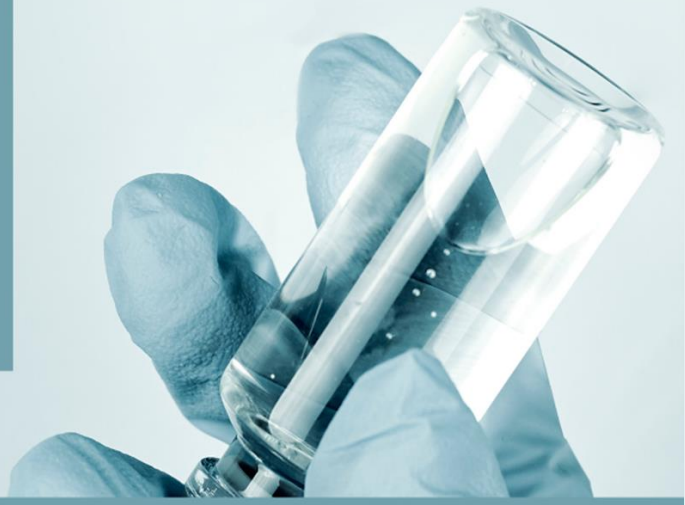
Asia-Pacific
Economic Cooperation

VACCINE SPOTLIGHT REPORT



A Compilation of Initiatives to Explore Vaccine Uptake in the Asia-Pacific Region

APEC Health Working Group

Asia-Pacific
Economic Cooperation

Vaccine Spotlight Report: A Compilation of Initiatives to Explore Vaccine Uptake in the Asia-Pacific Region

APEC Health Working Group

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Produced by

Office of International Affairs for the Health Portfolio,
Public Health Agency of Canada,
130 Colonnade Road, Ottawa,
Ontario, K1A 0K9

For
Asia-Pacific Economic Cooperation Secretariat
35 Heng Mui Keng Terrace
Singapore 119616
Tel: (65) 68919 600
Fax: (65) 68919 690
Email: info@apec.org
Website: www.apec.org

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Message from the Sub-Working Group Co-Chairs

On behalf of the members of the Vaccination Sub-Working Group, Canada is pleased to present the *Vaccine Spotlight Report: A Compilation of Initiatives to Explore Vaccine Uptake in the Asia-Pacific Region*.

Vaccination remains one of the most cost-effective public health interventions currently available. The APEC regions saw a significant re-emergence of vaccine preventable diseases in 2018 and 2019, notably witnessing an increase in cases of measles and polio. This resurgence underscored the importance of strengthening vaccination efforts to safeguard public health, a key goal of the APEC Health Working Group's Vaccination Sub-Working Group. The challenges posed by the COVID-19 pandemic further emphasized the critical role of vaccination across the APEC region. The COVID-19 pandemic brought challenges for vaccine confidence, uptake and access, and hesitancy, and at the same time, presented an opportunity to advance global discussions regarding vaccination across the life-course. As such, vaccination and barriers to uptake represent areas of renewed focus for the APEC HWG.

The *Vaccine Spotlight Report* is meant to share successful policies and programs that have been implemented across the APEC region and to encourage collaboration between economies that face similar contextual challenges to increase vaccine confidence and uptake.

Executive Summary

In 2019, prior to the onset of the COVID-19 pandemic, the APEC Health Working Group (HWG) Sub-Working Group on Vaccination advanced a Vaccination Program of Work (VPoW) to help address vaccine demand and supply issues contributing to the re-emergence of vaccine-preventable diseases in the region. The VPoW categorized its work into two streams: the demand side, which focuses on vaccine acceptance and uptake (Canada lead) and the supply side, which is focused on the improvement of vaccine supply chains (US lead).

Completed VPoW deliverables have included policy discussions on 'Vaccine Acceptance and Uptake' (2020) and 'Vaccination Roll-Out and Addressing Vaccine Confidence' (2021). This *Vaccine Spotlight Report* builds on these important conversations to focus on identifying demand-side factors associated with improving vaccination rates through the targeted promotion of vaccine confidence, acceptance and uptake.

The VPoW deliverables, including the *Vaccine Spotlight Report*, align with the core tenets of the Putrajaya Vision 2040, particularly in the pursuit of strong, balanced, secure, sustainable, and inclusive growth within the Asia-Pacific region. As we navigate a world marked by shocks, crises, and pandemics, the report underscores the paramount importance of fostering quality growth that not only enriches our economies but also advances the health and well-being of all members of our society. By enhancing vaccine confidence and uptake, and promoting greater vaccination rates, we take significant strides toward ensuring the resilience of our region.

Overall, the initiatives submitted by economies in the *Vaccine Spotlight Report* reveal valuable lessons for bolstering vaccination programs. They underscore the pivotal role of building confidence through addressing misinformation and disinformation, and emphasize the effectiveness of community-based vaccination efforts, featuring community ambassadors, multilingual materials, and culturally sensitive approaches. Additionally, the power of adaptable, region-specific strategies emerges as a key to success. These lessons collectively guide the way forward, encouraging the application of these insights to broaden the reach and impact of vaccination initiatives globally.

Per the endorsed VPoW, the *Vaccine Spotlight Report* will be published and publicly accessible through the HWG website, to provide easy access to information on best practices and policies across APEC member economies. The HWG will also share the report on social media and encourage sharing through our network of global health partners, including the World Health Organization (WHO), UNICEF, and Gavi, the Vaccine Alliance. This report aims to facilitate the sharing of successful policies and programs across the region, particularly for those facing similar contextual challenges in the area of vaccination uptake.

Vaccination in the Asia-Pacific Region

Immunization saves approximately two to three million lives globally each year.[1] With protection from the threat of vaccine preventable diseases (VPDs), vaccinated individuals are set on a better path for health and well-being. Regional vaccination efforts through the World Health Organization (WHO) have contributed to milestone achievements, including progress towards the elimination of rubella as a public health problem in the Western Pacific Region, and the elimination of maternal and neonatal tetanus in the Region of the Americas.[2,3] However, progress toward the elimination of VPDs is fragile and global vaccination levels have stagnated below those required to ensure that the population is fully protected, as demonstrated by the resurgence of polio in the Asia-Pacific.[4]

Vaccination coverage rates within and amongst economies can be impacted by socioeconomic context, domestic immunization programing, global vaccine supply shortages, and a number of other factors.[5] This report focuses on individual and socio-cultural contributors to vaccination acceptance, namely, the role of three drivers of vaccine uptake (i.e., convenience, complacency and confidence, or what is known as the 3C Framework) and how it is being addressed by APEC member economies. The 3C Framework aids in understanding the factors influencing vaccine uptake; however, it is important to note that other frameworks exist and have been gaining attention in the field over the past five years. For instance, the WHO's Behavioural and Social Drivers of Vaccination framework discusses four domains that influence vaccination uptake: individual beliefs, attitudes and perceptions; social processes; motivation and internal drivers; and practical barriers and facilitators such as affordability and convenience.[6] While there is overlap between the two frameworks, this paper will employ the 3C Framework as a basis to enhance understanding of vaccination efforts in the Asia-Pacific Region.

Addressing factors related to vaccine acceptance and improving vaccine uptake among populations in the Asia-Pacific region could yield substantial economic benefit. Epidemics and pandemics have widespread economic implications as a result of the direct impacts on individual health, and indirect impacts on livelihoods, household incomes and expenditure. The COVID-19 pandemic has illustrated this in particular, having pushed over half a billion individuals into poverty or extreme poverty as a result of health care costs.[9] In 2020, the estimated global cost of COVID-19 was over USD11 trillion to fund the response and USD10 trillion in lost earnings.[10] Improving vaccine uptake is not only crucial for public health, but also for mitigating the economic consequences associated with epidemics and pandemics.

