The Importance of Immunisation for All Ages

Immunisation for All Ages

One of the core ambitions for the *WHO Immunization Agenda 2030 (IA2030)* is to expand immunisation services beyond infancy to include the whole of the life course and ensure **"a world where everyone, everywhere, at every age, fully benefits from vaccines for good health and well-being".**[1]

The Immunisation for All Ages (IFAA) initiative calls for action in support of a life course approach to immunisation, and for national and international health and advocacy organisations and governments to:[2]

1. Prioritise immunisation throughout life as a key pillar of expanded prevention strategies and a central component of universal health coverage.
2. Remove barriers to access for appropriate immunisation throughout life to ensure all people are protected and no one is left behind.
3. Reduce inequities in timely, appropriate, and affordable access to immunisation throughout life.

Vaccine preventable respiratory diseases are a public health burden

Influenza

~1b

Annual influenza cases worldwide across all ages.[3]

**last estimated in 2019.*

~290-650k

Influenza related deaths per year.[4]

Respiratory syncytial virus (RSV)

~64m

Annual RSV respiratory tract infections caused worldwide across all ages.[5]

**last estimated in 2023.*

~160k

RSV related deaths globally per year.[6]

COVID-19

>750m

cumulative COVID-19 cases have been reported since 2019.[7]

**across all ages, last estimated in 2024.*

>1.2m

COVID-19 related deaths in 2022.[8]

**estimated across all ages*

Pneumonia (all causes)

~336m

Pneumonia cases across all ages.[9]

**last estimated in 2016.*

~2.5m

Pneumonia related deaths in 2019.[10]

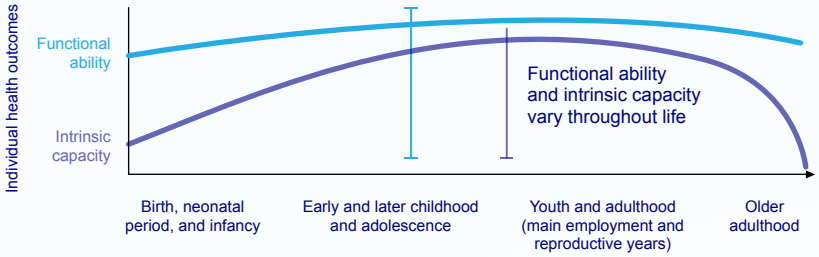
Health systems are managing the co-circulation of multiple infectious respiratory diseases, particularly in the winter.[11] These contribute to severe illness and high levels of hospitalisations in vulnerable populations every year putting additional pressure on already strained healthcare systems.[12,13,14,15]

Older adults and those with underlying medical conditions are at even a greater risk of serious and life threatening consequences of vaccine-preventable deaths (VPD).

AGE

With increasing age the likelihood of an adult having two or more chronic medical conditions increases.[16]

During the 2021/2022 winter season, **94%** of US adults who were hospitalised with flu-related complications had at least one underlying medical condition, such as diabetes, asthma, chronic obstructive pulmonary disease (COPD) and chronic heart disease.[17]



Conceptual framework for a life course approach to health[20]

Maintaining functional capacity is central to healthy ageing. Preventive medicine, including vaccination, can play a major role in preserving this.[18]

Vaccine-preventable diseases are a significant cause of morbidity and mortality in older people, and severe infections are associated with the loss of independence, function, and quality of life.[19]

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Vaccination is recognised as one of the most cost-effective ways of saving lives and promoting good health and wellbeing leading to significant societal and economic value.[21]

If the universal 75% influenza vaccination coverage target rate is achieved, vaccines could potentially reduce the public health and economic burden in Europe by an estimated:[22]

- **31,400** hospitalisations[22]
- **14,300** deaths[22]
- **767,800** physician visits[22]
- **1,015,100** working days lost annually[22]

Targeting specific adult populations, such as older adults, those with chronic medical conditions, healthcare workers, and pregnant women, can help protect at-risk populations.[1,7,23]

Adult immunisation rates are lagging behind child immunisation rates worldwide.*[24]

	Adult Pneumococcal Vaccination Rates	Paediatric PCV-13 Pneumococcal Vaccination Rates
	44%	92%
	62%	88%
	37%	81%
	18%	81%
	60%	82%

*as of 2021

Closing the immunisation gaps amongst healthcare workers helps to:[25]

1. Protect their safety
2. Prevent the spread of disease
3. Ensure continuity of care and maintain an adequate workforce
4. Improve the overall effectiveness of healthcare systems

Strengthening maternal immunisation pathways has been recognised as a means of helping to protect new-born infants, from the day of birth, when they are most vulnerable to respiratory diseases, such as RSV, pertussis and influenza.[26,27]

Community pharmacies help build health system capacity to support increased immunisation uptake across the life course.

