



Asia-Pacific  
Economic Cooperation

# Life-Course Immunization as an Enabler for Healthy Aging: A Policy Brief for APEC Economies



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# Executive Summary

As APEC economies face a demographic shift toward aging populations, life-course immunization has emerged as a critical enabler for healthy aging and regional health security. More than 600 million people over the age of 60 reside in APEC economies today, and this population is projected to increase to 800 million by 2040. This policy brief supports implementation of the *APEC Action Plan on Vaccination Across the Life-Course (2021–2030)* by outlining how adult immunization prevents disease, reduces disability and healthcare costs, and enables older adults to maintain independence and quality of life.

However, disparities persist across the region. Vaccines for older adults (e.g. influenza, pneumococcal, shingles) have been introduced unevenly, and many economies face barriers related to regulatory approval, National Immunization Technical Advisory Group (NITAG) capacity, financing, data infrastructure, and public awareness. Case studies from Japan, Hong Kong, China and Singapore illustrate successful approaches to scaling older adult immunization through policy innovation, subsidies, and integration with primary care.

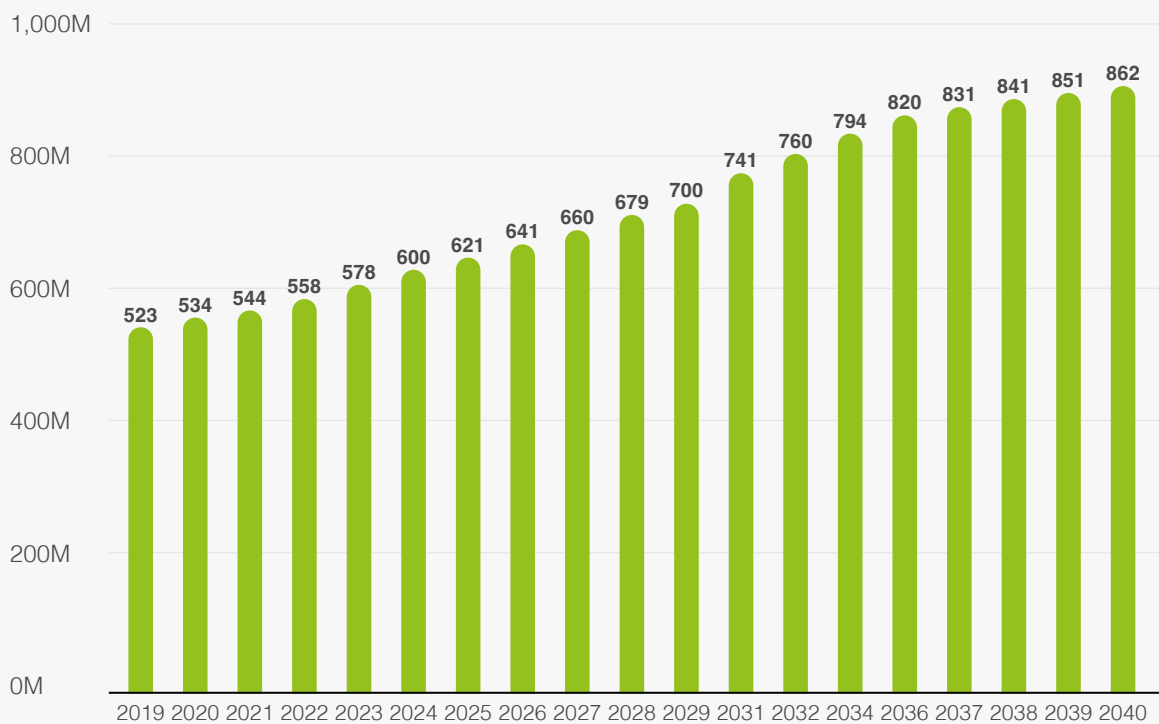
This document outlines strategic, actionable policy recommendations for APEC economies, including: aligning regulatory and NITAG processes, securing sustainable financing, embedding immunization into aging and health systems, strengthening digital data systems, and generating demand through education. Key performance indicators are proposed to track regional progress and highlight areas for targeted action.