Factors Driving Vaccine Uptake

Vaccine uptake in communities is influenced by a multitude of interconnected factors, resulting in a complex landscape that varies widely across the diverse economies of the Asia-Pacific Region. From socioeconomic disparities to cultural beliefs, healthcare infrastructure, policies, and access to information, these factors contribute to the heterogeneity of vaccine uptake patterns across the region. It is crucial to note that this paper does not delve into each of these multifaceted dynamics individually. Instead, it employs the 3C Framework to assess general barriers and facilitators of vaccine uptake in the region to identify potential interventions and tools to improve public health outcomes.

The '3C' model is used in this report to categorize contributors of vaccine uptake into convenience, complacency and confidence:

1. *Convenience* encompasses the physical availability, affordability/willingness to pay, geographic accessibility and understanding/appeal of vaccination.
2. *Complacency* occurs when the perceived risk of contracting VPDs is low, resulting in vaccination being considered unnecessary.
3. *Confidence* refers to the trust in the effectiveness of vaccines, the systems that deliver them and the motivations of decision-makers who determine vaccine requirements.

Objectives of the Vaccine Spotlight Report

The '*Vaccine Spotlight Report'* highlights how APEC member economies are improving vaccine uptake by addressing contributing factors of confidence, convenience and complacency. The report aims to:

1. Share successful policies and programs that have been implemented across the APEC region to encourage knowledge sharing and collaboration to address challenges in increasing vaccine uptake and acceptance.
2. Develop a greater understanding of how vaccine confidence, acceptance and uptake are impacting APEC member economies, including challenges and lessons learned from the pandemic.

Methodology

Member economies were requested to complete a survey sharing projects and initiatives aimed at improving vaccine acceptance and uptake, and illustrate innovative approaches to address vaccine hesitancy. The survey was initially circulated in July 2022 and shared again with economies in April 2023 and August 2023. Survey questions related to how vaccine confidence, complacency and convenience drivers were targeted by each economy's program.

Details that were provided by each economy related to:

- Project/Initiative description and objectives;
- How vaccine confidence, complacency and convenience drivers were targeted;
- Project/Initiative adaptability;
- Project/Initiative cost and investment;
- Project/Initiative evaluation;
- Challenges to implementation and;
- Lessons learned.

Results

With eight submissions from **Australia; Canada; Hong Kong, China; Malaysia; the Republic of the Philippines; Singapore; Thailand;** and the **US**, this report identifies common themes that can benefit a broader audience, inviting all economies to consider their applicability beyond these specific cases. The submissions pertain to both routine vaccinations as well as COVID-19 vaccinations, due to the timing of the report and submission collection, which took place during the COVID-19 pandemic. While the responses from the Vaccine Spotlight Survey are not reflective of all APEC economies, they offer valuable insights and shared lessons which may be relevant for the broader APEC region.

Economy Submissions

This section provides a brief overview of each economy's submission. For detailed submissions, please refer to ***Annex A.***

1. In **Australia**, the Sharing Knowledge About Immunization (SKAI) project and MumBubVax program used evidence-based tools, such as fact sheets and infographics, to improve conversations between patients and their health care providers about childhood and pregnancy vaccinations. The intervention adapts the concept of clinical pathways to establish 'communication pathways' for professionals responding to vaccine hesitancy.
2. **Canada's** Immunization Partnership Fund (IPF) is a federal grants and contributions program that the Public Health Agency of Canada (PHAC) leads to identify and help address gaps in vaccine acceptance, confidence and uptake, and empower people in Canada to make informed vaccine decisions, particularly among marginalized communities and those with persisting gaps in vaccine coverage.
3. In **Hong Kong, China**, initiatives to enhance COVID-19 vaccination among children and adolescents include a free of charge territory-wide vaccination program. With the support of professional bodies, territory-wide health education and promotion campaigns were implemented to provide up-to-date and accurate information on vaccination to increase vaccine uptake.
4. The Ministry of Health (MOH) of **Malaysia** established the COVID-19 Strategic Communication Committee for COVID-19 vaccination at the federal and sub-federal levels to ensure that correct information is sent quickly to the public. Information was regularly shared through social media channels, alongside regular engagement with healthcare workers in the form of webinar sessions.
5. In the **Republic of the Philippines**, a COVID-19 communication campaign was mounted by the government with a mix of activities to support the spread of evidence-based information around vaccination. Social media and other distribution platforms were employed to amplify messages regarding vaccine safety and efficacy.
6. **Singapore's** immunization program focused on public communication on vaccination via multiple platforms. It also targeted misinformation alongside increasing vaccine accessibility, taking a multi-pronged approach to encourage vaccine uptake.
7. **Thailand** enacted a plan to increase vaccination coverage by increasing vaccine availability and building health literacy for individuals in hard-to-reach remote areas.
8. The **US** CDC's Vaccine Task Force created an Insights Unit that collected data from up to 24 data sources on the public's questions, concerns, frustrations, and circulating misinformation that impact vaccine confidence, including perceptions that decrease trust in government, science, and health behaviors. This data is used to collaborate with internal and external partners to mitigate the impact of these issues.

Focus Areas of Initiatives Promoting Vaccine Uptake

As evident in Table 1 below, improving *confidence* from the 3C model is a key intervention target across all programs. This is consistent with evidence that suggests information, communication, and resources addressing misinformation and disinformation can strengthen vaccine uptake.

Table 1. Intervention target from the '3C' model by economy.

	Confidence	Complacency	Convenience
Australia	x		
Canada	x	x	x
Hong Kong, China	x	x	x
Malaysia	x		x
The Republic of the Philippines	x	x	x
Singapore	x		x
Thailand	x		x
US	x		

Examples of Strategies for Adaptability

Economies were asked to identify how the project/initiative could be adapted to other settings, highlighting the potential relevance and applicability to other member economies.

1. Adapting to meet the needs of diverse population groups

Australia's innovative approach of consolidating and adapting resources for different population groups, such as their endeavor to extend childhood and pregnancy immunization materials to reach priority communities like the Aboriginal and Torres Strait Islander people, showcases a promising model for broader application. This strategy, which proved successful in their Sharing Knowledge About Immunization (SKAI) program, underscores the potential for efficiently disseminating vital healthcare information and interventions across diverse population segments by repurposing existing resources. For instance, economies grappling with the challenge of boosting vaccination rates among Indigenous or marginalized communities could draw inspiration from Australia's adaptation of childhood and pregnancy immunization resources to tailor their own initiatives accordingly.

Additionally, the SKAI project's communication materials have been widely disseminated to vaccination providers and the public, informing efforts by organizations such as the Taskforce for Global Health and the US CDC. This suggests the potential for these principles to be adapted in other member economies. However, it is vital to emphasize that such adaptations require engagement with local stakeholders and population groups to ascertain the suitability and customization needed to address diverse needs and contexts effectively.

Canada's Immunization Partnership Fund (IPF) adapted to local contexts by including community-led initiatives and receiving feedback from community organizations, and applying an equity lens to reach marginalized populations. Eligibility criteria and target audiences were determined based on local evidence and research findings, as well as community requirements. By tailoring vaccination efforts to the specific needs and challenges of different communities, economies can better address disparities in healthcare access. Applying a community-based approach can also allow local or grassroots organizations to provide input in how to engage with diverse populations effectively, making this adaptable approach relevant for economies with similar disparities in healthcare delivery.

