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# MEETING SUMMARY

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APEC Vaccines Task Force: Policy Dialogue on Vaccination Across the Life-Course

FEBRUARY 18, 2023

PALM SPRINGS, CALIFORNIA, UNITED STATES OF AMERICA

APEC HEALTH WORKING GROUP

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## Executive Summary

On 18 February, 2023, the APEC Vaccines Task Force (VTF) hosted a policy dialogue on ‘Vaccination Across the Life-Course’ on the margins of the first Senior Officials and Related Meetings (SOM1) Health Working Group (HWG) meetings in Palm Springs, California, United States of America. The Policy Dialogue was co-organized by the APEC HWG Sub-Working Group on Vaccination, which is chaired by the United States and Canada.

Several themes emerged from the policy dialogue, including:



### *Significant gaps in Life-Course Immunization (LCI) programs persist across economies*

- Immunization programs in APEC economies are strongest for pediatric populations, with all economies including recommendations for children in immunization schedules. However, adult and risk-based immunization programs are not as prominent in APEC economies.
- Economies can better support disease prevention for adolescents, adults, pregnant women, the healthcare workforce, and the elderly by introducing and strengthening LCI.
- Awareness of the importance of life-course vaccination from both patients and health care providers; sustainable financing for immunization programs; data collection; and vaccine confidence were noted as challenges in multiple economies.
- Economies must take a whole-of-system approach – including research & development (R&D), manufacturing, distribution, and primary care – to vaccination, including for new vaccines, COVID-19 vaccines, and routine, booster, and catch-up immunization. This approach should consider policies, funding, programs, and performance.



### *There is a need to expand and implement comprehensive, holistic approaches to value of vaccination*

- Half of reporting economies in APEC do not include societal and economic benefits of vaccination in existing value assessment frameworks, limiting the information that is available on the full value of vaccination, particularly for adults.
- Vaccines help reduce equity gaps seen when certain populations are more prone to disease. The preventive benefits of vaccination are not solely individual, but also accrue to a variety of stakeholders such as households, health systems, communities, and economies. Moreover, vaccines can prevent diseases, secondary infections, and long-term effects, which can be costly to families, the health system, and society.
- Measurable social and economic impacts of vaccination include cost to the health system, loss of income, and decreased overall economic productivity.
- Engaging patients and local stakeholders can enhance cost-effectiveness data to communicate the broader social and economic impact of vaccination, and can also address vaccine confidence and increase uptake.
- Universal health coverage (UHC) is not only an enabler for immunization, but can also help promote coverage by providing additional primary healthcare services touchpoints. The deployment of resources by healthcare services can avert preventable disease, maximizing economic potential and driving poverty reduction.



### *Immunization financing must be sustainable and stable*

- Sustainable immunization financing can overcome barriers to vaccine access, but it is crucial that economies select financing mechanisms that complement health systems and prioritize the effectiveness of immunization programming and the efficiency of delivery.
- Specific financing mechanisms should be selected in a way that is contextually relevant to an economy’s situation in order to improve the effectiveness and efficiency of immunization programming and delivery.

## Introduction

On 18 February, 2023, the APEC Vaccines Task Force (VTF) hosted a policy dialogue on ‘*Vaccination Across the Life-Course*’ on the margins of the first Senior Officials and Related Meetings (SOM1) Health Working Group (HWG) meetings in Palm Springs, California, United States of America. The Policy Dialogue was co-organized by the APEC HWG Sub-Working Group on Vaccination, which is chaired by the United States and Canada.

Vaccines are global health’s biggest success, helping people of all ages live longer, healthier lives. Immunization prevents 4-5 million deaths every year in all age groups and 1.5 million additional deaths could be avoided [by increasing global vaccination coverage](#). Vaccines and vaccinations not only save lives, but they also help protect livelihoods and increase workforce productivity. Vaccines play a critical role in freeing up capacity (e.g. hospital beds and visits to healthcare professionals) so that patients with other conditions can be treated making our healthcare systems more resilient and sustainable. [As an example](#), vaccine preventable diseases (VPDs) such as influenza, meningitis, pneumonia and pertussis put a major strain on in and out-patient services and are estimated to cost the US health system alone \$27 billion annually.

Vaccines can also help slow the impact of antimicrobial resistance (AMR) by preventing infections in the first place, reducing the demand and use of antibiotics and slowing the emergence of pathogens resistant to available treatments. Additionally, the transition from ‘pediatric vaccination programs’ to ‘vaccination programs for all ages and all groups’ is critical for future pandemic preparedness and health security, by providing additional protection against waning immunity and stemming the rise in mortality from VPDs during adulthood.

Recognizing that immunization programs are one of the most important and cost-effective public health measures, which have direct impact on economic growth in the region, the [APEC Action Plan on Vaccination Across the Life-Course](#) was developed to enhance the resilience, coverage, and sustainability of immunization programs in APEC member economies. Endorsed by all 21 APEC economies in 2021, the *Action Plan* outlines 21 targets across 7 pillars, which serve to guide APEC members as they accelerate policy action on immunization. In 2022, the [APEC Regional Dashboard on Vaccination Across the Life-Course](#) was developed to measure progress in strengthening and enhancing immunization programs throughout the region.

This policy dialogue sought to accelerate the development, implementation, and sustainability of domestic life-course immunization plans & policies by sharing evidence-based policies and solutions to build resilient immunization programs.

## Summary of Presentations and Discussions

### *Introductory Remarks and Presentations*

**Dr. Michelle McConnell**, *Department of Health & Human Services (United States)*, opened the session by noting successes related to the COVID-19 response, such as rapid advancements in research and development for new vaccines, as well as challenges, including equity in access and administration of COVID-19 vaccines and reductions in routine immunization. Dr. McConnell also emphasized the need for a systems approach – including R&D, manufacturing, distribution, and primary care – to vaccination, including for new vaccines, COVID-19 vaccines, as well as routine immunizations and boosters/catch-up vaccination.



