offered up to age 49 [83]		Offered to all adults up to and including 26 years old [94]	Offered to all adults up to 25 years of age, and certain at-risk groups >25 years old [27]

Figure 3: Adult Vaccination Funding Across EU, UK, New Zealand and Australia [61] [64] [65] [66] [68] [28] [83] [84] [85] [86] [87] [88] [27] [89] [90] [91] [92] [93] [94]

Underserved Groups

Both the HSE's Health Protection Strategy 2022-27 and the NIO's strategic plan 2024-27 emphasise the importance of vaccinating underserved populations in line with NIAC recommendations and working with stakeholders to increase access to and develop tailored immunisation programmes for these populations. In addition, several other documents have outlined specific approaches and guidelines for increasing vaccination among members of underserved groups. These include;

1. The 'HSE Vaccine Approach for Vulnerable Groups in Ireland', published by the National Social Inclusion Office in 2021 during the pandemic, recommends a tailored COVID-19 vaccination roll out for each vulnerable group. Other recommendations included targeting vulnerable groups that are in danger of spreading the disease by the nature of culture and behaviour; employing 'champions', and utilising mobile teams - under the premise that listening to and engaging with these vulnerable groups is critical to building confidence in vaccination programmes [74].
2. The HSE document 'Supporting Information for Vaccinators in GP' has a section which outlines vaccination guidelines for refugees and applicants seeking international protection [95], which directs users to the National Immunisation Guidelines for Ireland, Chapter 2.2.7 Delayed Immunisation/late entrants to the Irish health-care system. This outlines necessary immunisation procedures for marginalised populations (e.g. refugees) who may not have had access to immunisation [96].
3. The 'National Traveller Health Action Plan 2022-2027' outlines the development of Primary Healthcare for Traveller Projects (PHCTPs) fostering collaborations between the HSE and Traveller organisations to support Traveller families. PHCTPs are vital for community engagement and trust-building and employ part-time Traveller Community Health Workers (TCHWs) who advocate in various health areas, including immunisation [97]. The HSE National Social Inclusion Office has a section on their website which outlines information on COVID-19 and flu vaccination for Travellers including information posters and videos [98].
4. The MMR Catch-up Programme lists underserved populations such as Travellers, Roma, people who are homeless, Refugees and Applicants Seeking Protection and other vulnerable migrants and those in custodial settings as priority groups for this vaccination programme [99].



Expert Perspectives

'Equity in Immunisation'

- The existence of inequalities arises for complex reasons including socio-economic status, healthcare access, cultural beliefs, health literacy and competing priorities such as poverty and housing. Understanding and addressing these underlying issues is crucial for creating targeted interventions to ensure equitable vaccination access for all.
- Many individuals in underserved groups experience premature ageing, live with chronic disease(s) or in congregated settings which predispose them to higher risk of exposure to, or poorer outcomes from VPDs and this should be reflected in immunisation policy and vaccine prioritisation.

Communication and Trust

Communication to the public

The NIO develops and distributes educational materials to the public through printed leaflets, journal editorials, press coverage (such as seasonal influenza campaigns), social media platforms like Twitter, YouTube, Spotify, Instagram, LinkedIn and their website [100].



Expert Perspectives

‘Lack of a clear immunisation schedule’

There is no clear and concise information schedule outlining funded adult vaccines and eligibility criteria in Ireland. This lends to a general lack of awareness about which vaccines are recommended and funded, making it difficult for the public to understand their eligibility. Clear communication and easily accessible information are required to inform the public about available vaccines and their benefits for individuals and the community.

There are examples of educational resources readily available for diverse audiences in Ireland. E.g.; Gay Health Network, in conjunction with the HSE, has developed a comprehensive, accessible and informative website Man2Man.ie which is directed towards gay/bisexual men, men who have sex with men (MSMs), people who are transgender and features information on vaccines such as HPV and Hepatitis A&B [101].



Expert Perspectives

‘Effective communication strategies’

Effective vaccination outreach and education require communication and awareness efforts at multiple levels including through the DoH, professional societies, patient organisations and during postgraduate education. The prominence of vaccine advocates and public health leaders is essential for promoting vaccination. This was evidenced in Ireland’s cohesive response to COVID-19 characterised by media responsiveness and active engagement from politicians and clinicians in public discussions which played a crucial role in vaccine outreach efforts.

