





Getting more vaccines to more people

ASIAN VACCINE CONFERENCE

ASVAC 2023

THE BIG CATCH UP

CLOSING IN, RENEWING THE VAXX-P.A.C.T.

PROTECT ASSURE CONNECT THRIVE

THE 9TH ASIAN VACCINE CONFERENCE

November 8-11, 2023 | Radisson Blu Hotel, Cebu, Philippines

PROGRAMME AND ABSTRACT BOOK

www.asianvaccine.com

Organized By

IPAP ip-ap.net Immunisation Partners in Asia Pacific

Hosted By

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Takeda is a global, R&D-driven biopharmaceutical company committed to discovering and delivering life-transforming treatments and vaccines that have a lasting impact on society.

Since our founding in 1781 in a market stall in Osaka, Japan, our values endure by putting patient needs first, building trust with society, strengthening our reputation, and developing the business - in that order.

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In 10 years since its inception, Moderna has transformed from a research-stage company advancing programs in the field of messenger RNA (mRNA), to an enterprise with a diverse clinical portfolio of vaccines and therapeutics across seven modalities, a broad intellectual property portfolio in areas including mRNA and lipid nanoparticle formulation, and an integrated manufacturing plant that allows for rapid clinical and commercial production at scale.

Moderna's mRNA platform builds on continuous advances in basic and applied mRNA science, delivery technology and manufacturing, and has allowed the development of therapeutics and vaccines for infectious diseases, immuno-oncology, rare diseases, cardiovascular diseases, and autoimmune diseases. To learn more, visit www.modernatx.com.

Takeda

As a leading values-based, R&D-driven biopharmaceutical company headquartered in Tokyo, with a global hub in Massachusetts, Takeda is committed to bringing better health and a brighter future to patients by translating science into highly innovative medicines and vaccines. For more than 70 years, we have supplied routine vaccines to protect the health of people in Japan including measles, rubella, and mumps. Today, we're expanding our global vaccine business by applying innovation to tackle some of the world's most challenging infectious diseases, such as dengue, COVID-19, pandemic influenza and Zika. Our team brings an outstanding track record and a wealth of knowledge in global vaccine development and manufacturing to advance a pipeline of vaccines to address some of the most pressing public health needs. Our mission is to develop and deliver innovative vaccines that tackle some of the toughest problems in public health and improve the lives of people around the world.

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At MSD, known as Merck & Co., Inc., Rahway, NJ, USA in the United States and Canada, we are unified around our purpose: We use the power of leading-edge science to save and improve lives around the world. For more than 130 years, we have brought hope to humanity through the development of important medicines and vaccines. We aspire to be the premier research-intensive biopharmaceutical company in the world – and today, we are at the forefront of research to deliver innovative health solutions that advance the prevention and treatment of diseases in people and animals. We foster a diverse and inclusive global workforce and operate responsibly every day to enable a safe, sustainable and healthy future for all people and communities.

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novavax

Our Company
Novavax, Inc. is a global biotechnology company committed to helping address serious infectious diseases globally through the discovery, development, and delivery of innovative vaccines to patients around the world.

Our commitment is backed by solid science tested by decades of research, vaccines developed from trusted technology and a global network that will help to ensure our vaccines reach everyone who needs them.

Our Product
NUVAXOVID is a unique COVID-19 vaccine that combines a proprietary Matrix-M adjuvant with a protein subunit platform used in some vaccines for influenza, hepatitis B, and HPV.

NUVAXOVID is indicated for active immunization to prevent COVID-19 caused by SARS-CoV-2 in individuals 12 years of age and older.

The authorized indication for NUVAXOVID varies internationally. You can visit Nuvaxovidglobal.com or scan the QR Code for your local Prescribing Information.

sanofi

Sanofi is an innovative global healthcare company, driven by one purpose: we chase the miracles of science to improve people's lives. Our team, across some 100 countries, is dedicated to transforming the practice of medicine by working to turn the impossible into the possible. We provide potentially life-changing treatment options and life-saving vaccine protection to millions of people globally, while putting sustainability and social responsibility at the center of our ambitions. For more information, visit www.sanofi.com

WELCOME ADDRESS
FROM IPAP PRESIDENT

To All our Esteemed delegates of the 9th Asian Vaccine Congress :

I take pride and joy in welcoming you to this face to face meeting to be held in the beautiful city of Cebu, Philippines, dubbed the Queen island of the South. Despite the great disruption brought about by the COVID19 pandemic , we are indeed fortunate to have learned so many lessons about emerging infectious diseases and the need to be prepared for such a global threat. It is without a doubt that vaccines played a major role in our response to this pandemic, getting millions of lives saved and allowing us now to resume our regular meetings and interactions in the most impactful way. At this time, we are more aware of the value of vaccination and how vaccine development could be prioritized when the need occurs.