*Presentation: Dr. Laura Nic Lochlainn, World Health Organization*

**Dr. Laura Nic Lochlainn**, *Technical Officer at the World Health Organization (WHO)*, presented on life-course immunization (LCI) as an approach used to extend the benefits of vaccination across an individual's entire life. LCI shifts the traditional model of vaccination from a focus on infants to recommendations for specific vaccines at each stage of life, thereby supporting disease prevention for adolescents, adults, pregnant women, the healthcare workforce, and the elderly. Recent and ongoing research and development activities have created opportunities to expand vaccination across the life course and offer health interventions through multiple delivery platforms.

**Life course vaccination recommends specific vaccines at each stage of life**

Pregnant Woman	Newborn	Infant	Second Year of Life	Child	Adolescent	Adult	Older Person
Pregnant woman	Newborn (<24 hours)	Infant (<1 year)	Second year of life (12-23 months)	Child (2-9 years)	Adolescent (9-19 years)	Adult (20-64 years)	Older Person (>65 years)
Tetanus toxoid containing vaccine (TTCV)  Seasonal influenza	BCG Hep B-BD	DTPCV Measles Rubella / HepB / PCV Rotavirus / Hib / Polio  Japanese Encephalitis Meningococcal Rabies Seasonal influenza Typhoid / Yellow Fever	DTPCV booster Measles PCV3 (if 2+1 schedule)  Cholera Seasonal  influenza Hepatitis A Typhoid Meningococcal Varicella Mumps Rabies	Diphtheria booster Tetanus booster  Cholera Rabies Seasonal influenza Typhoid	Diphtheria booster HPV Tetanus booster  Cholera Dengue Rabies Seasonal influenza Typhoid	-  Cholera Dengue Rabies Seasonal influenza	-  Cholera Rabies Seasonal influenza
<b>COVID-19 vaccination</b>							

The importance of LCI is highlighted in the WHO Immunization Agenda 2030, which is a global strategy to address any challenges in immunization over the next decade. The goal and objectives of this strategy include strengthening immunization policies and service delivery, providing appropriate vaccinations and booster doses, and the establishment of integrative delivery points of contact between immunization and other public health interventions. These objectives work to ensure that people benefit from recommended immunizations and can access other health interventions in a streamlined and efficient manner. By offering a people-centered approach, policymakers can ensure that everyone benefits from vaccines for good health and wellbeing, increasing coverage and reducing the burden of vaccine-preventable diseases, especially for vulnerable populations.

*Presentation: Michael Blanch (MSD) on behalf of the APEC Vaccines Task Force*

**Michael Blanch**, *Asia Pacific Public Policy Director at MSD*, provided an overview of the APEC VTF and its activities related to LCI, including challenges during the COVID-19 pandemic, which has led to decreased routine vaccination rates globally and in the APEC region. In 2021, the VTF developed the APEC Action Plan on Vaccination Across the Life-Course, with the ultimate goal of increasing access to LCI. Mr. Blanch underscored the opportunity to restructure and improve existing immunization programs and systems.

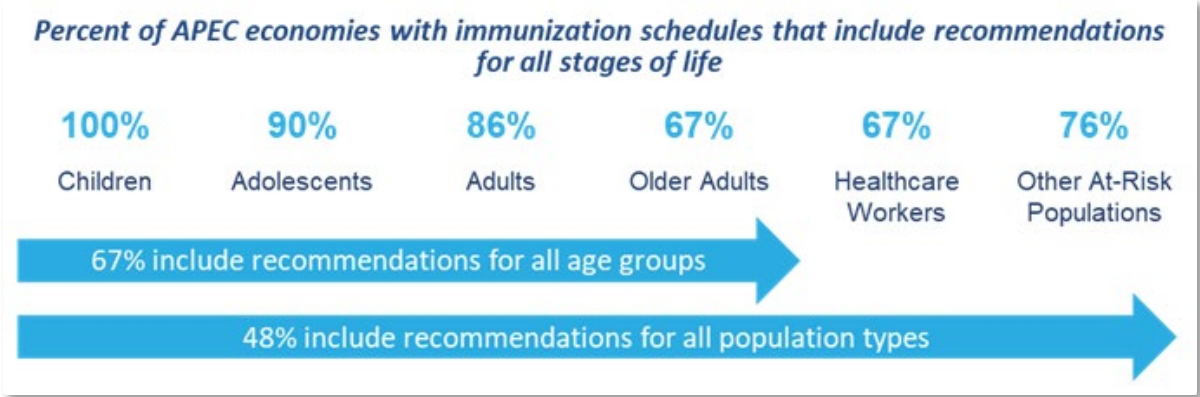
**The core goals of the APEC Action Plan on Vaccination are to:**

- 1 Promote recognition of the value of vaccination & vaccine innovation
- 2 Prioritize access to & uptake of vaccination across the life-course
- 3 Build whole-of-government capacity in health security & pandemic preparedness
- 4 Strengthen confidence in vaccination & build resilient immunization program
- 5 Enable investment & innovation in vaccine R&D, manufacturing, and delivery
- 6 Accelerate regulatory harmonization for vaccines across APEC economies
- 7 Establish proven & innovative mechanisms for sustainable immunization financing

The presentation highlighted the importance of collaboration and partnerships to reach immunization goals: since 2020, the VTF has partnered with APEC economies, academic institutions, international organizations, NGOs, and other stakeholders to support economies in enhancing the resilience and sustainability of immunization programs.

*Presentation: Ada Wong (Sanofi) on behalf of the APEC Vaccines Task Force*

**Ada Wong**, Asia Public Affairs Lead at Sanofi, presented on the APEC Regional Dashboard on Vaccination Across the Life-Course. The dashboard was developed to support implementation of the Action Plan, and includes indicators related to the 7 pillars. Results showed success in meeting several measures related to the Action Plan, but there is still work to be done to reach the goals set for 2030. Key findings included that immunization programs in APEC economies are strongest for pediatric populations, with many economies meeting >70% coverage for several key vaccines. However, additional efforts are needed to reach >90% coverage and expand vaccination of non-pediatric populations. Moreover, half of reporting economies did not include societal and economic benefits of vaccination in existing value assessment frameworks, and one-third did not report capabilities to generate data on direct or indirect benefits of vaccination or to conduct research on immunization. Lastly, 19% of economies reportedly do not conduct assessments to understand barriers to vaccination in their populations. APEC member economies can utilize the data and best practices spotlighted in the dashboard as they work towards strengthening immunization programs and achieving the goals of the Action Plan.