## Overview

APEC economies are experiencing rapid population aging – an estimated 600 million people or more over the age of 60 reside in APEC economies, and this number is expected to increase to 800 million by 2040 (Figure 1).<sup>1</sup> This demographic shift makes healthy aging not only a social priority but an economic imperative.

**Figure 1. Estimated number of persons aged over 60 years or over in APEC region, 2019-2040**



Robust immunization programs are a cornerstone of preventive health, offering one of the most cost-effective ways to protect populations. By adopting a life-course approach, vaccinating individuals at every age, not just in childhood, APEC economies can prevent infectious disease across all generations, reduce disability, and improve quality of life for older adults while fortifying health systems against unexpected threats.

Vaccinating older adults yields multiple benefits, preventing disease and frailty, lowering healthcare costs, and keeping seniors active, which in turn supports economic growth and social inclusion. At the same time, a robust immunization infrastructure (e.g., supply chains, surveillance, registries) strengthens health system resilience, reduces the burden on healthcare systems, and serves as a critical health security architecture, enabling economies to respond more effectively to pandemics and emerging threats. To realize these benefits, APEC economies must address gaps in adult immunization policies (such as funding and regulatory hurdles) and accelerate implementation of the APEC Action Plan on Vaccination Across the Life-Course across the region.

Despite progress, policy and implementation challenges persist across APEC economies that slow the expansion of life-course immunization. Key barriers include:

- 1 Delayed vaccine introduction and policy support including lengthy regulatory pathways, limited NITAG capacity, and slow incorporation of adult vaccines into immunization programs.
- 2 Financing and insurance gaps including limited public funding for adult vaccines, reliance on out-of-pocket payment, and uneven insurance coverage.
- 3 Infrastructure and data limitations including underdeveloped adult immunization delivery platforms, weak registries, and fragmented data systems.
- 4 Awareness and demand challenges including low public and provider awareness of adult vaccination benefits and addressing vaccine confidence and awareness gaps, including through transparent communication and the provision of accessible scientific information to support informed decision-making.
- 5 Fragmentation and coordination issues including unclear institutional ownership across health, aging, and primary care systems, and weak cross-sector coordination.



# Immunization as a Pillar of Healthy Aging

Vaccines are vital to healthy aging, as they prevent infectious diseases that disproportionately affect older adults. With age, the immune system weakens and chronic conditions accumulate, leaving seniors especially vulnerable to illnesses such as seasonal influenza, pneumococcal pneumonia, and shingles. These vaccine-preventable diseases (VPDs) can cause severe complications, disability, or death in older populations. Preventing such illnesses through vaccination significantly improves the quality of life, independence, and ongoing contributions of older adults to their families and society. For example, immunizing seniors against flu, pneumonia, and shingles has been shown to reduce hospitalization rates and serious complications, freeing up medical resources for other patients.<sup>2</sup>