The 9th ASVAC will feature what every health professionals , health policymakers , public and private health service providers, economists, industry and various medical and paramedical organizations must know and can themselves help disseminate in order to reduce the mortality and morbidity from vaccine-preventable diseases. We have invited vaccinology experts and immunization program managers to enhance the knowledge and skills of our participants in the use of old and new vaccines, its efficacy, safety, effectiveness and impact to determine how useful they are in each of our Asian countries. With so many new vaccine developments, it is so important to remain updated and fight misinformation and vaccine hesitancy that could be overwhelming.

The Organizing Committee led by Dr Rontgene Solante and Dr Jonathan Lim, both Infectious Disease Specialists have worked hard to make this congress another productive and memorable event.

We thank all of you who contributed and insured its success!

Prof Emeritus Lulu C. Bravo
President
Immunization Partners in Asia Pacific (IPAP)

WELCOME ADDRESS
FROM IPAP STEERING COMMITTEE CHAIR

It is an honour to invite you to the 9th Asian Vaccine Conference (ASVAC 2023) that will be held from 8–11th November 2023 in Cebu City, Philippines.

COVID has had a big impact on all conferences everywhere. ASVAC 2022 was hosted in Sri Lanka in September 2022, and very successfully attracted a large in-person local audience and a virtual global audience. Since the first ASVAC held in Siem Reap, Cambodia in 2009, subsequent "Asian Vaccine Conferences" have been held biennial and draw strong and consistent interest from a broad range of stakeholders involved in vaccines and immunization. Both in Sri Lanka in 2022 and in Myanmar in 2019, successful pre-conference EPI managers meetings have been very well attended by local EPI managers and country staff who have benefitted from the support of speakers participating in the main ASVAC conference. On the day before the main 2 day conference, ASVAC hosts workshops with core partners and its very popular "Masterclass" provides concise updates on vaccinology to conference participants and local practitioners.

ASVAC is one of the best recognized conferences on vaccinology in the Asia Pacific region and our philosophy remains to work closely together with our many partners. This partnership makes it possible to provide participants with an excellent and succinct scientific programme. ASVAC 2023 will follow a similar format of previous conferences with 6 plenary lectures, 2 panel discussions, 4 partner symposiums, 2 free-paper session, together with industry partners providing lunch and evening symposia.

The theme of ASVAC 2023 is "Closing in, Renewing the Vaxx-P.A.C.T. ". The COVID-19 pandemic has shown that very rapid development of new vaccines is possible and that regulatory and other hurdles can be quickly overcome. However, the speed with which this was done, together with immunisation policies and mandates that many viewed as coercive, have also had very negative effects of amplifying both vaccine hesitancy and vocal anti-vaccine movements. ASVAC 2023 will address these challenges and share progress and new opportunities through a focused scientific programme with distinguished speakers, theme-focused partner symposia, knowledge-sharing and networking opportunities.

We very much look forward to your continued support and we hope to have your participation in beautiful Cebu City in November 2023.

Prof Tony Nelson
Chair
IPAP Steering Committee

Dear Friends and Colleagues,

It is with great pleasure and honour that I welcome you all to the 9th Asian Vaccine Conference (ASVAC 2023) in the beautiful city of Cebu. As the Overall Chair, I am thrilled to witness the gathering of experts, researchers, healthcare professionals, and advocates who have come together to drive advancements in the field of vaccination across Asia.

ASVAC 2023 represents a significant milestone in our collective efforts to advance immunization efforts across Asia, recognising the vital role that vaccines play in safeguarding the health and well-being of individuals of all ages. ASVAC continues to serve as a platform for education and the exchange of knowledge, enabling us to stay updated on the latest developments in vaccinology.

In addition to the informative sessions, ASVAC also offers networking opportunities that allow you to connect with professionals and peers who share your passion for improving healthcare outcomes. I encourage you to take full advantage of these interactions, as they can lead to meaningful collaborations and the exchange of ideas that will shape the future of vaccination in our communities.