Communication to healthcare workers

The NIO has educational resources and materials for healthcare workers to assist them in communicating with diverse public and patient groups. For example, they have created a document for vaccinators in the GP setting which contains information on carrying out vaccinations, common administrative issues and the maintenance of cold chain and vaccine ordering [95]. During the pandemic, the NIO developed resources specifically for underserved populations which included an approach and script to support COVID-19 awareness raising for intercultural and LGBTQI+ populations [102].



Expert Perspectives

‘Building HCP trust’

HCPs administering vaccines also need to be well-informed about the benefits of the immunisation to effectively counter misinformation at the individual level.

Trust and Transparency

In general, Ireland’s public exhibits high levels of trust in government and health-related initiatives. According to data from the European Commission, 91% of people surveyed in Ireland agree that vaccines are effective compared to an EU average of 87% [103]. The pandemic highlighted the Irish public’s trust in immunisation, with Ireland having one of the highest uptake rates of COVID-19 vaccination in the world, with over 90% of people being vaccinated [73]. Further to this, a Eurobarometer report by the European Commission reported that 64% of Irish people expressed satisfaction with the government’s handling of the vaccination strategy which ranked Ireland 6th highest in the EU and well above the EU average of 46% [103].



Expert Perspectives

'Improving public attitudes'

There is a crucial need to improve public attitudes towards vaccination by combatting disinformation, raising awareness of the personal benefits, emphasising that immunisation is a lifelong necessity and is not just for infants and children. This involves promoting a proactive approach to health and disease prevention and correcting the misconception that vaccines are only for early childhood. Health education relating to vaccines should start at primary school level to ensure an attitude towards a life-course approach to vaccination is promoted from an early age. Additionally, given the increasing prevalence for individuals obtaining information via social media channels, working with Comissiún na Meán, a key regulator in the space may be important to ensure success of adult vaccination programmes.

The Government has stated its commitment to introducing a vaccine injury compensation scheme (VICP) in Ireland. Consideration has been under examination since 2001, when the Oireachtas Joint Committee on Health and Children recommended that a vaccine damage compensation scheme be set up at the earliest possible date [104]. In 2021, the HRB published a DoH-commissioned review on vaccine injury compensation programmes which suggested that a comprehensive and fair vaccine injury compensation scheme would enhance ethical responsibility and boost public trust and confidence in vaccines [105].



Case Study

'Vaccine Redress Schemes'

Several countries have implemented VICPs to compensate individuals who experience serious vaccine-related harm. Globally, 25 jurisdictions have a no-fault vaccine injury compensation programme, 16 of which are in Europe [105].



Priorities for Recommendation

It is recommended that a comprehensive, stand-alone national immunisation strategy that promotes a life-course framework and adopts a whole of government approach to vaccination is developed. Aligned with the WHO's Immunisation Agenda 2030 (IA2030), the following priorities and recommendations are set out as the basis of what should be considered as part of this strategy, in order to achieve a vision of 'an Ireland where everyone, everywhere, at every age, fully benefits from vaccines for good health and well-being':



Strategic Priority One:

Build **trustworthy** vaccination programmes supported by systems grounded in informed consent and transparent, evidence-based information, offering clear opportunities for individuals to ask questions and fully understand the benefits and risks to support widespread acceptance and participation and ultimately enhance community immunity and protect public health.



Strategic Priority Two:

Ensure **equitable** access to adult immunisation which reflects NIAC recommendations, considers the diverse needs of the entire population, focuses on maximising convenience for individuals and is delivered in an integrated manner thereby protecting the most vulnerable and enhancing public health.



Strategic Priority Three:

Leverage a **data-driven** approach to immunisation, utilising accurate vaccination and population data to empower individuals and inform timely public-health decision-making.



Strategic Priority Four:

Ensure Ireland is optimally **positioned to leverage future vaccine innovations** thereby protecting public health while supporting the sustainability of the healthcare system and wider economy.