Another driving force behind IPF's accomplishments lies in taking into account evolving evidence and best practices. Many IPF projects drew inspiration from established theories of change, including the Theory of Health Behavior and the WHO-supported COM-B (Capability, Opportunity, Motivation, and Behaviour) model, aimed at countering vaccine hesitancy. The Theory of Health Behaviour explains how individual attitudes, beliefs, and social influences affect health-related actions, while the COM-B model provides a framework for understanding and changing behaviour by addressing these components. In order for behaviour change to occur, individuals must have the capability, opportunity, and motivation to perform the behaviour. Continuously monitoring and adapting these strategies based on local, domestic, and international best practices is essential for ensuring program success.

IPF's effectiveness was also enhanced by its commitment to fostering intersectoral partnerships (e.g., with newcomer-serving organizations, the long-term care sector, and the education sector, among others). By funding over 50 locally engaged communities across Canada, IPF established working relationships with organizations that support vaccination efforts for marginalized and Indigenous communities. Achieving this level of collaboration may necessitate economy-wide coordination efforts in member economies. By bringing together various stakeholders and expertise, economies can adapt the cohesive approach that underpinned IPF's achievements, ultimately strengthening healthcare access and equity for their populations.

Hong Kong, China, adapted their initiatives for children and adolescents to other target groups, such as the elderly. The safety of COVID-19 vaccines was a major issue of concern among the elderly group, particular for those with chronic illnesses, so medical experts were engaged to help address their concerns. The successful adaptation of initiatives originally designed for children and adolescents to benefit the elderly population underscores the potential for cross-generational applicability. This approach could be insightful for economies with aging populations facing unique healthcare concerns. By involving medical experts to address specific worries, like vaccine safety for those with chronic illnesses, economies can build trust among these demographic groups, facilitating the adoption of preventive healthcare measures.

The **Republic of the Philippines'** employed the demand generation ladder framework, presenting a valuable model with broad relevance and applicability. The Demand Generation Ladder Framework involves stages such as creating awareness, providing knowledge, motivating, ensuring access, promoting adoption, maintaining behavior change, and encouraging advocacy.[11] It can help design effective strategies to move people through these stages towards desired health behaviors or services, and offer a structured guide for implementing a mix of interventions at both economy-wide and local levels, ensuring targeted and cost-efficient strategies tailored to diverse audiences. By adapting key messages and information based on social listening data and targeting specific population groups, such as senior citizens, individuals with comorbidities, and low-literacy groups, economies can effectively engage their communities.

Moreover, the framework accommodates local government units and social mobilizers, empowering them to customize messages according to their respective audiences. For regions facing heightened healthcare access challenges, allocating resources to nudge and incentive mechanisms becomes vital, helping to overcome barriers to vaccination. Nudge mechanisms provide clear and easy-to-understand information about vaccinations to encourage vaccination, while incentive mechanisms offer rewards or benefits to those who are vaccinated. Adaptable nudges and incentives, adjusted to meet the unique needs of various populations, exemplify a flexible and responsive approach that other APEC member economies could consider for their vaccination campaigns.

2. *Adapting successful approaches to other topic areas and diseases*

The **US** CDC Insights Unit was developed during the COVID-19 response to provide regular updates on the status of COVID-19 vaccine confidence in the United States, emphasizing major themes that influence vaccine confidence and uptake. The reports from the Insights Unit include analyses of multiple data sources, from social listening and web metrics to immunization survey data and CDC-INFO inquiries, and seek to identify emerging issues of misinformation, disinformation, and where intervention efforts can positively increase vaccine confidence across the US The US adapted the data collection methodology from their CDC Insights Unit to other topic areas and emerging diseases, such as Mpox. This flexibility highlights the importance of a versatile strategy and is an excellent example for other economies seeking to tackle a range of health challenges beyond routine immunization. By leveraging existing frameworks and expertise, economies can respond effectively to new and evolving health threats, ensuring the continued relevance and applicability of their initiatives.

3. *Adapting to evolving and dynamic global landscapes through communication and building trust*

Singapore's strategy of building trust through communication and sharing science-backed, evidence-based vaccine information offers valuable insights into the importance of adopting a multi-pronged approach. This approach, coupled with making vaccines free-of-charge, forms a foundational strategy to encourage high vaccination rates. Recognizing the unique factors and parameters at play in each member economy, adopting a multi-pronged approach such as this, tailored to the specific situation and context, can be instrumental in developing a resilient vaccination program. This adaptable approach allows economies to address their unique challenges while capitalizing on the trust-building and information-sharing strategies that have proven successful in Singapore.

Malaysia's approach to building confidence and trust in government initiatives during the COVID-19 vaccination campaign serves as a valuable example of an effective strategy with the potential to be adapted to other economy contexts. By promptly establishing the COVID-19 Strategic Communication Committee, they ensured the rapid dissemination of accurate information at both federal and sub-federal levels, countering misinformation and disinformation efficiently. Their strategy included sentiment analysis, community feedback, and engagement with healthcare workers, educators, and community leaders, resulting in a comprehensive and community-driven approach. Moreover, Malaysia's commitment to making vaccines easily accessible through government health clinics and private vaccination centers further enhanced their vaccination program's effectiveness. As the world transitions towards digital solutions, Malaysia's experiences offer valuable insights applicable to the evolving landscape of healthcare communication and vaccination efforts by using social media channels and broadcasting agencies to disseminate information.

Challenges Facing Economies

The implementation of vaccination programs, particularly in the context of the COVID-19 pandemic, brought to light several common challenges that economies around the APEC region faced.

1. **Time Constraints**: A paramount challenge faced by many economies was the unprecedented time limitations imposed by the urgency of the COVID-19 pandemic. The task of rapidly devising and executing operational plans to vaccinate entire populations within a short timeframe was uncharted territory. This challenge extended beyond healthcare resourcing and entailed intricate coordination between agencies from different sectors. From setting up suitable facilities to crafting effective public communication strategies and ensuring a steady supply of vaccines, seamless collaboration became imperative.
2. **Organizational Capacity & Workforce Support**: Another significant hurdle that emerged was the implementation and promotion of vaccination programs in the context of organizational capacity. Beyond vaccine distribution logistics, proper planning and support for the workforce responsible for administering vaccines were key. This ranged from recruiting and training personnel to organizing vaccination sites and ensuring the availability of necessary equipment and resources. Overcoming this challenge demands a comprehensive approach that also takes into account the human resources required to make a program successful.
3. **Scope of Programs**: Determining the scope of vaccination programs presented a delicate balancing act for economies. While a broader scope promised to extend the benefits of vaccination to more diverse and marginalized populations, it also introduced complexities in terms of implementation. Expanding the scope meant accommodating varied demographics, each with their own unique requirements and considerations. This challenge emphasized the importance of a flexible approach that could adapt to a wide range of needs while maintaining efficiency and effectiveness.
4. **Data Barriers**: A common obstacle that surfaced across different economies was the collection and utilization of data. The lack of proactive and systematic data collection hindered evidence-based evaluations of the vaccination programs. Routine data collection and analysis, including from vaccine preventable disease surveillance, outbreak surveillance, and program-level immunization data, plays a pivotal role in gauging the impact of these initiatives, identifying areas for improvement, and making informed decisions for future healthcare strategies. Consideration should also be given to the need for rapid data collection in the context of emergencies or outbreaks. Overcoming this data barrier required a commitment to robust and timely data collection and analysis mechanisms, ensuring that the lessons learned from each phase of the vaccination program could inform ongoing efforts.
5. **Vaccine Messaging**: Mixed messaging, including mis- and disinformation related to vaccines, presented a challenge as information was being shared from multiple sources offering conflicting information about vaccines, leading to confusion among the public. This eroded trust and highlighted existing gaps in trust in public health and healthcare authorities, fueling vaccine hesitancy and hampering effective public health communication. To tackle this challenge, initiatives must prioritize clear, consistent, evidence-based messaging to build trust and encourage vaccination, and develop a plan for tackling misinformation.