On behalf of the organizing committee, I hope to see you in Cebu, Philippines and wish you a fruitful and enjoyable time and experience.

Dr. Rontgene Solante
Overall Chair
ASVAC and PNIC 2023

On behalf of the Organizing Committee, I would like to invite our immunization warriors Worldwide to the 9th Asian Vaccine Conference (9th ASVAC) and to the 24th Philippine National Immunization Conference (24th PNIC) to be held on 08-11 Nov 2023 in Cebu City, Philippines!

The biannual Asian Vaccine Conference and the annual PNIC will feature varied topics that will incite further interest among our advocates! Our theme for this year is "Closing in, Renewing the Vaxx-P.A.C.T. (Protect, Assure, Connect, Thrive)", this is very timely since it had been exactly 10 years ago when we hosted the ASVAC 2013 in the same venue. We come full circle as we host this milestone event once again!

We look deep into protecting everyone across all ages from vaccine preventable diseases through vaccination, and assure them of vaccine safety and efficacy. As COVID-19 continues in our midst, it is time for us to embrace it as part of our daily life, and come together to foster camaraderie and networking opportunities among all vaccine advocates.

Cebu City, known as the "Queen City of the South", is best know for its history, having the oldest street in the country, the smallest Fort built during the Spanish occupation, beaches, shopping, street food, mangoes and lechon, to name a few! Fancy diving with whale sharks or taking a dip in the warm waters of Maolboal and watch millions of sardines swim with you or taking a plunge in the waterfalls? Come, join us in this marvelous event, and spend a few days and be awed by what nature has to offer! Learning and fun, rolled into one event! See you all!

Dr. Jonathan G. Lim, MD, FPPS, FPIDSP
Overall Co-chair
ASVAC and PNIC 2023

IPAP Steering Committee

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THE VENUE
Radisson Blu Hotel, Cebu
Serging Osmena Boulevard, Cebu City, 6000, Philippines
Website: https://www.radissonhotels.com/en-us/hotels/radisson-blu-cebu

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SPEAKER REGISTRATION
Upon arrival at the conference venue, please proceed to the Speakers' Lounge at San Pedro Room, Level 2, where you can collect your event badge and kit.

REGISTRATION DESK HOURS
The registration desk will be located in the 2/F Pre-Function Lobby and open as follows:

07 November 2023, 14:00 – 18:00H
08 November 2023, 7:30 – 17:00H
09 November 2023, 7:30 – 17:00H
10 November 2023, 7:30 – 17:00H
11 November 2023, 7:30 – 15:00H

EXHIBITION HOURS
The exhibition is located at the Santa Maria 1 and 2 and will be open as follows:

09 November 2023, 08:30 – 18:00H
10 November 2023, 08:30 – 18:00H
11 November 2023, 08:30 – 16:00H

CERTIFICATE OF ATTENDANCE
Please note that certificate of attendance will not be printed onsite. Certificate of Attendance will be issued to all attendees electronically after they respond to the post event survey form.

INSTRUCTIONS FOR SPEAKERS
To the Speakers who are not able to submit their presentation slides before the deadline (02 November), are requested to upload their final PowerPoint slide at the Speakers' Lounge at San Pedro Room, Level 2 at least 2 hours prior their session. Speakers will not be allowed to use their own laptop for presentation. PowerPoint should be in 16:9 format.

Speakers are kindly requested to check the Scientific Programme carefully for last minute updates. All presenters are required to check in to their session room at least 15 minutes prior to your session. We appreciate your cooperation.

POSTER PRESENTATIONS

Poster Presentation Area is located at Santa Maria 1 & 2 (Exhibition Hall). Posters are organized according to their abstract numbers. You may confirm your poster number at Poster Help Desk located at Santa Maria 1 & 2 (Exhibition Hall). The posters will be on display throughout the entire event, from November 9 to November 11. The organizers are not responsible for any posters that have not been removed by the end of the conference.

REFRESHMENTS AND LUNCH

Refreshments and lunch will be provided daily according to the time indicated in the programme.

WELCOME RECEPTION

The Welcome Reception will take place on 8 November 2023, Wednesday at 19:20 – 21:00H at Santa Maria 1 & 2 (Exhibition Hall). All participants are invited to attend the Welcome Reception.

