The Role of Healthy Aging and Adult Immunization in Achieving Fiscal Sustainability and Economic Growth Across the APEC Region

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Global Coalition on Aging

Executive Summary

Investments in health prevention and promotion, and in particular healthy aging, are a growing economic imperative for economies across the Asia-Pacific Economic Cooperation (APEC) region, all of which are experiencing rapid population aging. The success of healthy aging efforts increasingly determines 21st century health system capacity and sustainability, and connects directly to broader economic productivity and participation among adults of all ages. As APEC economies seek to spend smarter, not more, amid a changed demographic landscape, immunization for older adults has emerged as one of the clearest, most efficient, and accessible strategies to drive healthy aging, and therefore health system stability and continued economic growth. This brief will provide background and data underpinning the economic value and overall importance of routine immunization for older adults and suggest priorities for action among APEC economies.

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Introduction

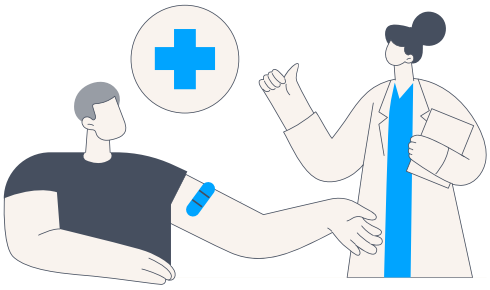
An estimated 630 million people over the age of 60 live in APEC member countries, comprising 60% of the global population in this age group. This population, and the proportion living in APEC economies, is expected to increase over time, with an estimated doubling to 1.3 billion older adults by 2050.[1] Amid this demographic transition, APEC governments and public budgets are grappling with how to provide healthcare for a population with increasingly complex health needs and weakened immune systems.

This shift to more old than young across APEC economies and globally requires a corresponding restructuring of health systems from current models of reactive, acute care to more proactive, preventive approaches that keep people healthy and active for longer, reducing demand for already limited resources.

Among many preventive approaches to population health, immunization is one of the most impactful, cost-effective and readily applicable if prioritized in policy.[2] Immunization has been an essential component of human development since the first vaccine, for smallpox, was conceived in the late 18th century.[3] Since then, wide-spread implementation of immunization for a multitude of diseases across the globe has allowed for unprecedented growth: in lifespan, in society, and economically.[4]

Not only did the smallpox vaccine help to spur the industrial revolution, its eventual eradication of the disease in 1980 has resulted in global economic returns estimated between $1,000 to 2,000 million USD annually, compared to an outlay of only $313 million USD on eradication efforts.[5,6]

Despite its important role throughout life, immunization is often associated with childhood. In fact, childhood immunization was one of the greatest public health achievements of the 20th century, contributing significantly to our current longevity. Yet, our continued emphasis on childhood vaccinations at the expense of a full life-course approach has led to comparatively low investment in and poor uptake of immunizations for adults, including the growing population of older adults.[7]



Countless studies have found that immunization is consistently cost-saving at the population level, and the body of research supporting immunization for older adults continues to grow, underscoring its importance for 21st century demographics.[8,9,10,11,12,13] Today, immunization remains uniquely positioned to increase economic strength due to its ability to (1) help older adults to live longer and healthier lives; leading to (2) a healthier workforce with lower absenteeism among older employees themselves and their adult children, who might otherwise be called on to provide care; (3) increased economic activity, consumption productivity, and tax revenues; and (4) reduced healthcare spending and improved health system capacity, resource utilization, and overall system sustainability. Using immunization to drive economic growth and create savings is especially important, as economies worldwide emerge from the COVID-19 pandemic and its resulting impacts.[14]

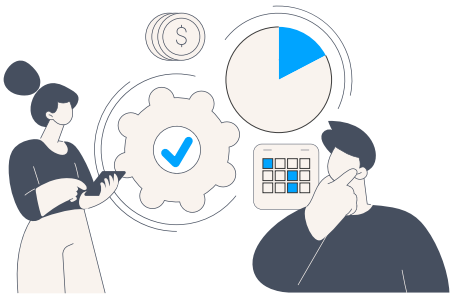
Amid increasing pressures on health systems and economies to spend smarter and invest in healthy aging, 21st century governments must now prioritize achieving success in immunization for all ages and particularly for older adults, where the largest gaps exist.[15]