In conclusion, the challenges faced by economies in program implementation highlights the intricacies involved in orchestrating vaccination initiatives of such magnitude. The need for swift action, effective communication, comprehensive planning, good data, and adaptable strategies became evident. While the COVID-19 pandemic magnified these challenges, the

lessons learned provide valuable insights and can help economies prepare to tackle future challenges to address vaccine-preventable diseases on a global scale.

Best Practices & Lessons Learned as a Way Forward

The lessons learned from these initiatives illuminate a path forward for economies. The economy submissions underscore the significance of targeting confidence, a crucial component of the 3Cs model. Confidence is critical when considering vaccine hesitancy and misinformation because individuals are more likely to accept vaccinations when they have confidence in the vaccines and the information they receive. Conversely, doubt and mistrust can lead to vaccine hesitancy and resistance, undermining public health efforts. This aligns with evidence indicating that addressing misinformation and disinformation through effective information dissemination, communication strategies, and resource allocation, can substantially enhance vaccine acceptance and uptake.[12] By focusing on confidence, these initiatives offer potentially replicable strategies to foster greater public trust in vaccines and healthcare information.

Another recurrent theme across these initiatives is the emphasis on community-based vaccination programing. This approach enhances intervention delivery through the integration of community ambassadors, establishment of easily accessible vaccine clinics, provision of materials in diverse languages, and the application of a culturally sensitive, trauma-informed, and harm reduction framework. This approach recognizes the power of local engagement and tailored strategies in ensuring that vaccination efforts are attuned to the unique needs of different population groups, ultimately enhancing confidence, promoting higher vaccine acceptance, and as a result, supporting better public health outcomes.

Similarly, establishing trust between government entities and the public, alongside transparent dissemination of evidence-based information on vaccines and community-oriented approaches, emerges as a pivotal factor in improving vaccine uptake. By providing vaccines free of charge and establishing a foundation of trust through clear, reliable information, a strong basis is laid to foster widespread vaccine acceptance. These insights underscore that instilling confidence and trust in the vaccination process is foundational to achieving high rates of immunization. Lastly, the implementation of a multi-faceted approach, customized to the distinct characteristics of each member economy and region, emerges as an effective strategy for developing a resilient vaccination program.

While the factors outlined above provide insights into understanding vaccine uptake, it is essential to acknowledge an underlying thread intertwining these factors—systemic inequities which can foster mistrust. Understanding the social processes underlying vaccine uptake is crucial, and tools such as the WHO's Behavioural and Social Drivers Framework can aid in this understanding. Key drivers influencing health-related behaviours, including vaccination attitudes, extend beyond individual beliefs and perceptions to reflect community norms and practices; socioeconomic conditions, broader environmental influences; and experiences of marginalization.[13] Social and community norms are often interconnected, creating additional barriers for populations already facing discrimination or challenges with access to healthcare. Programs aimed at enhancing vaccine uptake must consider the impact of systemic inequities on vaccine acceptance, and a comprehensive understanding of these drivers can support efforts to provide transparent and evidence-based communication about vaccines to build public trust.

Given the limited evidence for many behavioral and communication interventions to boost vaccine demand, there is a clear need for more robust evaluations of demand interventions. Implementation research to understand the fidelity, reach, and acceptability of these and other demand focused interventions could also provide valuable insights. Finally, tracking vaccine coverage as a metric and attributing it to specific interventions would also be helpful in understanding the effectiveness of these strategies. This focus on adaptation and learning

underscores the need for incorporating these elements when undertaking demand and communication-related interventions.

In conclusion, the imperative to enhance vaccine uptake within the APEC region cannot be overstated. The economic ramifications of vaccine preventable diseases – and epidemics and pandemics — extend far beyond individual health, impacting livelihoods, household incomes, and overall economic wellbeing.

The implementation of a multi-faceted approach, customized to the distinct characteristics of each member economy and region, emerges as an effective strategy for developing a resilient vaccination program. This approach invites all APEC economies to reflect on how programs and initiatives can be adapted to suit different contexts or priority groups, thereby extending the reach and impact of these efforts. By embracing an approach that blends adaptability with evidence-based practices, these initiatives offer a valuable framework for achieving comprehensive, effective, and inclusive vaccination campaigns. The *Vaccine Spotlight Report* underscores the need for APEC member economies to share experiences and take coordinated action to improve vaccine uptake and bolstering vaccination rates. By doing so, we not only enhance the health and well-being of our populations but also fortify our collective resilience against future health crises.

This report illuminates the proactive steps being taken by APEC member economies to address the multifaceted factors of confidence, convenience, and complacency in order to improve vaccination uptake—and as a result, health outcomes—for their populations. It reflects a shared commitment to building a healthier, more resilient future for all.

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ANNEX: Improving Vaccination Uptake – Examples of Projects and Initiatives in APEC Member Economies

Australia

Sharing Knowledge About Immunization (SKAI) – specialized communication tools for vaccination providers and parents.

Year of Implementation: 2018—Present

Description

The Sharing Knowledge About Immunization (SKAI) project uses pioneering research to produce evidence-based guidance about immunization for healthcare providers and patients. The SKAI project launched in 2018 with resources designed to improve conversations between parents and their health providers about childhood vaccinations. SKAI resources are publicly available at www.skai.org.au.

The SKAI communication model is applied in two digital settings:

- SKAI Childhood, which focuses on routine vaccinations in early childhood. It comprises two websites providing information for the public and healthcare professionals, with links to a professionally accredited e-learning module hosted on a separate platform.
- MumBubVax, which focuses on vaccines in pregnancy and at birth. It comprises one website featuring information for the public, with additional resources for healthcare professionals provided in a password-protected area of the site.

The innovative SKAI intervention adapts the concept of clinical pathways to establish 'communication pathways' for professionals seeking assistance in responding to vaccine hesitancy. Information, resources and e-learning for providers aim to improve skills and confidence in using effective communication techniques with parents at different stages on the vaccine acceptance continuum (accepting, hesitant, or declining vaccination). Information and resources for community members aim to answer specific questions and concerns about vaccines and vaccination, and build vaccine confidence.

Project Development

SKAI is informed by social science and communications research and was developed by a team based at the University of Sydney. The process of development was iterative and involved extensive formative research to identify the information environment and needs of providers and parents, pre-testing of resources, end-user interviews, and piloting the package in primary care practices. Several research publications describe this process.

The project is specifically informed by a Vaccination Communication Framework for managing hesitancy in primary care settings. SKAI tips for health workers use behavior change counselling techniques that have been used to help people quit smoking or mediate conflicts between neighbours, and the SKAI conversation style is informed by Motivational Interviewing.

SKAI conversation principles include:

- Determining where a patient is on the continuum of vaccine acceptance (accepting, hesitant, or refusing) and tailoring the conversation style accordingly.
- Using different conversation goals and approaches with people who are accepting, hesitant, or planning to decline vaccination for themselves or their children. For hesitant parents, the main communication practices are: (1) elicit, (2) acknowledge, (3) set agenda, (4) share knowledge, (5) plan and close.

Rationale

Research shows that professionals strongly influence parents in their vaccination decisions. Evidence indicates that equipping immunization providers to confidently discuss patient concerns and recommend vaccination is important for increasing patient vaccine acceptance.

Further, supporting hesitant patients to have satisfactory conversations about immunization with their healthcare provider, and providing accessible information about vaccines and vaccination, builds patients' vaccine confidence and supports consent and acceptance. Vaccine acceptance is an important determinant in vaccine uptake, alongside removing practical barriers to vaccination.

The SKAI project supports Australia's Immunization Strategy in maintaining and ensuring community confidence in vaccination through effective communication strategies, and an adequately skilled immunization workforce through promoting effective training for immunization providers.