OPENING CEREMONY

Registered participants are invited to attend the Opening Ceremony on 9 November 2023, Thursday at 0815H in Santa Maria 3 Ballroom. The Opening Ceremony will be followed by the main conference sessions.

TIME ZONE

Philippine Time is GMT +8 hours. The country is on one time zone only.

Getting more vaccines to more people

ASIAN VACCINE CONFERENCE

ASVAC 2023

FIRESIDE CHAT:
Asia-Pacific In Action, Revitalized Emphasis On National Influenza Vaccination Programs

VENUE:
SAN MARTIN 1 TO 3

DATE & TIME:
NOVEMBER 8
6:35PM-7:20PM

PROGRAM (45 MINS)

FIRESIDE CHAT

Topics

- **Addressing the Problem:** *Current Status of Influenza Disease and Surveillance in Asia Pacific*
- **Tailoring Programs:** *Designing Immunization Programs for Seasonal Influenza: Is there a Standard?*
- **Best Practice Sharing :** *Learning from the Regional Partners*
- **Call for Integration :** *Maximizing public health programs with influenza vaccination*

SYNOPSIS

• Vaccination remains the most effective countermeasure against morbidity and mortality caused by influenza virus, but national programs and policies differ by region, financial capacity, and immunization strengths. Population aging, socioeconomic, and political contexts contribute to the diversity of health system infrastructures.

• Adult vaccination rates in the Asia-Pacific region are suboptimal, necessitating a strong commitment to improving adult vaccination rates. A life course approach to vaccination, concentrating on disease prevention and resolving barriers to vaccination, should be incorporated into health promotion strategies.

• A collaborative approach with a renewed emphasis on redesigning, rebuilding, monitoring, and evaluating influenza immunization programs in the Asia Pacific can increase public receptivity and demand for adult immunization by increasing targeted communication for older adults and healthcare professionals, supporting multidisciplinary and cross-sectoral coordination, encouraging political commitment, and constructing robust data to inform policies and programs.

References

1. Seasonal influenza vaccines: an overview for decision-makers. Geneva: World Health Organization; 2020. Licence: CC BY-NC-SA 3.0IGO.;
2. El Guerche-Séblain, C., Caini, S., Paget, J. et al. Epidemiology and timing of seasonal influenza epidemics in the Asia-Pacific region, 2010–2017: implications for influenza vaccination programs. BMC Public Health 19, 331 (2019). https:doi.org/10.1186/s12889 -019-6647-y Accessed September 13,2023;
3. Cowling, B.J., Caini, S., Chotpitayasunondh, T., Djauzi, S., Gatchalian, S.R., Huang, Q.S., Koul, P.A., Lee, P.I., Muttalif, A.R., Plotkin, S. Influenza in the Asia-Pacific region: Findings and recommendations from the Global Influenza Initiative. Vaccin 2017; 35(6), 856-864;
4. Kathleen P. Morales, David W. Brown, et al,Seasonal influenza vaccination policies in the 194 WHO Member States: The evolution of globalinfluenza pandemic preparedness and the challenge of sustaining equitable vaccine access. Vaccine 2021, DOI: doi.org/10.1016/j.jvacx.2021.100097.;
5. Stancu Andra, Khan Anusheh, Bamatt Jane, Driving the life course approach to vaccination through the lens of key global agendas.Frontiers in Aging,2023, DOI=10.3389/fragi.2023.1200397;
6. APEC Action Plan on Vaccination Across the Life Course

MEET THE EXPERTS

DR. RONTGENE SOLANTE

Clinical Assistant Professor 1, Department of Medicine, College of Medicine
University of the East Ramon Magsaysay Memorial Medical Center
National President, Philippine College of Physicians
Convenor, Raise Coalition Philippine Foundation for Vaccination

PROF. DR. MAW PIN TAN

Professor of Geriatric Medicine at the University of Malay
President of the Malaysian Society of Geriatric Medicine
Honorary General Secretary of the College of Physicians of Malaysia

DR. ALEX RICHARD COOK

Vice Dean (Research) ***Vice Dean*** (Research) and ***Domain Leader*** (Biostatistics & Modelling), NUS Saw Swee Hock School of Public Health (Primary)
Associate Professor at the Department of Statistics and Applied Probability, NUS Yong Loo Lin School of Medicine, and the Program in Health Services and Systems Research at the Duke-NUS Graduate Medical School Singapore (Joint)