*Presentation: Bjelle Roberts (MSD) on behalf of International Federation of Pharmaceutical Manufacturers and Associations (IFPMA) Life Course Immunization Working Group*

**Bjelle Roberts**, Associate Director of Global Vaccine Policy at MSD, presented as the co-chair of the International Federation of Pharmaceutical Manufacturers and Associations Life Course Immunization Working Group, which works to include the life-course approach to immunization policy and practice. The group recently published an economy landscape report, which collected evidence of life course immunization policies across the world and compared available datasets and case studies before and during the COVID-19 pandemic.

The pandemic has highlighted the gaps and inequities in immunization systems and the urgent need for a life course approach to immunization. The report identifies four core areas for action in addressing barriers to a life-course approach to immunization: policies, funding, programs, and performance. For policies, programs should ensure life-course driven domestic immunization program and there needs to be an exchange of best practices. For funding, investments in prevention need to be increased and the positive return on investment and full societal value of vaccination acknowledged. For programs, access to immunization needs to be expanded and service delivery improved. Lastly, for performance, coverage data needs to be collected and vaccine acceptance built across the life-course.

Ms. Roberts concluded that implementing the WHO Immunization Agenda 2030 will require urgent course correction in this decade, with COVID-19 creating a policy window to exchange best practices, include experts in policy making, and build evidence of the value of adult vaccination and life-course approach to immunization.

## What must now be done?

Exchange of best practices	Include experts in policy making	Documentation and value
Seek to foster equitable approaches through regional solidarity and exchanges	Advocate for NITAGs to be representative of the IA2030 and include adult-serving practitioners	Document and communicate the differences in coverage rates for <u>pediatric</u> and adult vaccination
Build a body of knowledge on the links between vaccine confidence and easy, affordable access to life course immunization	Continue efforts to bolster pharmacovigilance systems and to communicate to policymakers and the public their value	Advocate for leveraging real-time COVID-19 vaccine coverage tracking to be expanded to other adult vaccinations
Document and communicate on the expansion and successful implementation of community-based immunization	Research collaboratively to develop a better understanding of economy specific HCW knowledge, attitudes, beliefs, and <u>behaviors</u>	Document and communicate the high value and low cost of vaccination compared to restorative services
Consider collaborations to develop best practices guides, support evidence-based policy, and encourage fair reimbursement	Work with professional organizations to focus particularly on expanding the role of nurses and pharmacists	Continue to message on the importance and socio-economic benefits of LCI as a fundamental of health security for everyone, everywhere

### Session 1: Promote the value of vaccination and vaccine innovation (Action Plan Pillar 1)

#### Session 1A: The Economic and Social Impact of Life-Course Immunization

*Presentation: Ms. Lois Privor-Dumm, Johns Hopkins' International Vaccine Access Center*

**Ms. Lois Privor-Dumm, Director of Adult Vaccines at Johns Hopkins' International Vaccine Access Center (IVAC),** presented on the broader social and economic impacts of vaccination. Vaccines are often an equalizer and help reduce equity gaps seen when certain populations are more prone to disease. The preventive benefits of vaccination are not solely individual, but also accrue to a variety of stakeholders such as households, health systems, communities, and economies. Moreover, vaccines can prevent diseases, secondary infections, and long-term sequelae, which can be costly to families, the health system, and society.

In addition to providing critical protection for pediatric populations, vaccination can benefit populations such as older adults, who not only contribute to society through labor, but also through volunteer work and family caregiving. When older adults start losing their functional ability due to vaccine-preventable disease, the cost to society and health systems increases. There is also a disproportionate effect on vulnerable populations, such as women, who are often primary caregivers.

Ms. Privor-Dumm stated that the economic benefits of vaccination extend beyond the traditional narrow approach of determining cost effectiveness and highlighted a study conducted by IVAC in 94 low- and middle-income economies, which investigated return on investment for vaccination by utilizing multiple approaches. Researchers found that a value of statistical life approach, which further calculates what the society values in terms of improvements in health beyond the health system, found a \$52:1 return on investment. Overall, vaccines can help reduce catastrophic health expenditures, improve productivity, keep children in school, and contribute to a more stable economy, making them an important tool for reducing inequities.



## Broader vaccination benefits accrue to a variety of stakeholders

### Individual

Nosocomial infections  
Long term sequelae affect ability  
to work, volunteer  
Productivity/education

### Household

Greater productivity, peace of  
mind, less medical  
impoverishment, wealth

### Health system

Reduced treatment costs &  
AMR, more resources to  
address other health issues

### Community

Herd immunity, labor force  
participation, education  
volunteer activities, more  
opportunities for women, less  
inequity

### Society/Government

Taxes, reduced spending,  
economic growth, foreign  
direct investment, protection  
from outbreaks/pandemic  
effects

jhsph.edu/ivac



### Session 1A Roundtable Discussion

In the **United States**, the [Advisory Committee on Immunization Practices \(ACIP\)](#) considers both direct and indirect costs of vaccines when determining whether to recommend new vaccines. For example, when the childhood varicella (chickenpox) vaccination became available, the ACIP looked at not just the direct costs of disease in children, but also the indirect costs, such as caregivers and children missing work or school, when deciding to recommend the vaccine. The United States acknowledged that there are limitations related to data availability during the initial recommendation process, necessitating additional analyses post-recommendation using real-world evidence as vaccines are administered.

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**Canada** has established a national immunization strategy to improve vaccination programs and provide equitable access to immunization across the economy. It also seeks to identify under-immunized populations and understand the barriers and best practices to improve immunization coverage. This requires a whole of society approach and intergovernmental collaboration with ministries of finance, social and economic development, as well as science and innovation; partnerships across all levels of government; and partnerships with the private sector. In recognition of significant social and economic impacts of vaccine preventable diseases, including cost to the health system, loss of income, and decreased overall economic productivity, Canada is reviewing their immunization strategies to ensure relevance and integrate best practices and lessons learned from the COVID-19 response. This process will support strategic responses to current and emerging pressures, and can be informed by knowledge sharing opportunities within APEC.