Objectives

- Improve conversations between parents and their health providers about childhood and pregnancy vaccinations (and as SKAI expands, other vaccinations as well);
- Build immunization providers' skills and confidence in having supportive vaccination conversations with patients at different stages of the vaccine acceptance continuum (accepting, hesitant, refusing); and
- Build patients' (expecting parents, parents and carers of young children, and other population groups in future) vaccine confidence and to support consent.

Adaptability

SKAI conversation principles can be applied and adapted to different vaccinations and, beyond vaccination, to different health topics. SKAI conversation practices can also be adapted to different population groups. For example, the project team and partners plan to consolidate the resources for childhood and pregnancy immunizations into a single platform and expand the resources suite to cover other vaccines and priority groups (including Aboriginal and Torres Strait Islander people, culturally and linguistically diverse people, adolescents, and adults).

As a vaccine hesitancy communication package, SKAI has been presented to thousands of immunization providers via plenaries, workshops and updates in Australia; Canada; New Zealand; the UK; and the US. The communication practices from SKAI have informed work undertaken by the Taskforce for Global Health and the US CDC.

SKAI practices could potentially be adapted to settings within other member economies. Adaptation to economies in the region would require preliminary engagement with population groups and local stakeholders to understand and determine whether SKAI conversation principles are valid in their contexts and could be adapted to meet the needs of diverse groups and local stakeholders.

Evaluation

In 2022, the project's target audiences participated in an evaluation of the SKAI Childhood and MumBubVax websites. Evaluation activities included surveys and in-depth interviews with community members (638 surveyed, 29 interviewed) and healthcare professionals (HCPs; 500 surveyed, 59 interviewed). Additionally, a mixed methods survey collecting insights about the vaccination provider e-learning module was completed by 2,002 HCPs.

Community members and HCPs responded very positively to the websites, perceiving the sites as having credible and comprehensive information, written in a way that was easy to understand, and presented in a manner that was visually appealing and simple to navigate. The age and trimester-based navigation was highlighted as attractive, and the tone of the content (perceived to be non-judgmental and balanced, yet positive) was well-received.

HCPs who had completed the SKAI e-learning module for vaccination providers reported significantly more confidence in having supportive conversations with patients who may have questions and concerns about vaccination. They valued the information and communication techniques provided, and access to different resources to share with patients. Interactivity of the e-learning module, access to scenarios and examples of conversations with different groups of parents, and availability of transcripts were also highly rated.

Challenges

- Dissemination and promotion: enhanced dissemination and promotion of the package would improve brand awareness of and engagement with SKAI among time-poor vaccination providers and the public. Some activities could include increasing direct marketing of SKAI to providers and the public, improving connections between the SKAI package and reputable health organizations, identifying and supporting champions to help promote SKAI and deliver education on the SKAI approach, and increasing delivery of face-to-face SKAI training to providers.
- Scope: a broader scope (other population groups, vaccines, topic areas) would deliver benefits to more diverse audiences. These could include older adults, at-risk groups such as Aboriginal and Torres Strait Islander families, adolescents, and others.
- Visual content: enhancing visual content to complement written content would increase the appeal to a broader range of audiences and support promotion via social media and other platforms.
- Technical performance: enhanced technical performance of the package would support access via mobile devices, which is the route by which most users access the package.

Canada

The Immunization Partnership Fund (IPF)

Year of Implementation: 2016-Present

Description

In 2016, the Government of Canada committed CAD25 million to enhance and sustain vaccination coverage through the establishment of the Immunization Partnership Fund (IPF). The budget allocated CAD3-5 million annually for a period of 5 years (2016 to 2021). Initially, the fund primarily supported childhood and routine immunizations however, it underwent adaptation in response to the COVID-19 pandemic.

The IPF is an equity- and evidence-based grants and contributions program, and the only one of its kind in Canada, that the Public Health Agency of Canada leads as part of domestic vaccination efforts, including the Government of Canada's COVID-19 response. The IPF remains critical to Canada's Immunization Strategy through its fifth objective, in which Canada aims to understand the key barriers to and best practices in improving immunization coverage – and invests in addressing them.

It is well documented that messaging from governments and institutions for marginalized communities is not as effective as it is for the general population. Evidence reveals that trusted representatives from local communities can be key messengers for conveying credible information to these groups.

The IPF program's design is flexible, and recognizes there is no "one size fits all" solution to supporting vaccine confidence and uptake; allowing projects that take a multifaceted approach, reflective of Canada's diversity. Where resources allowed, the IPF incorporated suggestions and learnings from program reviews, evaluations and stakeholder engagements, resulting in expanded reach and funding of new and novel approaches to vaccine programing. One notable approach is the inclusion of community-led vaccination initiatives, with intersectional recipients who are reflective of the communities they serve. Eligible IPF recipients are diverse, and include marginalized communities and cultural advocacy organizations; healthcare organizations, providers and community health centres; child, youth, and educational organizations; applied research teams; public health resource hubs; digital experts; Indigenous communities; and science centres.

Objectives

- Build capacity of health care providers as vaccinators and vaccination promoters and reduce the impact and spread of misinformation and disinformation
- Support community-based vaccination education, promotion, and outreach
- Build capacity for evidence-based vaccination communication

Adaptability

A driving factor of IPF success is the consideration of local context. Notably, eligible recipients, as well as program target audiences, are based on local evidence, community needs, and Canadian research findings. Member economies may also want to consider local vaccine hesitancy and uptake contexts if creating a similar program. Additionally, this local context would want to be considered when deciding the appropriate amount of funding per recipient.

Many IPF projects are based off common theories of change, including the Theory of Health Behavior, or the WHO-supported COM-B model to counteract vaccine hesitancy. Maintaining

evidence on local, domestic, and international best practices has been essential to our program's success.

Fostering inter-sectoral partnerships is a key driver of IPF program success. In member economies, this may require economy-wide coordination efforts.

Cost/Investments

For COVID-19, the IPF received a total of CAD54 million for over 100 community-informed projects to support COVID-19 vaccine acceptance and uptake, with investments spanning from early 2021 to March 31, 2023. The vast majority of funded projects received CAD100,000-500,000 for their community-based work. Selected high-capacity recipients received over CAD500,000 for their work, primarily in the digital mis- and disinformation space (*note: these projects often have higher costs than community-based promotional projects).*

To build on the above efforts, the Government of Canada renewed its commitment to the IPF, investing an additional CAD9.6 million in 2023-24. This investment will allow trusted partners across Canada to enhance previously funded projects to support vaccine confidence, uptake, and access to vaccines.

The Government of Canada has invested an additional CAD10 million over the next 2 years (2024-2026) to increase confidence and uptake of vaccination across the life course among certain marginalized priority populations. The Public Health Agency of Canada launched an open call for applications for the Immunization Partnership Fund. Through this funding opportunity, PHAC aims to identify projects that will deliver culturally safe, equity-promoting, and evidence-informed initiatives.

Evaluation

IPF projects report on progress twice throughout the fiscal year. The mid-year progress report (after Q1, Q2) asks for updates to project activities, as well as a summary of successes to date. A project activity update is also required at the end of the fiscal year (after Q3, Q4), accompanied by the year-end performance report (Q1-4), which provides the richest data on reach and impact. Key indicators from this report include (but are not limited to): the number of individuals vaccinated /number of people accessing vaccine resources, and how the project is advancing health equity/evidence/cultural safety surrounding vaccines

Program evidence to date indicates that investments are having a notable impact, and closing vaccine equity gaps within Canada. The most recent program has demonstrated clear results with its COVID-specific investments. Through these investments, more than 100 IPF funding recipients tailored over 26,000 evidence-informed, equity-based, and culturally safe COVID-19 resources and services for the audiences they served. This resulted in over 350,000 vaccinations of individuals within marginalized and vulnerable communities that may not have otherwise chosen to access vaccines. Over 1 million individuals were reached by in-person programing efforts, and online digital product materials were accessed over 20 million times. IPF information was disseminated in 67 languages and provided service in more than 100, including in 19 Indigenous languages.