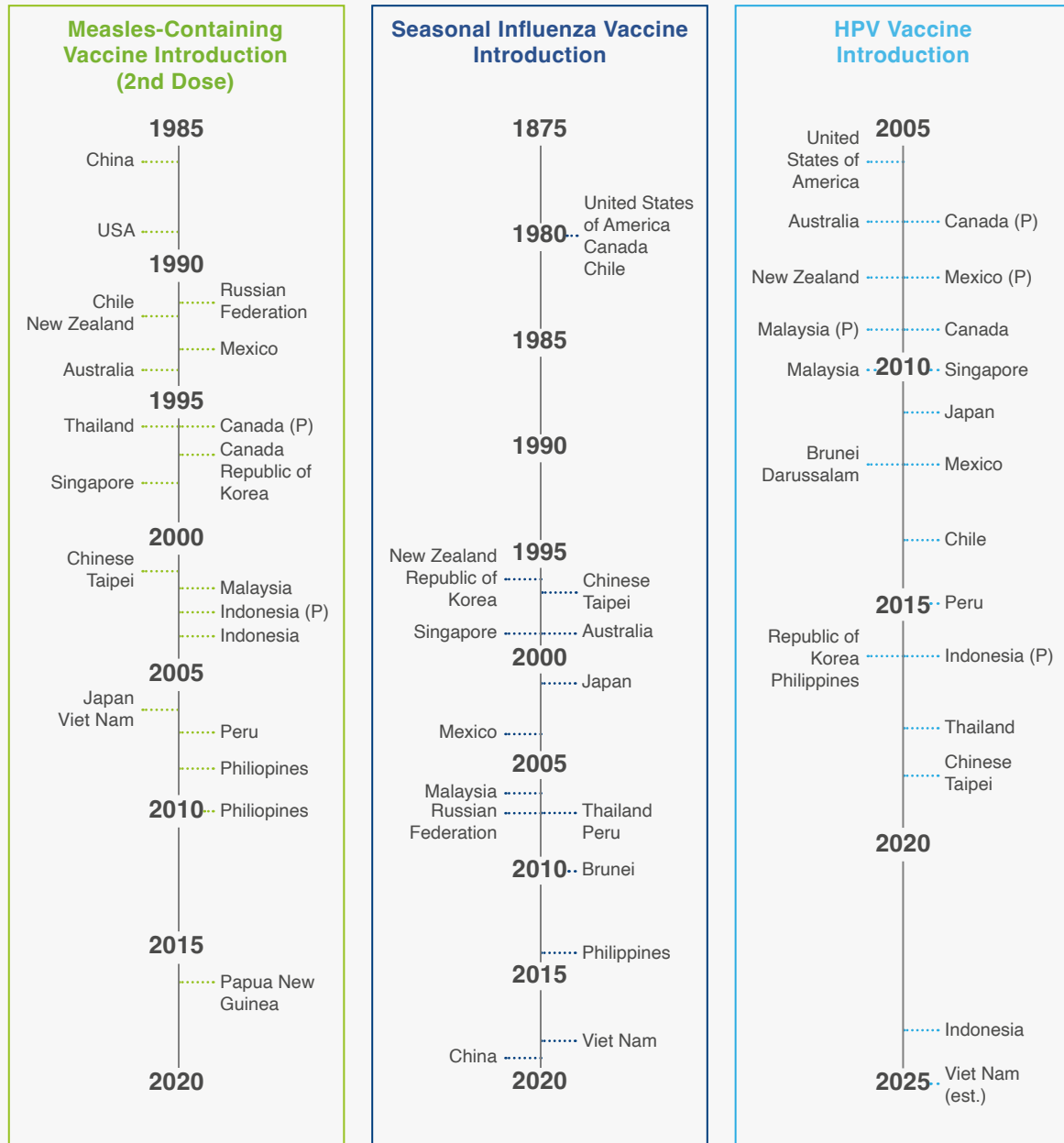
Immunization also yields substantial economic benefits in aging societies. Infectious disease in older adults drives up healthcare utilization and long-term care needs. In the United States, for instance, four key VPDs (influenza, pneumococcal disease, pertussis, and shingles) among people over 50 were estimated to cost \$26.5 billion in a single year.<sup>3</sup>

The economic costs of VPDs and the resulting value of immunization shift as well when economies consider worker productivity and absenteeism, both for patients and their caregivers. For example, absenteeism (time away from work) and presenteeism (work loss due to lower productivity at work) resulting from shingles infection are estimated to cause approximately \$3.9 million USD in economic losses per 100,000 person-years in working adults aged 50-59.<sup>4</sup>

Lastly, disparities exist between global vaccine introduction and introduction at the economy level (Figure 2), with some vaccines (e.g., seasonal influenza) being introduced in APEC economies over a span of nearly 40 years. By convening immunization experts and government stakeholders, APEC economies can identify challenges to vaccine regulatory approval and NITAG recommendation processes. Once regulatory and NITAG roadblocks are addressed, older adults will have speedier access to vaccines, and economies will be better prepared to introduce and deploy vaccines in response to future health emergencies.