The **Global Coalition on Aging** discussed the importance of innovation in the context of an aging society, particularly in terms of health care and ensuring access to treatments and vaccines. The coalition also encouraged

policy support for market access, regulatory approval, and intellectual property rights in order to ensure ongoing innovation to progress health care.

**Chinese Taipei** discussed the need for a comprehensive and holistic approach to the value of vaccination, moving beyond just including cost-effectiveness analyses. The delegates recognized that there is a degree of uncertainty in cost-effectiveness analyses, which may be due to different model assumptions. The following questions were posed by Chinese Taipei and **Singapore**:

1. *How can we best measure the societal and economic value of vaccination? What are the data that we need in order to come up with reasonable estimates of the extended value of the vaccinations?*
2. *How do we effectively communicate or persuade policymakers, as well as health professionals, to the broader value of vaccines?*

In response to these questions, **Ms. Lois Privor-Dumm** provided examples of work that is currently underway to gather data, inform models, and determine the value of a statistical life. Engaging stakeholders and those affected by VPDs, such as caregivers for older adults, can enhance the data and understanding of the full impact of disease; for example, loss of independence – when an older adult is no longer able to take care of themselves due to VPDs – results in additional costs related to caregiving, new environments, and social welfare, among other costs.

**Republic of Korea** noted that although vaccination is an essential tool for preventing the spread of communicable diseases, adverse reactions to vaccination can lead to a reduction in uptake, resulting in more cases of communicable diseases and greater social costs. To reduce this risk and ensure maximum population protection, governments must analyze the risks of communicable diseases by age group and inform analyses with evidence-based information about the benefits of vaccines; the Korean government aims to improve the public's understanding of vaccines and vaccine safety by delivering necessary messages by age group so that everyone can actively participate in vaccination. The government is also looking at management systems and investigating the current status of vaccination in vulnerable populations such as low-income and multicultural families, and reasons why these populations may refuse or avoid vaccination, among other reasons for low vaccine uptake.

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*“The Korean government aims to improve the public’s understanding of vaccines and vaccine safety by delivering necessary messages by **age group** so that everyone can actively participate in vaccination”*

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**Australia** recognizes the value of successful immunization programs, which can reduce disease transmission and benefit individuals, families, the community and the economy. For example, one study estimated that COVID-19 vaccines reduced the pandemic's broad economic impact on Australia to an estimated 214 billion Australian dollars, with a positive incremental benefit of 181 billion Australian dollars (this [study](#) considered impacts on tourism, education, employment, and government finances). Australia has some of the highest immunization rates in the world, though there are variations based on cultural background, socioeconomic status and location. Vaccines on the domestic immunization schedule, including HPV, are free and supported by the universal health coverage system; mass vaccination events, such as those done in schools and aged care facilities, facilitate vaccination according the schedule. To further encourage vaccine uptake, Australia has implemented two initiatives: "[No Jab, No Pay](#)" and "[No Jab, No Play](#)". The former withholds three state payments for parents of children under 20 if they are not vaccinated or on a recognized catch-up schedule. The latter disallows unvaccinated children from attending preschool or childcare centers, and imposes fines on centers for admitting them. However, exemptions are allowed for those who cannot be safely vaccinated for medical reasons.

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**Japan** discussed its vaccination system in response to the COVID-19 pandemic. Japan has taken steps to inform the public on vaccination via websites and pamphlets in order to increase uptake. Additionally, an immunization registry, which includes populations across different jurisdictions, directs the development of the vaccination schedule, facilitating timely and inclusive vaccination. For example, children under three years old are encouraged to receive vaccinations during routine checkups.

## Session 1B: The Health Impact of Vaccination

*Presentation: Dr. Matthew Zahn, Orange County Health Care Agency*

**Dr. Matthew Zahn**, Deputy Health Officer at the Orange County Health Care Agency, shared a local health and provider perspective on the extraordinary impact that vaccines have had on preventing pediatric and adult diseases, as well as on preventing the spread of pathogens in the community. Using data from the CDC, Dr. Zahn showed that the pediatric burden of disease has been significantly reduced due to the introduction of vaccines in the past two decades. Pediatric vaccination also has spillover effects for adults and the broader community; the introduction of the PCV13 vaccine for routine childhood vaccination in 2010 led to a decrease in adult pneumococcal disease, even before public health experts recommended adult vaccination. Dr. Zahn also spoke to the efficacy of the influenza vaccine, which is estimated to have prevented 7 million illnesses during the 2019-2020 season, and he highlighted the importance of vaccination with respect to controlling the COVID-19 pandemic. It is estimated that over 3 million COVID-19 deaths have been prevented by vaccination, as well as over 18 million hospitalizations and over 100 million infections.

Disease	Pre-Vaccine Era Estimated Annual Morbidity*	Most Recent Reports <sup>†</sup> or Estimates <sup>‡</sup> of U.S. Cases	Percent Decrease
Diphtheria	21,053	0 <sup>†</sup>	100%
<i>H. influenzae</i> (invasive, <5 years of age)	20,000	243 <sup>§</sup>	99%
Hepatitis A	117,333	11,049 <sup>‡</sup>	91%
Hepatitis B (acute)	66,232	11,269 <sup>‡</sup>	83%
Measles	530,217	61 <sup>†</sup>	>99%
Mumps	162,344	982 <sup>†</sup>	99%
Pertussis	200,752	13,506 <sup>†</sup>	93%
Pneumococcal disease (invasive, <5 years of age)	16,069	4,167 <sup>‡</sup>	74%
Polio (paralytic)	16,316	0 <sup>†</sup>	100%
Rubella	47,745	4 <sup>†</sup>	>99%
Congenital Rubella Syndrome	152	1 <sup>†</sup>	99%
Smallpox	29,005	0 <sup>†</sup>	100%
Tetanus	580	14 <sup>†</sup>	98%
Varicella	4,085,120	449,363 <sup>‡</sup>	89%

\*CDC. JAMA, November 14, 2007; 298(18):2155-63

<sup>†</sup>CDC. MMWR, January 8, 2010; 58(51,52):1458-68

<sup>‡</sup>2008 estimates, *S. pneumoniae* estimates from Active Bacterial Core Surveillance

<sup>§</sup>25 type b and 218 unknown

Dr. Zahn emphasized that while vaccines can have a ‘silver bullet’ effect in preventing a significant burden of disease, it is important to recognize that it takes a considerable amount of resources and effort to introduce vaccines and achieve high immunization coverage. He stressed that local public health needs to put more effort into vaccine messaging to ensure that everyone is able to prevent serious illness.