Current Landscape

APEC economies have begun to recognize and take steps towards improving vaccination rates across the life course. Notably, the 2021 APEC meeting in New Zealand resulted in the comprehensive 10-year APEC Action Plan on Vaccination across the Life-Course, published in August 2021.[16] The APEC Regional Dashboard on Vaccination Across the Life-Course, launched in November 2022, was created to monitor progress across the goals and key indicators within the plan, allowing member countries to view progress and identify areas for improvement in immunization uptake, among other metrics.[17] The Action Plan and the Dashboard are important first steps for APEC economies. Together, both initiatives give countries the guidance they need to implement and assess the performance of their immunization programs.

At a high level, the Action Plan calls upon APEC member economies to promote and recognize the value of immunization and its access and uptake across the life course; strengthen both government capacity for health security and immunization programs; and support measures to advance vaccine innovation such as manufacturing, research and development, and delivery, as well as regulatory and financing schemes.[18] Currently, immunization rates vary by country and disease type, suggesting a need for a range of synergistic strategies to improve immunization coverage. The median uptake of the influenza vaccine in Asia is 37.3% in high-risk groups, which includes older adults, well below the WHO's 75% uptake target.[19] Pneumococcal immunization rates are also low, even in countries like Taiwan (30% in adults 50 and older) who provide it free of charge to that age group, and in Japan (38%), which provides a partial subsidy.[20,21]

Individual countries within APEC have demonstrated varying levels of commitment to this plan, as seen through the Dashboard. For example, while 67% of APEC economies have created immunization recommendations for adolescents, adults, and older adults specifically, many of the vaccines recommended by the member economies' National Immunization Technical Advisory Groups (NITAGs) are not yet included in National Immunization Programs. Further, roughly a third of member countries lack a facility that can generate data on immunization benefits, both direct and indirect, or a national agenda for research on immunization.



This is especially important as data is being used to measure progress toward the Action Plan pillars, and measurement of indirect vaccination benefits include economic measures, such as increased productivity.[22]

Member countries also vary in their program funding, extent of awareness campaigns, and vaccine confidence, all of which can influence policy and programming strength, as well as uptake.[23] For example, while Japan has a national policy on influenza and pneumococcal vaccines for older adults as well as payment support, immunization data is not collected at the national level. This lack of data contributes to continued de-prioritization of the issue,[24] and prevents the implementation of evidence-based and timely policies to address barriers to uptake, which go well beyond finances.

Very similar policies and guidance, as well as lack of adult immunization data exist for Hong Kong and the Philippines, the latter of which stores immunization data only through paper-based individual immunization booklets. Australia and Singapore both collect data through National Immunization Registers and have introduced national immunization programs for older adults for varying types of vaccines. Singapore's National Adult Immunization Schedule recommends eleven "essential vaccinations for adults," available through their healthcare program Medisave. Australia does provide guidance around influenza, pneumococcal, and Zoster vaccines for older adults, but they have much higher immunization uptake in pediatric populations, likely due to various financial incentive programs that go beyond immunization reimbursement that are not available for older adults.[25] Finally, there are countries like Indonesia, which lack policies, funding, and data collection for adult immunization nearly altogether.

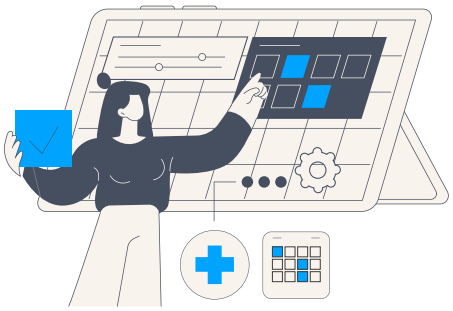
What Needs to Be Done

Despite the commitment by APEC members, a range of barriers remain to widespread immunization for older adults, all of which can be addressed if appropriately prioritized.