Figure 2. Time line of New Vaccine Introductions in APEC Economies



APEC's Regional Dashboard on Life-Course Vaccination shows uneven progress, while most economies have endorsed the concept, far fewer have fully funded adult vaccine programs or achieved high coverage in older age groups. Addressing these barriers is crucial to realizing the 2030 vision of the Action Plan, where all APEC economies enjoy the benefits of resilient life-course immunization systems.

# Case studies from APEC Economies

## Japan: Reaching Seniors with Pneumococcal Vaccine

Japan launched a nationwide program to vaccinate adults aged 65 and older, in 5-year age cohorts, with the 23-valent pneumococcal polysaccharide vaccine, achieving high uptake.<sup>5</sup> Following the introduction of this program, senior pneumococcal vaccination rates increased to just under 40 percent and have remained at that level.<sup>6</sup> Japan's experience demonstrates that strong government commitment – reflected in clear policy direction, sustained public co-financing, and coordinated implementation by municipalities – can rapidly scale up coverage and protect seniors from a preventable disease.

## Hong Kong, China: Elderly Vaccination Subsidy Scheme

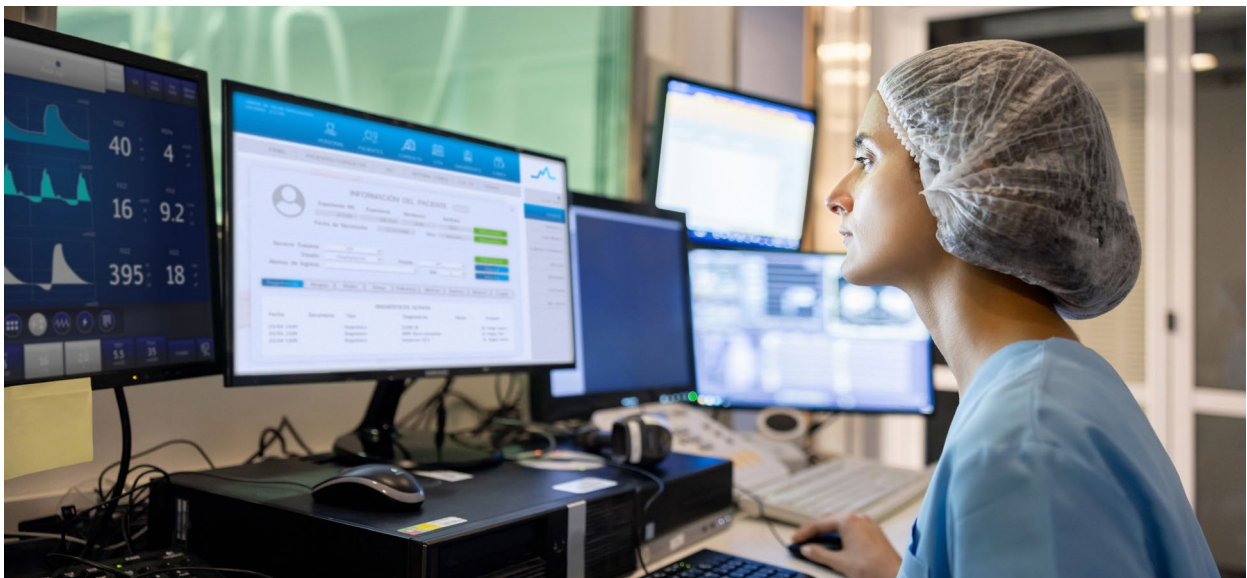
Hong Kong, China's government implemented a subsidy program to encourage vaccinations among older adults. Under this scheme, seniors receive subsidies to get influenza and pneumococcal vaccines from private providers. This public-private approach markedly increased vaccine uptake in the elderly. It also engages family physicians and community clinics in promoting adult immunization. Hong Kong, China's model shows how financial incentives and involving diverse healthcare providers can expand reach to older populations who do not routinely visit public clinics.