### Session 1B Roundtable Discussion

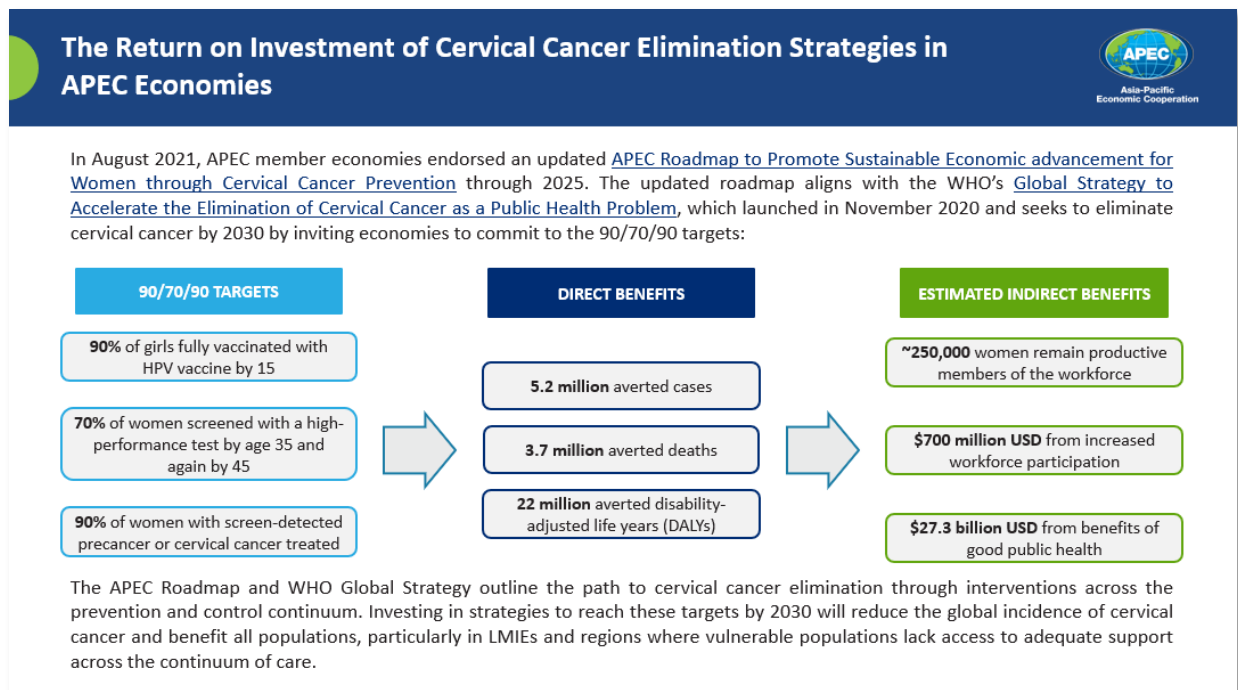
Following the presentation, **Thailand** asked whether the benefits of COVID-19 vaccination will wane in the future, to which **Dr. Zahn** acknowledged that modeling future cases of COVID-19 continues to be a challenge. Since most people have contracted the virus or have been vaccinated, it is likely that the burden of disease will decrease, but as the both the pandemic and vaccine are relatively new, it is difficult to make predictions.

**Canada** asked Dr. Zahn about the barriers to vaccination that he has seen and invited him to share strategies that have been most effective in advocating for increased investment of resources. **Dr. Zahn** shared that institutionalizing consistent funding for vaccination is a challenge and necessitates close communication with local leaders. For example, during the COVID-19 pandemic Dr. Zahn worked closely with local politicians to demonstrate the importance of vaccine mandates for the health care workforce, as well as regular pediatric vaccinations.

### Session 1C: Case Study Presentation on the Health, Economic, and Social Value of HPV Vaccination

**Dr. Edward Trimble**, Senior Advisor for Global HPV and Cervical Cancer Control, National Cancer Institute, United States, presented on the [APEC Roadmap to Promote Sustainable Economic Advancement for Women through Cervical Cancer Prevention and Control](#) and the broader value of HPV vaccination. Estimates suggest that following the three pillars approach – vaccination, screening, and treatment – could avert 5.2 million cervical cancer cases, 3.7 million deaths, and 22 million disability adjusted life years. The direct benefits of investments along the prevention and control continuum will have also have ripple effects for the economy and broader public health. For example, it is estimated that reaching the WHO 90-70-90 targets<sup>1</sup> will allow 250,000 women to remain productive members of the workforce, resulting in an additional \$700 million as a result of increased workforce participation and an additional \$27.3 billion generated as an indirect benefit of good health.

Dr. Trimble spotlighted Australia as an economy that has made significant progress in cervical cancer control, pointing to data demonstrating falling incidence of HPV following the introduction and widespread uptake of HPV vaccines. Dr. Trimble also shared that HPV vaccination is expected to decrease cervical cancer cases by



<sup>1</sup> The 90-70-90 targets refer to: 90% of girls fully vaccinated with HPV vaccine by age 15 years; 70% of women are screened with a high-performance test by 35 years of age and again by 45 years of age; and 90% of women identified with cervical disease receive treatment (90% of women with precancer treated, and 90% of women with invasive cancer managed).

approximately 80% in Tanzania, India and the United Kingdom. In addition to increasing life years saved, HPV vaccination yields additional benefits such as years of employment gained and maternal deaths averted.