Over 320 million COVID-19 vaccines had been **administered by pharmacists** around the world by November 2022.[28,29,30,31,32]

Pharmacists not only provide an accessible pathway for vaccination,[33] but are a feasible solution to building vaccination awareness and confidence.[34] As trusted healthcare professionals at the heart of communities, pharmacists are ideally placed to identify those who require vaccination and engage in conversations that encourage vaccine uptake and improve health literacy.[35,36]

To achieve the goals of IA2030, it is crucial to have strategies and plans of action to build and sustain comprehensive national immunisation programmes that are equitable across the lifecourse and all ages and strengthen health systems.

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The Importance of Immunisation for All Ages: A Spotlight on Pneumococcal diseases

The Burden of Pneumococcal Pneumonia across the life course

Pneumococcal pneumonia is the most common type of bacterial pneumonia.[37] People of any age infected with this type of pneumonia, caused by *Streptococcus pneumoniae*, are at greater risk of severe respiratory disease and three times more likely to die than those with pneumonia from other causes.[37,38]

Each year, pneumococcal disease, which includes pneumococcal pneumonia, causes **1.6 million deaths globally.**[37]

- 1 million of these deaths occur in children, making pneumococcal disease one of the leading causes of vaccine-preventable deaths worldwide in children under five.[39,40]
- Deaths from pneumococcal pneumonia among adults aged 70 and over have increased by 60% in the last two decades.[37]

Vaccination remains the primary and most effective preventative strategy for protecting people against pneumococcal disease.[37,41]

Children

Global pediatric immunisation programs using pneumococcal conjugate vaccines (PCVs) have significantly **reduced morbidity and mortality** from vaccine-serotype pneumococcal disease in children.[42]

From 2010 to 2019, PCV vaccines averted approximately **175.2 million cases of pneumococcal disease and prevented 624,904 deaths** in children under five.[43]

At-risk individuals and older adults

Pneumococcal Polysaccharide vaccination is **advised** for individuals aged **2 to 64 years** with specific medical conditions, and those over 65 years old.[44]

PPV23 and PCV 13 vaccination of high-risk immunocompromised individuals has been shown to **reduce the incidence of invasive pneumococcal disease.**[45]

Globally, adult pneumococcal vaccination rates **significantly lag** behind childhood pneumococcal vaccination rates.[46,47]

Scaling up vaccination infrastructure and workforce: Expanding the scope of pharmacists

In Italy, a working paper was compiled to model the **potential expanded role of pharmacist vaccination** and found that the **time taken to reach the 75% coverage rate for pneumococcal vaccination in the over 65s could be just 3 years** with the support of community pharmacy.[48]

The socio-economic value of life course pneumococcal immunisation

Minimise the exacerbation of medical conditions and associated healthcare costs: Community-acquired pneumonia (CAP), which is often caused by pneumococcal pneumonia, can intensify underlying conditions, such as chronic obstructive pulmonary disease, asthma, and hypertension, thereby increasing the likelihood of significant cardiac events.[49,50] A 2020 U.S. study calculated that expenditure for CAP hospitalisation averaged $33,380 and $4,568 during the 30-day period thereafter.[51]

Vaccination is an important measure in the fight against anti-microbial resistance:[52] Pneumococcal vaccination could avoid an estimated 11.4 million days of antibiotic use per year in children under five, representing a reduction by 47% in days on antibiotics.[53] Meanwhile, PCV vaccination in individuals ≥65 years and older can also significantly reduce antibiotic prescriptions and curtail the circulation of resistant strains by lowering pathogen carriage and infections.[52]

Reduce productivity losses and the associated societal costs: Untreated pneumococcal disease incurs an estimated societal cost of $14.3 billion.[54] Investment in vaccination could lead to societal cost savings of $2.64 billion through productivity gains from reduced caregiving and reduced out-of-pocket expenditures.[54]

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