## Singapore: National Adult Immunisation Schedule

In 2017, Singapore introduced the National Adult Immunisation Schedule (NAIS), which enumerates vaccines recommended for adults at various ages and risk groups. To put this into practice, Singapore introduced subsidies in 2020, allowing citizens to use their Medisave (domestic health savings) and/or receive government co-funding for these vaccines.<sup>7,8</sup> The schedule currently includes vaccines for influenza, pneumococcus, and shingles, among others, for seniors. Subsidies were extended to vaccines recommended in the NAIS in November 2020 for eligible adults to encourage uptake.<sup>9</sup> Starting in 2023, as part of Healthier SG, residents enrolled in a Healthier SG clinic can receive special subsidies for NAIS vaccines, such as seasonal influenza, at their enrolled clinic.<sup>10</sup>

# Policy Recommendations for APEC Economies<sup>11</sup>

- 1 Accelerate Regulatory Alignment and NITAG Collaboration:** Improve regulatory efficiency and coordination in the approval and recommendation of new vaccines across APEC without compromising rigorous scientific review of safety and effectiveness. Generate evidence on the disease burden among older age groups, the potential of vaccines to decrease it, and the programmatic implications for introducing vaccines.
- 2 Secure Sustainable Financing for Life-Course Immunization:** Support sustainable financing tailored for each economy for adult vaccines as part of universal health coverage and healthy aging investments, to expand equitable access and voluntary uptake across the life-course.
- 3 Integrate Immunization into Primary Health Systems and Aging Services:** Embed life-course vaccination into routine health and aging care, as well as into community-based systems to meet older adults where they are.
- 4 Strengthen Life-Course Immunization Data and Tracking Systems:** Develop and invest in robust information systems to monitor vaccinations at all ages and safeguard privacy, moving progressively toward nominal individual-level data where feasible.
- 5 Promote Awareness, Education, and Demand for Adult Vaccines:** Close the information gap and build confidence in vaccination for older adults.



# Key Performance Indicators

Given the diversity of health systems, demographic profiles, and data capacities across APEC economies, the proposed voluntary benchmarks for progress and learning are designed to be flexible, progressive, and context-sensitive. The indicators emphasize trend-based monitoring—tracking policy evolution, coverage gains, and system readiness over time—while maintaining sufficient comparability to support regional learning and collective advancement.

**Table 1. Life-Course Immunization Indicators**

Domain	Indicator	Definition/Measurement	Measurement Scale or Options
<b>1:</b> <b>Vaccine Access and Policy Progress</b>	1.1 Stage of adult vaccine program development	Degree of policy and implementation maturity for key adult vaccines (influenza, pneumococcal, shingles, hepatitis B, RSV).	01. No NITAG review initiated 02. Policy intent announced / pilot initiated 03. Domestic recommendation with partial public financing 04. Fully funded in NIP or reimbursed under insurance 05. Optimized program (annual review, equity plan, supply chain in place)
	1.2 Public financing coverage for adult vaccines	Extent to which adult vaccines are publicly financed through the NIP or via insurance reimbursement.	None / Pilot or limited subsidy / economy-wide or insurance reimbursement / Comprehensive (multiple vaccines fully financed)
<b>2:</b> <b>Coverage and Uptake</b>	2.1 Adult vaccination coverage (≥ 60 years)	Share of older adults receiving at least one recommended vaccine.	% coverage, or qualitative: No data / Pilot / Routine reporting
	2.2 Annual change in adult vaccination uptake	Direction of year-over-year change in doses administered or individuals vaccinated.	% increase, or Declining / Stable / Increasing (≥ 5 % growth)
<b>3:</b> <b>Policy and Strategy Integration</b>	3.1 Integration of adult immunization within domestic immunization strategy	Extent to which adult vaccination is included in domestic immunization planning or strategy documents.	Not included / Referenced / Operational plan / Implemented (with monitoring)
	3.2 Inclusion of vaccination in healthy-aging or NCD strategies	Degree to which vaccination is recognized as a preventive measure in healthy-aging or NCD frameworks.	Not included / Referenced / Actively implemented (e.g., joint programs or budgets)
<b>4:</b> <b>Sustainable Financing</b>	4.1 Financing mechanism maturity	Extent to which adult vaccination is supported by institutionalized financing that covers both vaccine procurement and essential program costs (e.g., delivery, cold chain, workforce, outreach)	Ad-hoc project / Pilot fund / Recurrent budget line / financing for vaccines and delivery / Dedicated insurance or earmarked fund
	4.2 Number of adult vaccines with recurrent public or insurance funding	Count of adult vaccines (out of 5 priority vaccines influenza, pneumococcal, shingles, hepatitis B, RSV) receiving ongoing public or insurance financing.	0 – 5 vaccines
<b>5:</b> <b>Information Systems and Digital Readiness</b>	5.1 Integration of adult vaccination data in domestic information systems	Degree to which adult vaccination data are captured and interoperable with digital health or aging registries.	Not captured / Pilot capture / Partial coverage / Fully integrated and interoperable
	5.2 Data disaggregation for adult vaccination	Availability of age-, sex-, and region-disaggregated data for adult immunization.	None / Basic (age only) / Intermediate (age + sex) / Comprehensive (age + sex + region + equity variables)