The **United States** asked Dr. Trimble to share best practices for communicating to policymakers the benefits of the HPV vaccine, not just for communicable disease, but also for cancer prevention and broader societal and economic benefits. **Dr. Trimble** shared that reminding policymakers that HPV can cause cervical cancer, painful dysplasia, and pharyngeal cancer, with a tremendous burden particularly in low- and middle-income economies, is an important first step. Dr. Trimble also pointed to modeling that highlights the social and economic impact of maternal deaths from cervical cancer, which demonstrate that if a mother dies, there is an increased risk of deaths among children.

### *Session 1 Roundtable Discussion*

Following presentations, economies were invited to participate in a guided roundtable discussion:

1. *What are the major challenges to properly placing a value on vaccination? Is it lack of education for the public? Are they unable to get that communicated clearly to them?*
2. *And how can the full value be better incorporated into our decision-making practices?*
3. *What are some of the best awareness strategies to demonstrate the value and to build support among policymakers?*
4. *How can we raise that awareness and make members of government and society in general understand that vaccines are valuable?*
5. *What can APEC do to help promote further recognition of the connection between vaccination programs, primary health care, and Universal Health Coverage (UHC)?*

**Japan** shared that since immunization is strongly encouraged rather than compulsory, addressing misinformation and disinformation while communicating the full benefits of vaccination to ministries of finance is critical.

**Singapore** shared what the government has done to design a vaccination strategy to maximize potential benefits while addressing the practical concerns around public perception of vaccines and the realities of vaccination programme management. The Singapore Ministry of Health's Expert Committee on Immunization closely monitors public health data to recommend changes to the immunization schedule where necessary. The Ministry of Health prioritizes quality delivery and delivers vaccinations across various platforms, this includes school health services and primary care networks where vaccinations may be provided through outpatient polyclinics and clinics run by private general practitioners. The broad-based delivery framework is aimed at ensuring accessibility of vaccinations.

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**The Philippines** highlighted the importance of robust evidence and innovative technology that is both cost-effective and safe. Moreover, when new technologies are integrated into existing systems, implementation is easier. The support of decision-makers, legislators and representatives, is also critical for implementation.

**Thailand** shared that one of the main challenges is limited resources to add new vaccines into routine immunization programs. Thailand recommends advocating for communities with the highest burden of disease, and suggests using data and information provided by epidemiologists and health professionals to make a more compelling case for policymakers to invest in immunization.

**Japan** noted that contributing to UHC and pandemic preparedness is necessary; prioritizing these two areas can promote equity in health access. Japan added that cooperation and coordination across the region is critical, and sharing information and best practices to support a transition to UHC is an urgent imperative. Japan will continue discussions on UHC during this year's G7 Summit.

In **Canada**, a task force was initiated to examine ways to strengthen the health care workforce to ensure that all Canadians can have access to consistent and high-quality primary care, which would in turn increase routine vaccination coverage, and preventive interventions. This achievement contributes to achieving UHC, especially for vulnerable and marginalized populations. Canada welcomes collaboration across economies, including through the HWG, WHO, and G20, to improve access to vaccination and population health services worldwide.

The **United States** emphasized that vaccination programs, primary healthcare, and UHC are all interconnected, and their success relies on each other. In the United States, the [Vaccines for Children Program](#) makes all childhood immunizations free of charge to those who otherwise would be unable to afford them, facilitating an increase in routine visits in terms of development and checkups. The United States underscored the importance of local solutions and the intersection between financial coverage for services and innovative systems for access.

## Session 2: Establishing proven and innovative mechanisms for sustainable immunization financing (Action Plan Pillar 7)

*Presentation: Ms. Megan Rauscher, ThinkWell Global*

**Megan Rauscher**, Senior Technical Advisor at ThinkWell Global, presented on how financing can overcome barriers to vaccine and medicine access. Ms. Rauscher began with an overview of the evolution of immunization financing and then highlighted its role in health system strengthening with concrete examples and models.

The percentage of GDP that APEC economies spend on health care varies considerably, but generally speaking, approximately 1% to 2% of GDP dedicated to immunization. There are several factors – population size, political will, available funding, and health system performance – that contribute to how much a specific economy spends on immunization. Moreover, immunization financing encompasses a broad range of programming that governments must account for, including vaccines/supplies, service delivery costs, storage/logistics, monitoring/reporting, surveillance/disease detection, and campaigns.

## What types of financing sources and mechanisms are used for health and immunization?

### General Taxation 1

- › Taxes at the **federal level** are one of the most common financing sources for immunization
- › In economies with decentralized health systems, **taxation at sub-federal levels** often comprise a proportion of immunization funding

### Sector-Specific Resources 2

- › **Earmarked taxes** are taxes that are separated and protected sources of revenue for a specific purpose
- › In economies with universal health coverage, **health insurance** contributions may fund immunization

### Trust Funds 3

- › A **trust fund** is a mechanism that governments can use to ring-fence funding for specific purposes
- › They may **receive funds from multiple revenue streams**, and they may be legally incorporated with policies and tax regulations that vary by economy

### Credit Guarantees 4

- › A credit guarantee scheme is a **financial tool used to reduce the risk of lending** to borrowers that may not qualify for traditional loans
- › This arrangement **encourages lending to underserved entities** by traditional lending mechanisms

### Results Based Financing (RBF) 5

- › RBF is an incentive payment mechanism whereby **health providers are funded based on their performance to meet targets** or undertake specific actions
- › It is meant to **maximize health outcomes** while increasing provider autonomy

### Impact Bonds 6

- › An **impact bond** is a type of **results-based financing** that blends public and private sector resources in a mechanism that allows for risk-sharing
- › It **transforms social problems** into investable opportunities

While economies have similar funding architectures, the way funding flows through each system varies depending on the organization of the health system. Ms. Rauscher provided 3 case study examples:

- In 2012, **the Philippines** set up a 'sin tax' on tobacco and alcohol with a health earmark. Sin taxes disincentivize behavior that is considered unhealthy, but they are not always sustainable, as a decline in consumption results in a decline in tax revenue. To adjust for this, the Philippines incrementally raises cigarette taxes.
- In 2000, **Bhutan** set up the [Bhutan Health Trust Fund](#), which provides the majority of the funding for immunization, ensures that the population is able to get the vaccination services that they need, and has helped the economy consistently reach 95% basic immunization coverage.
- In 2016, **The United Kingdom** introduced performance-based financing to positively affect influenza vaccination rates among frontline health care workforce. The United Kingdom set a target ranging between 70% and 85% in coverage, and if a hospital met that target, they received an additional bonus. In the four years following introduction of this financing mechanism, the number of hospitals that met and exceeded the coverage threshold greatly increased.