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EPI Managers' Meeting

8 November 2023, Wednesday, San Cristobal 1 & 2

TIME	SESSION
	MORNING SESSIONS Chair: Christine Pena, Philippines Co-chair: Noreen Matig-a, Philippines
09:00 – 09:15H	**Welcome Message** Speaker: Enrique Tayag, Philippines
09:15 – 09:30H	**Keynote Speech: Immunization Agenda 2030** Speaker: Teodoro Herbosa, Philippines
09:30 – 10:30H	**Session 1: Covid 19 Vaccination: Global and Regional Updates** Speaker: H.T. Wickramasinghe, Sri Lanka **Country Updates:** Singapore: Lim Soon Kok Vietnam: Pham Quang Thai **Open Forum** Moderator: H.T. Wickramasinghe, Sri Lanka
10:30 – 11:00H	**Break**
11:00 – 12:00H	**Session 2: Integrated Vaccine Preventable Disease (VPD) Surveillance: Measles, Polio, Rota & PCV** Speaker: Devon Ray Pacial, Philippines **Country Updates:** Philippines: Janis Bunoan-Macazo Fiji: Litiana Volavola **Open Forum** Moderator: Fatima Gimenez, Philippines
12:00 – 13:00H	**Lunch Break**
	AFTERNOON SESSIONS Chair: Kim Basilla, Philippines Co-chair: Mitzi Rose Inting, Philippines
13:00 – 14:00 H	**Session 3: Life Course Immunization: Maternal, Adult & Elderly Vaccination of Influenza & PCV** Speaker: Lois Privor-Dumm, USA **Country Updates:** Thailand: Thundon Ngamprasertchai Pakistan: Somia Iqtadar Japan: Hiroyuki Moriuchi

TIME	SESSION
	Open Forum Moderator: Kim Basilla, Philippines
14:00 – 15:00H	**Session 4: New Vaccines for NIP: HPV, Dengue & Meningococcal** Speaker: Kim Mulholland, Australia **Country Updates:** Malaysia: Radziah Mohammad Indonesia: Gertrudis Tandy **Open Forum** Moderators: Rontgene Solante, Philippines Jonathan Lim, Philippines
15:00 – 15:30H	**Break**
15:30 – 16:00H	**Vaccine Safety and Confidence** Speaker: Ananda Amarasinghe, WPR – Papua New Guinea
16:00 – 16:15H	**Discussion and Call to Action** Moderator: Lulu Bravo, Philippines
16:15 – 16:30H	**Summary and Conclusion** Speaker: Maria Rosario Capeding, Philippines

**As of November 10, 2023*

Pre-Conference: Vaccinology Through A Global Lens

8 November 2023, Wednesday, Nina 2

Specific Workshop Objectives:

1. To describe the state of global and regional immunization of VPD's

2. To discuss strategies to sustain vaccine confidence and improve vaccine coverage

3. To ask IPAP partners to recommit to putting vaccination at the forefront of global health

TIME	SESSION
08:00 – 09:00H	**Registration**
09:00 – 09:15H	**Welcome Remarks** Speaker: Rontgene Solante, Philippines Chair: Christina Tan, Philippines Co-chair: Mishelle Vonnabie Bala
09:15 – 10:15H	**Vaccinology through a Global Lens** **Improving Vaccine Coverage: A Challenge for the world** Speaker: Mayan Lumandas (Philippines)
	Panel Presentations:
	a. International Health Agencies Speaker: Reinhard Dalumpines (UNICEF)
	b. Policy Makers / Legislator Speaker: Janette Garin House of Representatives of the Philippines
	c. Medical Society / Civil Society Speaker: Iqbal Ahmad Memon, Pakistan (APPA)
	d. Academe Speaker: Porntep Suandork,Thailand
	Open Forum Moderator: Sri Rezeki Hadenigoro, Indonesia
10:15 – 10:30H	**Coffee Break**