Challenges

Operating during a pandemic environment increased the complexity of delivering a program of this nature, however the IPF implemented a number of mitigation strategies to promote program success:

- One implementation challenge for the program was the overwhelming response to the call for proposals. To ensure a fair, equitable, and representative selection process, the IPF team used both a minimum quantitative scoring system, as well as selection based on community needs, timely research and surveillance, and regional intelligence.

- Many recipients reported challenges associated with the waves of COVID-19 variants of concern, notably Omicron, which complicated the program delivery environment. The IPF provided additional support to recipients on administrative documents and processes, and provided additional flexibility during times of uncertainty.
- To combat organizational capacity and challenges of competing priorities, the team worked in close collaboration both internally and with others, and created efficient databases for retaining corporate information.
- As the IPF often heard about challenges with circulating mis- and dis- information (MIDI) and vaccine messaging, the team initialized a Community of Practice to allow diverse projects to connect virtually and discuss common challenges and best practices.

Key Lessons Learned

- Overall, progress reporting has highlighted program successes including: the establishment of more intersectoral vaccine partnerships; the expansion in access to vaccine-related knowledge products and activities; reach and engagement with equity-deserving communities using innovative approaches; and generally, moving the dial on vaccine confidence and uptake in key populations in Canada.
- IPF progress reporting has also shed light on best practices in community-based vaccination programing, such as the use of community ambassadors, provision of low barrier vaccine clinics, provision of materials in various languages, and application of a trauma-informed and harm reduction lens.
- These critical learnings have also been explored through the IPF Community of Practice (CoP), which have provided critical learnings to inform PHAC's vaccine programing and communications approaches, as well as key information about circulating mis- and disinformation. Community-level best-practices, such as increasing vaccine and digital literacy; encouraging cohesive communication and messaging; "meeting people where they are at"; responding empathetically; and increasing access have all been garnered through these initiatives.
- Broadly, the ability to fund diverse and trusted organizations in their capacity to become sources of vaccine evidence has been a notable success of the IPF, particularly in engaging equity-deserving populations.

Hong Kong, China

Initiatives to enhance COVID-19 vaccination among children and adolescents

Year of Implementation: February 2021 –Present

Description

To safeguard public health and to allow resumption of normal activities of society, Hong Kong, China has been implementing a territory-wide COVID-19 Vaccination Program free of charge for eligible persons, including children and adolescents. Two types of vaccine, namely Comirnaty (BioNTech vaccine) and CoronaVac (Sinovac vaccine), are available for children and adolescents aged 6 months or above.

To promote vaccination among the younger age group, the key was to address questions and concerns of their parents and carers (e.g. side effects of the vaccine and how well the vaccine works in children etc.). With the support of professional bodies, we organized an extensive territory-wide health education and promotion campaign to provide up-to-date and accurate information on vaccination to parents and school operators. Our key messages were (a) safety and efficacy of the vaccines and (b) risk of contracting COVID-19 and health consequences of infection. The campaign covered a variety of formats and channels in reaching our target audiences, including TV and radio, webpages, social media, advertisement, newspaper, online health talks, etc. We engaged health experts or professionals during the process (e.g. paediatrics professional group were invited to join health talks), with a view to enhancing the message credibility and reliability. We also leveraged the social network of parents, e.g., opinion leaders to boost vaccination in this age group.

The Government also worked to maximise the accessibility and availability of vaccination services for children and students. For example, we proactively approached all secondary schools, primary schools and kindergartens to arrange bussing services to vaccination venues, e.g. Community Vaccination Centres and Student Health Service Centre of the Department of Health (DH). Outreach vaccination services were provided for schools via COVID-19 Mobile Vaccination Stations. Parents were also informed of all available vaccination outlets including over 1700 Vaccination Subsidy Scheme (VSS) doctors who provided one-to-one assessments at their clinics.

With the availability of multi-dose mRNA vaccines, four designated large-scale Children Community Vaccination Centres (CCVCs) were set up to provide a friendly vaccination environment to ease children's anxiety, to improve operational efficiency and to reduce vaccine wastage. The CCVCs operated during weekends and after office hours to facilitate parents in bringing their children for vaccination. Online booking system to CCVC were available to allow round-the-clock appointment booking by parents.

- ✓ Confidence
- ✓ Complacency
- ✓ Convenience

Objectives

- Provide up-to-date and accurate information on vaccines to clear doubts and misconception so as to boost confidence in the safety and effectiveness of the vaccines and allow an informed choice to protect one's health
- Expand vaccine access to enhance willingness to receive vaccines

Adaptability

The initiatives adopted for this age group were implemented for other target groups, such as the elderly. For example, the safety of vaccine was a major issue of concern among the

elderly group, particular for those with chronic illnesses. Medical experts were engaged to clear their concerns. We also minimized the convenience barrier by making the vaccine easily available, e.g. provision of home vaccination service for elders and outreach programs for Residential Care Home.

Evaluation

The COVID-19 vaccination rate among children and adolescents is high in Hong Kong, China, signifying the success of the initiatives. As of mid May 2023, about 92% and 82% of those aged 3 to 11 years have received at least one and two doses of COVID-19 vaccine respectively. For those aged 12 to 19 years, almost 100% have received at least two doses of vaccine.

Key Lessons Learned

- Engagement of stakeholders is of crucial importance to increase vaccine acceptance. The support of many local healthcare professionals in promoting vaccination had boosted confidence in the safety and effectiveness of the vaccines among members of public.
- A well-implemented vaccination program with clear guidance provided to the public is critical in ensuring convenient access to vaccine and smooth vaccination process.
- Staunch support from policy makers is another key driver. The administration is determined to achieve a high vaccination rate within short period of time to protect public health.

Malaysia

COVID-19 Strategic Communication Committee for COVID-19 Vaccination

Year of Implementation: 2021—2022

Description

Malaysia, like other economies globally, faces numerous challenges in addressing COVID-19 vaccine hesitancy. The initial phase of COVID-19 vaccination ran smoothly as people were distressed, concerned and anxious to end the pandemic, and primary doses were thought to provide life-long protection. However, for the subsequent doses (including booster doses) and regime, hesitancy started to escalate as COVID-19 misinformation, incomplete information, and inconsistent scientific information started to spread, creating distrust, fear and unwillingness among the public, resulting poor acceptance, especially for COVID-19 Booster and COVID-19 vaccination for children.

- ✓ Confidence
- □ Complacency
- ✓ Convenience

Realizing this issue, the Ministry of Health (MOH) of Malaysia immediately established the COVID-19 Strategic Communication Committee for COVID-19 vaccination at the federal and sub-federal levels to ensure that correct information is sent fast to the ground. A proper strategic communication plan of action was then developed and activities carried out accordingly to reach all levels of the community in order to gain and maintain trust, manage expectations and counter misinformation and disinformation on COVID-19 vaccines. The prioritizing of issues to be addressed and the development of key messages were based on regular sentiment analysis and community feedbacks from all MOH social listening methods. Correct information was then regularly disseminated through various social media channels. Engagement with broadcasting agencies was also conducted and regular media slots were allocated to our public health specialists and clinicians.

Regular engagement with health care workers in the form of webinar sessions and briefings by health departments was another strategy. Inter-agency collaborations were established to reach all target groups, especially vulnerable and marginalized populations. Through this strategic collaboration, employers, school teachers, community leaders, and community volunteers were actively involved in disseminating accurate messages and encouraging communities to get a COVID-19 vaccine.