A set of key recommendations aligned to each of the four priority areas were developed through the course of expert interviews and discussions with the advisory board. These should be considered for inclusion in the National Immunisation Strategy in order to advance the development of a comprehensive national approach to adult immunisation in Ireland.



Strategic Priority One:

Build trustworthy vaccination programmes supported by systems grounded in informed consent and transparent, evidence-based information, offering clear opportunities for individuals to ask questions and fully understand the benefits and risks to support widespread acceptance and participation and ultimately enhance community immunity and protect public health.

Recommendations:

- 1.1 Ensure the HSE's NIO is appropriately resourced to continue its work to:
 - 1.1.1 Standardise vaccine-related messaging across healthcare platforms including honest acknowledgement of the limitations and potential adverse effects of vaccination where appropriate.
 - 1.1.1.1 Provide funding to support research to build a knowledge base regarding behaviour and attitudes (e.g. through surveys, focus groups, community consultations) to immunisation amongst the general public including underserved populations. Use this information to develop appropriate responses to combat misinformation and disinformation and to develop tailored, evidence-based communication strategies which meet the specific needs of each individual group (including healthcare workers).
 - 1.1.2 Create clear, user-friendly and accessible information on immunisation schedules across the life stage that explains the principle of immunisation, details available vaccinations by age and/or life stage and/or medical condition and outlines how and where to access public and private services for vaccine administration.
 - 1.1.3 Enable communications across a variety of channels and media and in multiple languages tailored to specific audiences and cultural contexts e.g., visual aids for those who find health information difficult to obtain and understand.
 - 1.1.4 Create a centralised repository (e.g. a dedicated webpage on the NIO's website) containing accurate and downloadable vaccination information for healthcare workers to access and share with patients and the public.
 - 1.1.5 Promote vaccine literacy with national vaccination awareness and education campaigns to ensure adult uptake of immunisation is maximised.
 - 1.1.6 Adopt a consistent approach to the communication of emerging concerns about vaccine preventable diseases to keep the public informed and avoid complacency.
- 1.2 Recommend the work of the National Vaccine Alliance (including HCPs, policy makers, patient advocates and under-represented groups) to build on lessons learnt from the COVID-19 immunisation programme and to promote evidence-based intersectoral and cross-agency communication on adult immunisation in Ireland.
- 1.3 Develop digital tools similar to the COVID-19 app to assist individuals in finding local vaccination sites, understanding eligibility criteria for individual vaccines and tracking vaccines by need/stage.
- 1.4 Embed communication on immunisation into the HSE's Making Every Contact Count programme, the Living Well Programme for adults with chronic or long-term health conditions and other programmes supported through HSE Health and Wellbeing.
- 1.5 Engage immunisation champions to advocate for adult immunisation across all communities including those who represent the diverse cultural, linguistic and social contexts of under-served and minority populations as well as champions within and for the healthcare workforce.



Expert Perspectives

‘Communication Strategies for Underserved Populations’

Marginalised and refugee communities often encounter challenges such as mistrust, fear, language barriers and limited access to healthcare resulting in lower immunisation rates. Effective communication strategies must consider their specific needs. Information should be available in multiple languages and tailored to cultural contexts. This helps address language barriers and fosters trust by respecting cultural sensitivity. Advocates and local champions from within these communities can significantly enhance vaccination uptake. Additionally, personal stories are powerful tools for raising awareness about the severity of VPDs and the importance of prevention.



Case Study

‘Health Education in Finnish Schools’

In Finland, health literacy is a compulsory part of the national school curriculum for primary and secondary school students aimed at helping them make sound health decisions and improve their well-being. In 2004, the compulsory introduction of ‘health literacy instruction’ as an initiative emerged from several large-scale surveys which had shown concerning changes in adolescents’ health and health behaviour. The curriculum-based health literacy programme has contributed to Finnish pupils being among the best informed about health in Europe with benefits such as better self-rated health, self-esteem, physical activity and reduced smoking and alcohol use. All health education teachers undergo university-level training to ensure high-quality instruction of the subject in schools [106].