Ms. Rauscher emphasized that when a specific financing mechanism is selected, it needs to be done in a way that's contextually relevant to an economy's reality in order to improve the effectiveness and efficiency of immunization programming.

### *Session 2 Roundtable Discussion*

Following the presentation, economies were invited to participate in a guided roundtable discussion:

1. *What makes an immunization program sustainable from a financing perspective?*
2. *What are the greatest barriers to immunization financing sustainability?*
3. *How can barriers be resolved, or new and sustainable funding channels be developed?*
4. *What changes could support sustainable life-course immunization?*
5. *What steps can policymakers take to sustain and support existing immunization programs?*

**Japan** stated that an immunization program's sustainability is contingent on an economy's legal system, the governmental budget, and health insurance systems. Japan's immunization act requires routine vaccination measures and is covered by public expenditures. Japan noted that its immunization plans are formalized in consultation with local governments and providers, enabling response to local conditions.

**Chinese Taipei** highlighted the importance of cooperation between international pharmaceutical companies and local vaccine companies to prevent supply chain issues.

**Canada** raised the importance of integrating sustainable funding mechanisms into pandemic preparedness and response efforts, particularly in the context of constrained resources. **Ms. Rauscher** noted that many economies have begun integrating COVID-19 into their overall immunization budget.

In the **United States**, the clinical care financing budget is separate from the public health budget, but vaccination is at the nexus of these two financing streams. Strengthening vaccination programs underpins pandemic preparedness.

**Australia** has invested more than \$32 billion USD since the pandemic began, which represents the largest health response in the economy's history. This investment goes to strengthening Medicare, which subsidizes primary and secondary care, the cost of pharmaceutical products. Overall, Australia is endeavoring to reduce pressure on its hospital networks.

**Chinese Taipei** noted that one of the greatest barriers to sustainable immunization financing is stability.

Population size is also an important determinant, and a rapidly aging population increases expenditures. When faced with limited resources, it is easiest for economies to vaccinate the highest risk populations, and there is a need to persuade policymakers to increase investment through cost-effective analyses. However, there is some uncertainty among policymakers with regard to what costs and benefits should be included in these analyses.

**The Philippines** stated that updating policies is a critical first step to supporting sustainable life-course immunization. The Philippines developed health guidelines to provide an integrated approach to health services and the continuum of care. After establishing guidelines, economies can focus on capacity building and implementing an effective logistics and information system.

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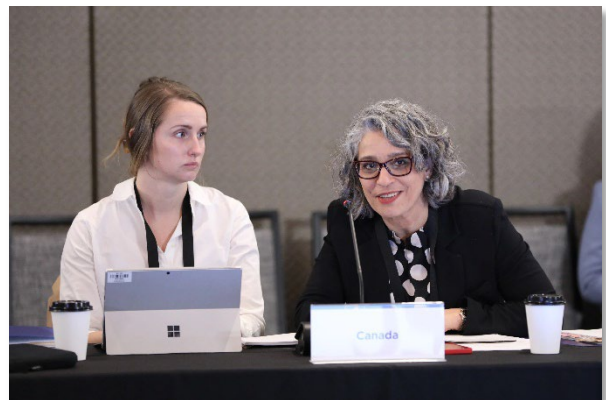
*“The Philippines developed health guidelines to provide an integrated approach to health services and the continuum of care. After establishing guidelines, economies can focus on capacity building and implementing an effective logistics and information system.”*

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### *Closing Remarks*

**Dr. Ryan MacFarlane** provided closing remarks, noting that as economies continue to chart a path forward on resilient health systems and prioritize pandemic preparedness, partnerships with external stakeholders can advance awareness campaigns, support sustainable financing mechanisms, and increase health system capacity through innovative solutions, such as permitting pharmacists to administer vaccines. Dr. MacFarlane reminded economies that the VTF welcomes further opportunities for economy-specific engagements and looks forward to continued partnership with the Health Working Group.

**Ms. Amrita Paul**, *Office of International Affairs for the Health Portfolio, Canada*, concluded the dialogue by reiterating the importance of enhancing the resilience and sustainability of immunization programs. Economy interventions and speaker presentations demonstrated that the value of vaccination cannot be overstated. Beyond reducing VPDs and related morbidity and mortality, vaccines can decrease complications from antimicrobial resistance (AMR) and incidence of cervical cancer. Moreover, vaccines have a significant impact on economic growth and productivity. As APEC economies work toward meeting the goals of the Action Plan and WHO Immunization Agenda 2030, continued collaboration for innovation is invaluable.