TIME	SESSION
10:30 – 11:30H	**Partnerships and Networking** Speaker: Naveen Thacker, India (IPA)
	Panel Presentations:
	a. Centers for Disease Control and Preventionn in the Philippines Speaker: Romel Lacson, CDC Philippines
	b. Industry and Private Sectors Speaker: Mr. Masood Alam (Serum Institute of India)
	c. Funding Agencies Speaker: Denese De Guzman (Asian Development Bank)
	d. Patients Group / Media Speaker: Amanda Bonife, Philippines (PAPO)
	Open Forum Moderator: Lulu Bravo, Philippines
11:30 – 11:50H	**Closing Remarks / Call to Action** Speaker: Jonathan Lim, Philippines

**As of November 10, 2023*

Pre-Conference: Vaccinology Masterclass

8 November 2023, Wednesday, Nina 2

TIME	SESSION
12:30H	**Registration**
	MASTERS OF CEREMONIES Cloe Anna Marie Pasco, Philippines Arlene Macabaya, Philippines
1300 – 13:10H	**Welcome Remarks** Daniel Goh, Singapore
13:10 – 13:30H	**History & Impact of Vaccination** History of vaccines and the Impact of vaccines in medical history Speaker: Kim Mulholland, Australia
	Basic Vaccine Immunology
13:30 – 13:50H	**How & Why Vaccines Work: Basics of Immune Responses and Mechanisms of Vaccines** Adjuvants: What are they & how they work Speaker: Selim Badur, Turkey
13:50 – 14:10H	**Fundamentals of Vaccine Clinical Development – Safety, Efficacy and Effectiveness** Speaker: Alberta Di Pasquale, Singapore
14:10 – 14:30H	**Importance of Disease Surveillance in Vaccination Strategies** Speaker: Chris Clarke, Australia
14:30 – 14:50H	**Concept of Cross-Protection and Herd Immunity** Speaker: Jin Oh Kim, South Korea
14:50 – 15:05H	**Break**
	MASTERS OF CEREMONIES Fidji Tambago, Philippines Chamberlain Agtuca, Philippines
15:05 – 15:35H	**Implementing Vaccination** Communications Debunking the myths Communication strategies Addressing vaccine hesitancy and the anti-vaccine movement Speaker: Zulkifli Ismail, Malaysia
	Vaccination Through the Ages – Vaccines in each Stage of Life

TIME	SESSION
15:35 – 16:05H	**Vaccination in Infants** Speaker: Cynthia Aguirre, Philippines
16:05 – 16:35H	**Vaccination in Adolescents** Speaker: Naveen Thacker, India
16:35 – 17:05H	**Vaccination in Pregnancy** Speaker: Helen Madamba, Philippines
17:05 – 17:35H	**Vaccination in Elderly** Speaker: Leo Yee Sin, Singapore
17:35 – 18:05H	**Clinical Application** **The triple S delivery: S**olo, **S**imultaneous, **S**equential Selected vaccine recommendations as to timing in sample clinical scenarios Speakers: Belle Ranile, Philippines and Evelyn Alesna, Philippines Moderator: Christina Tan, Philippines
18:05 – 18:25H	**Vaccines: What lies in the future?** **The Future of Vaccines** With focus on the value of immunisation in the evolving global landscape & the use of policy to protect communities Speaker: Lois Privor – Dumm, USA, IVAC
18:25 – 18:35H	**Concluding Remarks** Summary and Wrap-up Moderator: Daniel Goh, Singapore
18:35 – 19:20H	sanofi **Evening Industry Symposium by Sanofi** **Welcome Remarks and Introduction** **Addressing the Problem:** Current Status of Influenza Disease and Surveillance in Asia Pacific **Tailoring Programs:** Designing Immunization Programs for Seasonal Influenza: Is there a Standard? **Best Practice Sharing:** Learning from the Regional Partners **Call for Integration:** Maximizing public health programs with influenza vaccination Speakers: Rontgene Solante, Philippines; Tan Maw Pin, Malaysia; Alex Richard Cook, Singapore **Final Remarks**
19:20 – 21:00H	**Welcome Reception** Sta. Maria 1 & 2 (Exhibition Hall)