- 1.6 Develop a consistent approach to ensuring that all relevant undergraduate courses and continuing professional development programmes for medical and allied HCPs promote the benefits of preventative health and immunisation in adults.
- 1.7 Implement comprehensive vaccine education programmes in schools (e.g., primary, second level, university and higher learning facilities) to enhance knowledge about the importance of immunisation across the life-course. This should be done in collaboration with the Department of Education and the Department of Further and Higher Education, Research, Innovation and Science.
- 1.8 Promote greater understanding of the role of the HPRA and the European Medicines Agency (EMA) in monitoring and reporting on vaccine safety and how the public may access this information.
- 1.9 Establish a vaccine injury redress programme which incorporates an underpinning legal framework and clear eligibility criteria.



Expert Perspectives

‘Building public trust’

Building trust with the public requires transparency and the provision of a balanced view of vaccination programmes. Currently, Ireland lacks a formal vaccine redress scheme. To enable such a scheme, it’s important the programme respects the social contract by ensuring that individuals who contribute to public health efforts through immunisation are supported if they suffer adverse effects causally linked to vaccination. This demonstrates fairness, increases public confidence in vaccine safety, supports informed consent and fosters a trustworthy immunisation system.





Strategic Priority Two: Equitable Access

Ensure equitable access to adult immunisation which reflects NIAC recommendations, considers the diverse needs of the entire population, focuses on maximising convenience for individuals and is delivered in an integrated manner thereby protecting the most vulnerable and enhancing public health.

Recommendations:

- 2.1 Adopt a cross-agency and whole-of-government approach to ensure equitable access to adult immunisation across all populations and engage with underserved populations and the services working with these populations. Cross sector working including between the following bodies is recommended: HSE, patient organisations, DoH, Department of Children, Equality, Disability and Youth, Department of Social Protection, Department of Education, Department of Further and Higher Education, Research, Innovation and Science and Department of Justice.
- 2.2 Designate an HCP immunisation champion in each HSE Health Region. These champions should aim to ensure a coherent and cohesive approach to immunisation and successful implementation of adult vaccination programmes. They should enable consistent messages on immunisation and seek to address barriers to access to immunisation in the region by working with local providers, including primary care, acute, community and mental health and disability services.
- 2.3 Develop a service delivery model that prioritises equitable access to vaccination by incorporating multiple entry points to accommodate diverse need and ensure that every individual has equal opportunity to access the materials needed to make an informed decision. Promote and provide immunisation where it is most convenient for the individual through:
 - Expansion of pharmacy vaccination (i.e. through accelerated expansion of the range of authorised vaccines available for administration in pharmacies)
 - Promotion of workplace vaccination, including in non-health service settings
 - Enhancement of opportunistic administration in hospitals e.g. outpatient departments and in community settings
 - Offering mobile vaccination clinics e.g. drop-in clinics for seasonal vaccinations in high traffic areas (i.e. retail settings)
- 2.4 Develop, implement, monitor (see recommendation 4.6) and regularly update vaccination plans for the eligible population for each vaccine with a particular focus on under- or unvaccinated groups within these populations. These plans should be customised to the specific needs of each community. Ensure that adequate funding is made available to support qualitative and quantitative research to develop evidence-based immunisation strategies. Additionally, leverage data and insights from existing networks e.g. patient advocacy groups and patient organisations to enhance and tailor these plans.
- 2.5 Establish guidelines which outline the responsibilities of HCPs for vaccinating immunocompromised individuals, supported by effective communication and coordination among HCPs.
- 2.6 Establish a flexible vaccinator workforce that can adapt as needed, which is focused on delivering immunisation in a convenient and integrated manner. Ensure a standardised approach to training and accreditation is developed for all vaccinators. Consider the potential role of GPAs in delivering vaccination.
- 2.7 Ensure carers are well-informed on the benefits of immunisation and have access to vaccines to protect themselves and the individuals they care for from VPDs.