### **Additional Reading and Resources**

- APEC [Vaccines Task Force](#)
- [APEC Action Plan on Vaccination Across the Life-Course](#)
- [APEC Regional Dashboard on Vaccination Across the Life-Course](#)
- WHO [Immunization Agenda 2030: A Global Strategy to Leave No One Behind](#)
- WHO [Strengthening implementation of home-based records for maternal, newborn and child health: a guide for country programme managers](#)
- IFPMA [Life-Course Immunization Benchmarking Report](#)
- Johns Hopkins Bloomberg School of Public Health [International Vaccine Access Center](#)

- [Modeling The Economic Burden Of Adult Vaccine-Preventable Diseases In The United States](#)
- [A global agenda for older adult immunization in the COVID-19 era: A roadmap for action](#)
- [Global antibiotic use during the COVID-19 pandemic: analysis of pharmaceutical sales data from 71 countries, 2020–2022](#)
- [Economic Benefits of Immunization for 10 Pathogens in 94 Low- and Middle-Income Countries From 2011 to 2030 Using Cost-of-Illness and Value-of-Statistical-Life Approaches](#)
- [Leaving no one behind: Defining and implementing an integrated life course approach to vaccination across the next decade as part of the immunization Agenda 2030](#)
- WHO [Global strategy to accelerate the elimination of cervical cancer as a public health problem](#)
- Pan American Health Organization [Plan of Action for Cervical Cancer Prevention and Control 2018-2030](#)
- [Regional implementation framework for elimination of cervical cancer as a public health problem: 2021–2030](#)
- [Innovative Financing for Immunization Resource Guide](#)
- [Innovative Financing Mechanisms for Health: Mapping and Recommendations](#)
- ThinkWell Global [Sustainable Immunization Financing Project](#)

## Meeting Agenda

Welcome from United States

**Dr. Michelle McConnell**, Director Asia and Pacific, Office of Global Affairs, U.S. Department of Health and Human Services, United States of America

**Remarks** from the World Health Organization

**Laura Nic Lochlainn, PhD, MSc**, Technical Officer, Life course and Integration team, Department of Immunization, Vaccines and Biologicals, World Health Organization (Pre-Recorded)

**Presentation:** APEC Action Plan on Vaccination Across the Life-Course

**Michael Blanch**, Asia Pacific Public Policy Director, MSD

*A brief introduction to the APEC Vaccines Task Force and APEC Action Plan on Vaccination Across the Life-Course will be provided, outlining the seven pillars and corresponding targets and indicators.*

**Presentation:** APEC Regional Dashboard on Vaccination Across the Life-Course

**Ada Wong**, Public Affairs Lead, Vaccines Asia Sanofi

*An overview of the APEC Regional Dashboard on Vaccination Across the Life-Course, discussing key findings across the seven pillars.*

**Presentation:** IFPMA [Life-Course Immunization Benchmarking Report](#)

**Bjelle Roberts**, Co-Chair, IFPMA Life-Course Immunization Working Group; Associate Director Global Vaccine Policy, MSD (Pre-Recorded)

### **Session 1: Promote the value of vaccination and vaccine innovation (Action Plan Pillar 1)**

*The aim of the discussion sessions is to promote HWG members' understanding of the broader value of vaccination, including subjects such as prevention of secondary health conditions (e.g., AMR, cancer), improving health equity, and reducing lost productivity related to vaccine-preventable diseases.*

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**Presentation:** The economic and social impact of vaccination

**Ms. Lois Privor-Dumm**, Director, Adult Vaccines; Senior Advisor, Policy, Advocacy & Communications, International Vaccine Access Center and Senior Research Associate, Johns Hopkins, Bloomberg School of Public Health (Virtual)

*Vaccines are one of the most cost-effective health interventions available, with widespread evidence demonstrating their impact on economic growth and productivity, promoting health equity, and increasing life expectancy and opportunity.*

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**Discussion** on economic and social impact, including challenges capturing and incorporating into decision-making

Moderated by **Dr. Miranda Smith**

*Economies will have the opportunity to ask questions and discuss (1) ongoing research and programs related to economic and social impact of vaccination (e.g., productivity and health equity) and (2) how economic and social impact is incorporated into decision-making processes.*

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Lunch

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**Presentation:** The health impact of vaccination

**Dr. Matthew Zahn**, Deputy Health Officer at the Orange County Health Care Agency

*Beyond reducing vaccine-preventable disease morbidity and mortality and inducing herd immunity, vaccination can prevent complications and conditions such as anti-microbial resistance and cervical cancer.*

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**Discussion** on health impact, including challenges capturing health impact beyond primary

Moderated by **Dr. Miranda Smith**

Economies will have the opportunity to ask questions and share how broader health impact has informed immunization program decision-making.

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**Case Study Presentation:** The Health, Economic, and Social Value of HPV Vaccination

**Dr. Edward Trimble**, Senior Advisor for Global HPV and Cervical Cancer Control, National Cancer Institute, United States Health and Human Services (Virtual)

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**Roundtable Discussion**

**Guiding Questions:** *All member economies are strongly encouraged to participate in the discussion.*

Moderated by **Dr. Miranda Smith**

- What are the major challenges to properly placing a value on vaccination?
- How can the full value of vaccination be better incorporated into decision-making practices?



- What are the best awareness strategies to demonstrate the value of vaccination and build support among policymakers for investment?
- How can APEC help economies better establish and understand the value of life-course immunization and the secondary and tertiary impacts of vaccination programs to economic, social and development goals?
- UHC is not only an enabler for immunization, but can also help promote increased coverage by providing additional primary healthcare services touchpoints. By averting preventable disease, vaccines help permit the deployment of resources to those that need them most, drive poverty reduction, and maximize economic potential, thereby furthering attainment of sustainable development goals. What can APEC do to help promote further recognition of the connection between vaccination programs, primary health care, and UHC?

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## Health Break

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### ***Session 2: Establishing proven and innovative mechanisms for sustainable immunization financing (Action Plan Pillar 7)***

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**Presentation:** Sustainable Immunization Financing:

**Megan Rauscher**, Senior Technical Advisor, ThinkWell Global

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## Roundtable Discussion

Moderated by **Dr. Ryan MacFarlane**, Director, Crowell & Moring International

**Guiding Questions:** *All member economies are strongly encouraged to participate in the discussion.*

- What makes an immunization program sustainable from a financing perspective?
  - What are the greatest barriers to immunization financing sustainability?
  - How can barriers be resolved, or new and sustainable funding channels be developed?
  - What changes could support sustainable life-course immunization?
  - What steps can policymakers take to sustain and support existing immunization programs?
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- **Dr. Ryan MacFarlane** will preview VTF plans for 2023, including development of materials examining the relationship between vaccination, gender and health equity.
  - **Amrita Paul**, Director, Bilateral Engagement, Summits, and Trade Division, Office of International Affairs for the Health Portfolio, will provide closing remarks.
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