In addition to the above risk communication and community engagement strategies, COVID-19 vaccines were made easily available and accessible at all government health clinics. Private vaccination centers, which were established under the coordination of ProtectHealth Corporation (a not-for profit company established under MOH), were also important players in the COVID-19 vaccination program. Additional activities that were carried out in Malaysia that aimed to address convenience included:

- mass vaccination centres in main cities;
- drive-through vaccination centres;
- outreach activities in remote and hard-to-reach areas, including islands;
- COVID-19 vaccination was given free of charge to all, including non-citizens.
- vaccination appointments through the MySejahtera mobile application, where the public could choose suitable dates and times; and
- digital certification certificates in the MySejahtera mobile application for easy reference.

Objectives

The COVID-19 Strategic Communication Committee aims to:

- Reduce COVID-19 vaccine hesitancy among the Malaysian population through strategic communication
- Improve COVID-19 vaccine confidence among the Malaysian population
- Adopt whole-of-government and whole-of-society approach in promoting COVID-19 vaccination
- Ensure high COVID-19 vaccination coverage among the targeted Malaysian population

Adaptability

These experiences were invaluable in strengthening the strategies utilized to instill confidence and trust of activities conducted by the government (MOH), and to address distrust among the population. Moving forward with digital health solutions, the learnings from COVID-19 vaccination can certainly be applied. Malaysia is also happy to share its experience in promoting COVID-19 vaccination with other member economies. The strategies carried out by Malaysia may serve as a guide by others and as such, Malaysia welcomes experience sharing sessions with interested member economies.

Evaluation

With all these efforts, to date, Malaysia has reached 84.2% of its population received primary doses and 50% received COVID-19 1st booster dose. Among the adult 18 years and above, 98.2% received primary doses and 68.8% received 1st booster dose.

Challenges

The main challenge is the existence of anti-vaccine groups in communities. In addition, these groups also advocate for non-evidence-based medicine such as Ivermectin as a COVID-19 treatment, and oppose any interventions imposed by the government to curb the pandemic including movement restrictions, and any related SOPs. Although they are small in numbers, they actively promote false information about COVID-19 vaccine through various media platforms including social media, and engagement with communities including community leaders, which could influence those who have inadequate information on COVID-19 vaccine in making their decision.

The Republic of the Philippines

Resbakuna: Kasangga ng BIDA campaign and COVID-19 Demand Generation and Communications Intervention Ladder

Year of Implementation: March 2021—Present

Description

In 2021, the COVID-19 communication campaign (under the handle "*Resbakuna: Kasangga ng BIDA*") was mounted by the Philippines as the COVID-19 vaccination drive was introduced among the Filipino population. The campaign accounted for the different information and access needs of varying population segments. This utilized a whole-of-society and whole-of-government approach, where all sectors took their own leadership for the unified campaign.

The communication campaign adopted the demand generation and communications intervention ladder to guide the mix of activities implemented for the social and behavior change communication campaign. Persuasion, nudges, and incentives were supported by restrictive policies that limited peoples' activities. Risk communication campaigns have become more robust as they are supported by enabling policies, incentive mechanisms, and operational nudges.

The intervention ladder was informed by two other frameworks. The range of vaccination positions allowed the task group to segment the overall communication strategy according to what information is important for different members of the population with varying motivations. The diffusion of innovation framework, adopted from Everett Rogers, also provided insights on effective implementation strategies based on the position of the audience, both at the individual and community level. Given specified population segments, the framework recommends a supportive and informative approach towards the innovators, early adopters, and the early majority. Meanwhile, the late majority requires evidence of the experience of others ("wait and see"), while the laggards might require social pressure to adapt to the new innovation.

Objectives

The implementation of the *Resbakuna* campaign with the underpinning demand generation and communications intervention ladder aims to:

- Introduce a new health-related behavior, vaccination against COVID-19, through timely and relevant information;
- Advocate for settings that enable vaccination in high traffic settings such as public community spaces, markets and malls, transport hubs, workplaces, and places of worship;
- Generate insights through social listening mechanisms that guide the interventions according to changes within geographic and population segments.

Adaptability

The demand generation ladder provides a guiding framework on implementing the mix of interventions both at the economy-wide and local levels. This provides an opportunity to have targeted and cost-efficient activities fit for different audiences.

For instance, persuasion interventions are effective in reaching a broad audience base, but the key messages and information buckets may adapt based on social listening data and government initiated targets for special population groups (i.e. senior citizens, persons with comorbidities, low literacy groups). Local government units (LGUs) and their respective social

mobilizers are provided the competency to adapt these messages depending on their audience.

LGUs that face greater challenges in terms of access allocate more resources in their nudge and incentive mechanisms to reduce barriers to access. These nudges and incentives also change depending on the population that require more support to receive their vaccines.

Evaluation

The Social Weather Stations (SWS) Survey is an economy-wide representative study conducted quarterly to quantifiably assess Filipino's opinions on various topics of public concern. The survey reported that vaccine hesitancy had decreased significantly from 33% in May 2021 to 8% in December 2021. This decline was consistently seen across geographical areas (Metro Manila, Luzon, Visayas, and Mindanao), age groups, and educational attainment. The survey also reported that 80% of the respondents were willing to receive their booster dose.

Challenges

Although the campaign was successful in introducing the COVID-19 vaccines to the Philippines, the task group identified major gaps for each objective of the campaign, such as hesitancy, complacency, and structural barriers that hampered vaccination. This is being addressed by reorienting messaging according to strategic shifts to the vaccine rollout (booster vaccination, transition to new normal) while maintaining trust in the rollout and mitigating threats of anti-vaccine sentiments. The task group also advocates for vaccine equity through settings-based vaccination and targeted social mobilization activities.

While collecting and reviewing social listening data helps guide the interventions according to changes within geographic and population segments, local data is not proactively collected nor systematically fed to strategize demand generation and communication interventions. In order to address this, risk communication and community engagement training is being conducted to teach regional and local level communicators how to generate and effectively use data to improve vaccine promotion and rollout activities.

Key Lessons Learned

- A whole-of-society, whole-of-government approach is an effective strategy in ensuring the widest reach of risk communication activities, and diversifies the number of champions that can advocate for observance of the minimum public health standards and COVID vaccination within their specific sectors (i.e. government agencies and private sector companies, faith-based organizations, etc.)
- Adopting an implementation ladder of demand generation interventions based on their level of restrictiveness has been an effective strategy in developing a mix of activities. Persuasion, nudges, and incentives were supported by restrictive policies that limited peoples' activities. Risk communication campaigns have become more robust as they are supported by enabling policies, incentive mechanisms, and operational nudges.
- Allocating resources for evidence generation of the impact of risk communication activities should be prioritized in order to adopt dynamic and data-driven communication packages and strategies regularly.

Singapore

Vaccination Programme for COVID-19

Year of Implementation: End of 2020—Present

Rationale

Given the health threat of the COVID-19 pandemic, which leads to severe disease and deaths, a high coverage of COVID-19 vaccination was important to reduce the risks of infection and severe disease. As multiple factors contribute to vaccine coverage, Singapore adopted a multi-pronged approach to achieve this through the Vaccination Programme (NVP) for COVID-19.