Case Study

‘Canada’s approach to underserved populations’

In 2016, Canada set up the Immunisation Partnership Fund which has supported community-driven initiatives with the aim of increasing vaccine uptake in populations with lower vaccine uptake. The initiatives are all equity based, evidence driven and deployed in communities across Canada. The funding for projects in 2024-2026 will be used to develop and implement community-focused vaccination education and outreach to boost vaccine confidence and reduce barriers and enhance HCPs ability to serve priority populations by increasing vaccination access, ensuring positive vaccination experiences, providing clear, tailored vaccination information and offering effective counselling to vaccine-hesitant individuals. An example of one of these initiatives is a project which aims to boost vaccine acceptance in East African communities, especially among newcomers, refugees, and new mothers unfamiliar with Canada’s vaccine regulations. Key initiatives include:

- Developing an AI Chatbot on WhatsApp for automated messaging
- Organising community learning circles
- Creating train-the-trainer modules for young community members to become ambassadors
- Producing video and print content in Somali, Oromo, Tigrinya, and Amharic

These efforts aim to improve vaccine knowledge, identify challenges and enhance vaccine literacy in Alberta’s East African communities [107].





Strategic Priority Three:

Leverage a data-driven approach to immunisation, utilising accurate vaccination and population data to empower individuals and inform timely public-health decision-making.

Recommendations:

- 3.1 Implement a comprehensive interoperable immunisation information system that: simplifies access to, and analysis of, vaccination data by HCPs; provides a single 'data lake' which integrates historic and ongoing data from all settings in which immunisation is provided (e.g., GP practices, pharmacies, schools, secondary care and occupational health settings); provides access for individuals to their vaccination record; records immunisation data throughout an individual's life.
- 3.2 Institute a reminder and recall messaging system which facilitates a multichannel (e.g. text, email, mobile app notification) communication strategy to prompt individuals or cohorts to attend for vaccination based on age, medical history and/or other appropriate criteria (i.e. disease-based recommendations).
- 3.3 Integrate vaccination data with demographic and clinical information, facilitated by the establishment of appropriately funded disease registries (i.e. through clinical programmes) with the proper consent mechanisms in place and in line with GDPR and the European Data Governance Act. This integration will facilitate detailed analysis of vaccination coverage and disease surveillance rates, the generation of real-world evidence (RWE) and will enable more targeted vaccination promotion and delivery.
- 3.4 Ensure access by the NIO and HPSC to near real-time, accurate vaccination data to facilitate effective commissioning and delivery of services, informed decision making and rapid response to emerging public health concerns.
- 3.5 Progress the Health Information Bill and accelerate the implementation of Shared Care, EHRs and HSE's Patient App. Prioritise the integration of adult immunisation data within these systems once they are in place. Additionally, they should support informed consent, enable individuals to store their own data and records and guarantee the protection of an individual's privacy and confidentiality.



Expert Perspectives

'The importance of technology driven and interoperable systems for immunisation'

While the urgent requirement for the integration of digital health systems is a sentiment echoed throughout the entire healthcare ecosystem, the expedited development and deployment of these digital tools are especially crucial for enhancing immunisation efforts across Ireland. As the digital healthcare framework develops and operationalises, it is vital that immunisation-related services, like the NIIS, are built to ensure interoperability. The immunisation ecosystem must avoid creating redundant systems and maintain a unified approach to prevent fragmentation and ensure seamless communication between new systems.



Case Study

New Zealand's Chipper Tool – advancing inclusive access to digital immunisation services

New Zealand's health authority (Te Whatu Ora) utilise a sophisticated system called CHIPPER which is designed to identify New Zealanders (as individuals or in groups of cohorts) in order to nudge them via text, email, letters and phone calls about health programmes such as immunisation [108]. In addition, CHIPPER has a feature that allows individuals to 'act on behalf of' someone else ensuring that digital health tools reach a broader audience including those without direct access to digital services. It was found that 20% of CHIPPER interactions were taken on behalf of someone else [108].

In New Zealand, ethnicity data is collected at multiple levels to ensure comprehensive and culturally sensitive healthcare services. This multi-level data collection allows for more targeted and effective health interventions across diverse ethnic groups. CHIPPER ensures that health services are accessible to all populations in New Zealand by facilitating multichannel communication and enabling proxy engagements.





Strategic Priority Four:

Ensure Ireland is optimally positioned to leverage future vaccine innovations thereby protecting public health while supporting the sustainability of the healthcare system and wider economy.