Chief among barriers are low awareness about vaccines for adults generally and persistent hesitancy. While access to immunizations and health services are key drivers of uptake, access and availability mean nothing if populations are unaware of their access, or hesitant to be immunized. Hesitancy toward adult immunizations remains prevalent across the APEC region, as does lack of awareness, which reduces optimal uptake of adult immunization programs. For example, in China, the 2019 immunization rate for pneumococcal disease was just 3.7% in those aged 60 and older. A study on factors associated with uptake in this demographic found that knowledge and trust in immunizations were significant contributors toward a positive pneumococcal vaccine attitude.[26]

Other salient barriers include weak immunization infrastructure and unclear targets. Poor integration with broader community level initiatives limits communication with older adults to formal healthcare settings. For those who do not regularly see a healthcare provider, this limitation can significantly impact both their willingness and opportunity to be vaccinated.[27] Further, cost and time barriers have been suggested as key drivers in Japan and elsewhere, and trivialization of both infectious disease and the need for adults to immunized have been described in both Australia and Singapore.[28] Finally, poor data collection feeds into a negative feedback loop where there is no data to articulate the problem—and thus, no impetus to solve it.

A deeper understanding of barriers to adult immunization will enable APEC economies to develop strategies and employ best practices to drive optimal uptake, improve health outcomes, and ultimately contribute to economic stability and continued growth. It is not sufficient for only select countries within the cooperative to take action on immunization policy, with older adult immunization rates far below recommended thresholds across the region.[29] Infectious diseases know no borders, and with rapidly aging populations across APEC, the economic downside of failing to prioritize adult immunization is too large to ignore.[30]



To help ensure continued growth and both fiscal and health system sustainability, APEC economies must rapidly prioritize four key action areas to advance adult immunization:

01 Prioritize Prevention

Identify existing gaps in health prevention for older adults to strategically target these gaps.

Invest in robust National Immunization Programs (NIPs) that enable better access to immunization. Countries that do not have current NIPs should be supported to create guidelines, and countries with current NIPs should ensure that they are optimized and continue to iterate and measure progress towards defined metrics.

Include aging and adult immunization experts on committees and working groups that have input in vaccine policy and decision-making, such as National Immunization Technical Advisory Groups (NITAGs).

02 Invest in Education and Awareness[31]

Engage older adults and those they trust. An individual's knowledge, beliefs, and attitudes towards immunization are greatly influenced by their community, friends, and families.

Build awareness campaigns utilizing accessible formats and locations, such as senior citizen newsletters and educational lectures at senior centers and clubs.

Use behavioral nudges that tap into older adults' desire to contribute to the family and to protect their loved ones.

03 Integrate Immunization into Community-based Systems[32]

Meet older adults where they are: in their communities. Integrate community organizations into delivery programs to support immunization beyond traditional healthcare settings. Vaccination centers should be accessible, placed in public spaces and institutional settings.

Offer in-home vaccination services and enable nurses and pharmacists to administer vaccines to make vaccination more convenient.

04 Quantify the Costs and Benefits

Invest in disease surveillance, data sharing, and program evaluation, with specific stratifications of data by age group to know the current state of progress toward immunization goals and monitor for gaps and warning signs. Reporting to the APEC Dashboard will help visualize progress across the APEC member economies and provides a sense of accountability.

Develop facilities that are trained to collect, monitor, and report data related to immunization and related metrics. This includes both direct and indirect benefits and costs—such as economic measures of productivity and workforce engagement. Data collection programs should be designed to improve the work efficiency of health care providers, and not result in increased administrative burden, to reduce barriers to implementation at the provider level.

Report on prevention and immunization spending, including vaccines themselves and program implementation, that are stratified by age category to better understand resource allocation and gaps, and to discern what kinds of resources are working to improve awareness and uptake.

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