## Conclusion

Life-course immunization is fundamental to achieving healthy and active aging in APEC economies. As demographic shifts accelerate, investing in vaccination across the lifespan is not only a health priority but an economic and social necessity. The experiences of Japan, Hong Kong, China, and Singapore demonstrate that progress is achievable when policy, financing, and delivery systems align. To translate these lessons region-wide, APEC economies should continue advancing the APEC Action Plan on Vaccination Across the Life-Course by strengthening regulatory and NITAG collaboration, expanding sustainable financing, embedding immunization within primary and aging-care systems, and modernizing digital data infrastructure. By tracking progress and sharing lessons learned, economies can foster a culture of continuous improvement and mutual accountability. Ultimately, making vaccination a lifelong investment will help APEC economies build more resilient, inclusive, and productive societies for all generations.



## References & Notes

- 1 [https://platform.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/number-of-persons-aged-over-60-years-or-over-\(thousands\)](https://platform.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/number-of-persons-aged-over-60-years-or-over-(thousands))
- 2 <https://www.ifpma.org/insights/unlocking-the-full-value-of-life-course-immunization-a-key-to-sustainable-healthcare/>
- 3 McLaughlin JM, McGinnis JJ, Tan L, Mercatante A, Fortuna J. Estimated human and economic burden of four major adult vaccine-preventable diseases in the United States, 2013. *J Prim Prev.* 2015;36:259–73
- 4 Work and productivity loss related to herpes zoster”. Singhal PK, et al. *Journal of Medical Economics.* 2011;14(5):639-45
- 5 Note: From FY 2026, Japan has replaced PPSV23 with PCV20 for the routine pneumococcal vaccination in seniors.
- 6 <https://www.mhlw.go.jp/topics/bcg/other/5.html>
- 7 <https://www.primarycarepages.sg/schemes-and-programmes/vaccination-and-childhood-developmental-screening-subsidies/national-adult-immunisation-schedule>
- 8 <https://www.cda.gov.sg/public/vaccinations>
- 9 Ministry of Health, Singapore. Vaccination and Childhood Developmental Screening Subsidies. Retrieved from <https://www.moh.gov.sg/healthcare-schemes-subsidies/vaccination-and-childhood-developmental-screening-subsidies>
- 10 Healthier SG. Benefits of Enrolment. Retrieved from <https://www.healthiersg.gov.sg/enrolment/benefits/>
- 11 [https://globalcoalitiononaging.com/wp-content/uploads/2023/11/GCOA\\_APECImmunization\\_Brief\\_FINAL.pdf](https://globalcoalitiononaging.com/wp-content/uploads/2023/11/GCOA_APECImmunization_Brief_FINAL.pdf)

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