Recommendations:

- 4.1 Agree a sustainable multi annual funding model for the progressive enhancement of the adult immunisation programme. This model should ensure that Ireland consistently allocates at least the median of 0.3%^b of its healthcare budget towards immunisation programmes and plan to include provisions to increase this to 0.5% as more vaccine innovations become available. Additionally, this model should seek to ensure the removal of financial barriers to access to immunisation, provide a mechanism through which HCPs are appropriately supported for the provision of immunisation services and include the establishment of a permanent HSE vaccinator workforce.
- 4.2 Recommend NIAC's recognition as a NITAG to align with European and WHO standards and boost participation in European initiatives.
- 4.3 Institute a horizon scanning process and publish a regularly updated roadmap of potential new vaccines which may be considered for future inclusion in the adult immunisation schedule. Transparency to all stakeholders can be provided by publication of the immunisation roadmap by NIAC/DoH/NIO on accessible platforms with established timelines for the provision of roadmap updates.
- 4.4 Develop a streamlined process, advanced by the DoH (e.g. establishment of guidelines, dedicated task force, pre-assessment framework, cross-collaboration between NIAC, policymakers and health economists) to enable faster cost effectiveness and budget impact analysis and overall decision making on funding for adult vaccines recommended by NIAC.
- 4.5 Implement a flexible, time-bound and streamlined HTA assessment process which is designed specifically for vaccines and incorporates a wider societal perspective on the benefits of vaccines. This should include for example an economic evaluation of absenteeism/ presenteeism as well as an evaluation of the progressive frailty resulting from VPDs. Additionally, the process should allow for the recognition of evidence from other countries and real-world evidence data.



Expert Perspectives

'Current HTA Process Limitations'

The current HTA process in Ireland, with its focus on budget impact and a narrow interpretation of cost-effectiveness, limits the demonstration of the true societal and financial value of vaccines. Current cost effectiveness assessments often overlook factors such as reducing absenteeism or preventing presenteeism, avoidable hospital admissions and the broader consequences related to healthcare workers. These overlooked costs suggest a need for a more comprehensive approach to evaluating healthcare expenses. Robust data including RWE should support the analysis of vaccine effectiveness to ensure appropriate public funding of this public good.

^b Based on the finding that immunisation funding represents a median of 0.3% of total healthcare spend in Europe.

4.6 Agree and monitor KPIs against which strategy implementation and the performance of the adult immunisation programme will be monitored over time. Examples include;

- Level of uptake of vaccines in eligible cohorts for vaccines included on the adult immunisation schedule
- Incidence of VPDs (e.g. pneumococcal disease) among the adult population
- Level of public trust towards adult immunisation programmes

- Vaccination coverage rates among under-or unvaccinated groups
- Implementation and interoperability of the national immunisation information system
- Time taken for HTA assessment of new vaccines

4.7 Ensure robust outbreak response and pandemic preparedness through a proactive surveillance system, health protection resource allocation and cross-sector collaboration. This should include a level of resilience within the immunisation programme and the healthcare sector to facilitate its continued delivery during times of crisis.



Strategic Roadmap

The overarching recommendation of this position paper is the creation of a comprehensive, whole-of-government adult immunisation strategy. This strategy should clearly define goals, objectives and actions for the short, medium, and long term. Within this position paper, we have outlined several key recommendations for consideration for inclusion in the development of a comprehensive national approach to adult immunisation in Ireland. In this section, a number of suggested key actions aligned to the recommendations have been highlighted in figures (4-6) which can be used as a guide to understand the implementation of these recommendations across the strategic priority areas. Figure 7 outlines a number of key stakeholders who are essential in the dialogue surrounding the development of an adult immunisation strategy.