Description of the Program

The NVP undertook a multi-pronged approach through a range of measures to encourage a high-level of COVID-19 vaccination uptake. This included:

a. Securing Access and Ensuring Steady Pipeline of Vaccines. Singapore worked closely with the scientific community and industry partners to source for, assess, and secure access to COVID-19 vaccines, including promising vaccine candidates under development. A dedicated work group was set up to plan for the sourcing of suitable COVID-19 vaccines.

b. Regulatory Oversight by Health Sciences Authority (HSA), and Expert Recommendations by the Expert Committee on COVID-19 Vaccination (EC19V). The COVID-19 vaccines were reviewed by HSA for safety, efficacy and quality before being authorized for use in Singapore. HSA also conducted post-market surveillance to continue monitoring its safety. The Expert Committee on COVID-19 Vaccination (EC19V) was constituted to advise the government on domestic vaccination recommendations and strategy. Members include experts in infectious diseases, immunology and other relevant fields. Given the fast-evolving situation and many developments in COVID-19 vaccines, the committee was crucial in guiding the approaches and priorities for the NVP. Through the pandemic, the EC19V also reviewed the clinical safety and efficacy/effectiveness of the vaccines before recommending it for use under the NVP. These ensure that the COVID-19 vaccines are rigorously reviewed before being provided to the population, so that its use is safe and effective, and assures the population of this.

c. Accessibility & Affordability. COVID-19 vaccination was offered free for the resident population, with costs borne by the government, removing financial barriers to being vaccinated. Multiple vaccination centres were set up in the economy in accessible locations across neighbourhoods, and primary clinics (particularly Public Health Preparedness Clinics) were also involved in the provision of COVID-19 vaccines. To further increase uptake, particularly for those who were less mobile or less able to travel, home vaccination teams and mobile vaccination teams were deployed. Home vaccination teams went to homes of persons who were not mobile, while mobile vaccination teams would set up vaccination sites at certain locations for a time period to further extend the physical reach. Vaccination at certain vulnerable settings, such as nursing homes were also organized. In all, these made vaccination highly accessible, even to the hard-to-reach populations.

d. Public Communications on Vaccination. To increase awareness of COVID-19 vaccination, public communications were delivered via multiple platforms, including websites, advertisements in traditional media, collaterals, social media engagements and community engagement activities. HSA also publishes regular safety updates on COVID-19 vaccination, which allows public to have an overview of suspected adverse

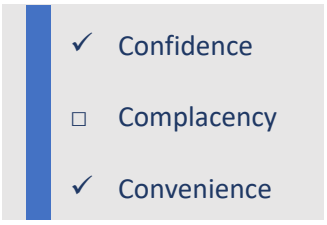
events that happened following the use of COVID-19 vaccines, as a form of transparency.

e. Targeting Vaccine Misinformation. Misinformation can contribute to vaccine hesitancy and reinforce it. To address this, aside from a strong public communications approach in (d), the government provided clarifications on various topics related to COVID-19 on its websites and media releases. It also issued correction directions under the Protection from Online Falsehoods and Manipulation Act (POFMA) to parties that made false or misleading statements about COVID-19 vaccines.

f. Vaccine Injury Financial Assistance Programme (VIFAP). VIFAP for COVID-19 vaccination was set up to provide the vaccinated persons a one-time goodwill financial assistance to persons who experienced serious side effects that are assessed to be related to the COVID-19 vaccines administered in Singapore. This served to give greater peace of mind to persons taking the vaccine and help reduce vaccine hesitancy. With the implementation of the NVP, Singapore achieved a high level of vaccination coverage, with more than 90% having completed the primary vaccination series.

Objectives

- To ensure safe and effective vaccination of the population, against COVID-19
- To achieve a high vaccination coverage in the population to substantially reduce the risks of infection, disease and death from COVID-19. As a priority, for persons vulnerable to COVID-19 to be protected through vaccination.
- To establish and maintain confidence, and curb hesitancy, around COVID-19 vaccines
- To facilitate access and reduce barriers to COVID-19 vaccination
- To communicate effectively on the rationale, safety and efficacy of COVID-19 vaccination, coupled with risk communications on COVID-19



Adaptability

Building trust between the government and the public, as well as publicizing clear, evidence-based information on vaccines is important to reduce vaccine hesitancy. In addition to offering the vaccines as free-of-charge, this will set the primary foundation to facilitate a high vaccination uptake rate. Given the various factors and parameters, a multi-pronged approach, contextualized to individual member economy situation, could be adopted for a robust program.

Evaluation

MOH tracks vaccination coverage, including at sub-population level.

Challenges

The quick scale operational plans to vaccinate the entire population within such a timeframe was unprecedented, and beyond healthcare resourcing, involved tight coordination between agencies of different sector e.g. to make available facilities, derive public communications, and ensure good pipeline of vaccines.

Thailand

Project to Accelerate and Maintain Vaccination Coverage

Year of Implementation: October 2021—September 2022

Description

Due to the COVID-19 pandemic in Thailand since early 2021, COVID-19 response and a COVID-19 vaccination campaign were top priority and the legal restriction has affected domestic routine immunization service. Reducing frequency of service in well child clinics and parents' concern about taking their children to the hospital during COVID-19 are part of the issue which led to decreasing of vaccination coverage level. Vaccination coverage of routine vaccine was lower than the target goal, except birth dose vaccine. According to vaccine hesitancy, this issue has occurred in some areas of Thailand—in deep-south provinces and being an area problem for long time caused by multi-factorial involvement; attitudes, beliefs, local culture, and socioeconomic status. Thailand's Immunization Program realized how important it is to improve and accelerate vaccine uptake, so Thailand implemented a plan to strengthen the immunization program in preparation for COVID-19 endemic phase in the 2022 budget year.

Objectives

The project to accelerate and maintain vaccination coverage aims to:

- To increase the rate of vaccination in the target group to meet the target goal.
- To accelerate the restoration of vaccination coverage according to the immunization program to meet the target goal.

Adaptability

The concept of this project could be adaptable to any setting, by addressing pain points and solving the problem.

Cost/Investment

From government budget.

Evaluation

In every trimester, we monitor the vaccination coverage for all of vaccines in by using the data from MOPH Health Data Center: HDC.

Challenges

Personal attitudes, belief, hard to reach remote areas.

The United States

State of Vaccine Confidence Insights Reports and Response System

Year of Implementation: January 2021

Description

The US Centre for Disease Control's (CDC) Vaccine Task Force created an Insights Unit that collected data from up to 24 data sources on the public's questions, concerns, frustrations, and circulating misinformation that may impact vaccine confidence, including perceptions that decrease trust in government, science, and health behaviors. The Insights Unit works with internal and external partners to mitigate the impact of these issues through supporting communication strategies, changes to CDC and partner programs, identifying research gaps, and conducting research to address those gaps. The Insights Unit employed both inductive and deductive methods to interpret insights, using behavioural frameworks to understand their potential impact. This approach has become a standing function and is now being applied to all vaccines. The Insights Units' State of Vaccine Confidence Insights Reports are regularly disseminated to partners and publicly available online.

Objectives

- Identify the public's questions, concerns, frustrations, and circulating misinformation that impact vaccine confidence; and
- Work with internal and external partners to mitigate the impact of these issues through supporting communication strategies, changes to CDC and partner programs, and conducting research to address those gaps.

Adaptability

The methodology and approach can be easily adapted to other topic areas, populations, and geographic regions, and this has been done for pre-exposure prophylaxis, COVID-19 vaccination of Ukrainian refugees, mpox, and others.

Evaluation

Survey respondents were asked how they used the State of Vaccine Confidence Insights Report:

- 78%: Improve my personal understanding of vaccine confidence issues
- 70%: Improve my understanding of vaccine hesitancy and access issues across special populations
- 61%: Inform communication strategies
- 46%: Learn about actionable steps communities and organizations can take to improve vaccine confidence and uptake
- 44%: Inform partnerships with other groups/organizations
- 43%: Improve my understanding of the COVID-19 vaccine rollout in the US
- 41%: Inform our prioritization of vaccine confidence issues based on themes in the SoVC
- 37%: Inform actions that my organization can take to improve vaccine access
- 28%: My team and I have prioritized vaccine confidence issues based on themes in the SoVC report