Strategic Roadmap





PRIORITY AREAS	SHORT TERM (~ 6 – 12 months)			
VISION	'An Ireland where everyone, everywhere, at every age fully benefits from vaccines for good health and well-being'			
KEY ACTION	Development of a Whole-of-Government Adult Immunisation Strategy & Implementation Plan			
 <p>Trustworthy</p>	<p>Advocate for and secure adequate funding and staffing for NIO (rec 1.1)</p> <p>Develop a comprehensive omnichannel communication strategy on immunisation for the public and healthcare workers (rec 1.1.1 & 1.1.4)</p>	<p>Develop an intuitive website and corresponding app detailing vaccination sites and information on vaccine eligibility (rec 1.3)</p> <p>Create clear, user-friendly and accessible information on immunisation schedules across the life stage (rec 1.1.2)</p>	<p>Integrate immunisation messaging into the training materials and resources of the Making Every Contact Count programme (MECC) (rec 1.4)</p> <p>Identify relevant individuals and organisations to participate in a National Vaccine Alliance (rec 1.2)</p>	<p>Work with patient organisations and advocacy groups to identify community leaders (rec 1.5)</p>
 <p>Equitable</p>	<p>Create an interdepartmental task force with representatives from relevant Departments, with a designated lead accountable for implementation (rec 2.1)</p>	<p>Define roles and responsibilities for immunisation champions in each HSE region (rec 2.2)</p>	<p>Along with strategy development, conduct a review of the current immunisation delivery model and identify areas for improvement to incorporate into the development of a future model (rec 2.3)</p>	<p>Identify data gaps and necessary data for developing vaccination plans for eligible populations (rec 2.4)</p> <p>Collaborate with relevant bodies (i.e. training bodies) to begin developing appropriate vaccination training and guidelines for all HCPs (rec 2.5 & 2.6)</p> <p>Develop guidelines for immunisation of carers (rec 2.7)</p>
 <p>Data Enabled</p>	<p>Identify synergies with the HSE's Digital Health Strategic Implementation Roadmap re the development of relevant IT infrastructure (rec 3.1 – 3.5)</p>	<p>Advocate for the integration of immunisation data within the Shared Care Record and the integration of an immunisation module within the HSE's Patient App (rec 3.5)</p>	<p>Ensure the development of the national immunisation information system (NIIS) is progressed (rec 3.1)</p>	
 <p>Future Fit</p>	<p>Ensure NIACs formal recognition as a NITAG (rec 4.2)</p> <p>Develop a horizon scanning process and publish a regularly updated roadmap of expected new vaccines and vaccine delivery systems (rec 4.3)</p>	<p>Conduct a review of the vaccine approval process (i.e. NIAC recommendation to funding decision) and identify key pain points for improvement for addition to publicly funded national immunisation programmes (rec 4.4)</p>		<p>Develop KPIs against which the implementation of the adult immunisation programme will be monitored (rec 4.6)</p>

Figure 4: Strategic Roadmap Short Term



Strategic Roadmap





PRIORITY AREAS	MEDIUM TERM (~ 1-2 years)			
VISION	'An Ireland where everyone, everywhere, at every age fully benefits from vaccines for good health and well-being'			
KEY ACTION	Implementation of the Whole-of-Government Adult Immunisation Strategy			
 <p>Trustworthy</p>	<p>Collaborate with patient advocacy groups, patient organisations and relevant Departments and agencies to understand the needs of underserved populations to create tailored communications (rec 1.1.3)</p> <p>Develop vaccine literacy campaigns (rec 1.1.5)</p>	<p>Partner with the Department of Education to develop and integrate education on life course immunisation and preventative health into school curricula (rec 1.7)</p> <p>Develop guidelines for timely and consistent communication on emerging VPDs (rec 1.1.6)</p>	<p>Advocate for funding for an ongoing programme of research focused on determining knowledge, behaviour and attitudes towards adult immunisation (rec 1.1.1.1)</p> <p>Develop communication plan to enhance public awareness and understanding of the roles of HPRA and EMA in vaccine safety monitoring, product supply and quality assurance (rec 1.8)</p>	<p>Establish a vaccine injury redress programme which incorporates an underpinning legal framework and clear eligibility criteria (rec 1.9)</p>
 <p>Equitable</p>	<p>Pilot the delivery of immunisation programmes in alternative settings e.g. mobile clinics (rec 2.3)</p> <p>Develop a research strategy to understand the needs of eligible population for vaccines (including vaccine hesitancy, vaccine effectiveness (RWE) and surveillance) and use to develop tailored plans (rec 2.4)</p>			
 <p>Data Enabled</p>	<p>Secure the integration of immunisation data within the Shared Care Record and the integration of an immunisation module within the HSE's Patient App (rec 3.5)</p> <p>Ensure the development of the national immunisation information system (NIIS) is progressed (rec 3.1)</p> <p>Develop a reminder and recall system for vaccination (i.e. through integration with the HSE's Patient App etc) (rec 3.2)</p> <p>Identify areas where disease registries are required to be integrated to support targeted immunisation (rec 3.3)</p>			
 <p>Future Fit</p>	<p>Develop plans for maintaining delivery of existing immunisation programmes in the event of another pandemic or public health emergency (rec 4.7)</p>			

Figure 5: Strategic Roadmap Medium Term



Strategic Roadmap





PRIORITY AREAS	LONG TERM (~ 2 years onwards)		
VISION	'An Ireland where everyone, everywhere at every age, fully benefits from vaccines for good health and well-being'		
KEY ACTION	Implementation of the Whole-of-Government Adult Immunisation Strategy		
 Trustworthy	<p>Develop guidance aimed at standardising vaccination training for HCPs (rec 1.6)</p>	<p>Disseminate material on vaccine and preventative health education in schools (rec 1.7)</p>	
 Equitable	<p>Conduct ongoing research to understand the needs of the eligible population for vaccines and use to develop tailored plans (rec 2.4)</p>		
 Data Enabled	<p>Ensure the development of the national immunisation information system (NIIS) is progressed (rec 3.1)</p>	<p>Develop disease registries to be integrated to support targeted immunisation (rec 3.3)</p>	<p>Use data-enabled approaches to support the commissioning and delivery of immunisation programmes (rec 3.4)</p>
 Future Fit	<p>Implementation of a sustainable multi-annual funding model (rec 4.1)</p>	<p>Implement updated HTA process (rec 4.5)</p>	<p>Monitor progress of adult immunisation strategy KPIs (rec 4.6)</p>

Figure 6: Strategic Roadmap Long Term

Stakeholder consultation will be an essential component of the development of an adult immunisation programme strategy, including with:



Figure 7: Stakeholder Map

Conclusion



This position paper has outlined the current approach to adult immunisation in Ireland, underscored the necessity for a robust adult immunisation programme and proffered recommendations to achieve this following consideration of opportunities and key challenges within the current system. The expert knowledge and insight provided in the course of the development of this position paper sets out a strategic path forward for policymakers to reallocate funding towards preventative health services.

These recommendations set out a strategic path forward, based on the vision of **'an Ireland where everyone, everywhere, at every age fully benefits from vaccines for good health and well-being'**, in alignment with the WHO's Immunisation Agenda 2030 (IA2030) vision.

In order to achieve this, **it is recommended that a comprehensive, stand-alone national immunisation strategy be developed, promoting a life-course framework and adopting a whole-of-government approach.**

The recommendations focus on building trust, ensuring equitable access, utilising data for informed decision-making and preparing for future vaccine innovations. Implementing these measures will establish a robust framework for adult immunisation in Ireland with the aim to enhance public health and protect vulnerable populations.

Participants

We extend our sincere appreciation to all the participants who contributed their insights and expertise through interviews and participation in the advisory board.

Participant	Organisation
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Professor Karina Butler	Clinical Professor of Paediatrics, Former Chair of National Immunisation Advisory Committee (NIAC)
Kate O'Connell	Pharmacist, Former TD
Kathy Maher	Pharmacist, Chair Pharmacy Contractors Committee, Irish Pharmacy Union
Mary Harney	Independent Company Director and Business Adviser, Former Politician and Government Minister for Health
Professor Molly Byrne	Professor of Health Psychology, Director of Health Behaviour Change Research Group, University of Galway
Dr Patrick Kelly	Clinical Lead for Immunisation, Irish College of General Practitioners (ICGP)
Dr Patrick Mitchell	Senior Lecturer/Associate Professor, Consultant Respiratory Physician, Trinity College Dublin and Tallaght University Hospital
Professor Siobhán O'Sullivan	Executive Director of the Royal Irish Academy, Former Chief Bioethics Officer in the Department of Health
Dr Yvonne Doyle	Former Medical Director and Director for Health Protection Public Health England 2019-2021 and National Director for Public Health at NHS England

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