**As of November 10, 2023*

ASVAC Main Conference

9 November 2023, Thursday, Santa Maria 3

TIME	SESSION
08:15 – 08:30H	**Opening Ceremonies** **Philippine National Anthem** **Welcome remarks** Lulu Bravo, Philippines **Opening remarks** Rontgene Solante, Philippines **Scientific program overview and formal declaration of convention open** Mitzi Marie Chua, Philippines
08:30 – 09:00H	**Keynote Address** **Improving the Health of the Country through Vaccination** Speaker: Teodoro Herbosa, Philippines Secretary of Department of Health
09:00 – 09:40H	**Opening Plenary 1** **Protect: To Leave No One Behind** The Global Health and Immunization Agenda 2030 Speaker: Kim Mulholland, Australia Chair: Ma. Theresa Alera, Philippines Co-chair: Chatie Olasiman, Philippines
09:40 – 10:20H	**Panel Discussion 1** **Protect: Is the COVID-19 Pandemic Truly Behind Us?** Speakers: Kim Mulholland, Australia, Tony Nelson, China Zulkifli Ismail, Malaysia & Lulu Bravo, Philppines Moderator: Daniel Goh, Singapore
10:20 – 10:50H	**Break** **Exhibit Area and Poster Hall Visit**
10:50 – 12:10H	**Symposium 1** **Protect: Why am I Special?** **Vaccination for the "Young Once" and Over-18 but with Many Ills**
	Vaccines in Elderly (Epidemiology of infectious diseases, the range of vaccines in the elderly and the importance of prevention) Speaker: Leo Yee Sin, Singapore
	Challenges and Opportunities in Vaccination in the Elderly (Scheduling of vaccination and how to get the elderly and caregivers to accept and receive vaccines; vaccination in aged facilities and home) Speaker: Shelley dela Vega, Philippines

TIME	SESSION
	Vaccination in the Elderly with Comorbidities Speaker: Tan Maw Pin, Malaysia Chair: Somia Iqtadar, Pakistan Co-chair: Mitzi Marie Chua, Philippines
12:20 – 13:30H	 **Lunch Symposium** **Introduction** Speaker: Choo Beng Goh **Navigating Dengue: Enhancing Clinical Management Strategies** Speaker: Rontgene Solante **Vaccination as a Powerful Shield: Preventing Dengue Disease** Speaker: Alberta Di Pasquale **Panel Q&A**
13:30 – 14:15H	**Panel Discussion 2** **Protect thy Warriors** Panel discussion on indicated vaccines for healthcare workers (HCWs) Speakers: Mitzi Marie Chua, Philippines, Elfleda Hernandez, Philippines & Anna York Bondoc, Philippines Moderator: Ethel Daño, Philippines Chair: Larsen Omolon, Philippines Co-chair: Ruby Rusia-Uy, Philippines
14:15 – 15:00H	**Panel Discussion 3** **Connect-1: Vaxx Protection Plus for Mum 'n Kiddo and the Jetsetter** **Mommy Knows Best:** Maternal Immunization Updates Speakers: Hiroyuki Moriuchi, Japan & Liona Poon, Hong Kong Moderator: Zulkifli Ismail, Malaysia Chair: Larsen Omolon, Philippines Co-chair: Ruby Rusia-Uy, Philippines
15:00 – 15:30H	**Break** **Exhibit Area and Poster Hall Visit**
15:30 – 16:50H	**Symposium 2** **Connect-2: Vaxx Protection Plus for Mum 'n Kiddo and the Jetsetter** **Wrestle for a Shot, Worth the Wriggle** Challenges of Childhood Immunization in the Era of Pandemic Speaker: Naveen Thacker, India
	Child Immunization in Developing Countries Speaker: Zulkifli Ismail, Malaysia

TIME	SESSION
	Importance of increased Rotavirus Vaccine Update Speaker: Tony Nelson, Hongkong Chair: Daniel Goh, Singapore Co-Chair: Jemilly Margaux Po-Rosell, Philippines
	A TRIBUTE SYMPOSIUM FOR DR. KAMRAN RAFIQ
16:50 – 18:10H	**Symposium 3** **Connect-3: Vaxx Protection Plus for Mum 'n Kiddo and the Jetsetter Travel Unraveled, Bug-Protected** Scenario-based interactive discussion on what appropriate vaccines to administer for the traveler plus other Travel Med Updates Speakers: Pornthep Chanthavanish, Thailand , Somia Iqtadar, Pakistan Alyssa Wong,US CDC Chair: Hasitha Tissera, Sri Lanka Co-Chair: Kim Basilla, Philippines
	MSD
18:10 – 18:55H	**Sunset industry sponsored symposium by MSD** **Welcome and Introductions** Speaker: Lulu Bravo, Philippines **Emerging burden of ST3 and challenges in prevention** Speaker: Kam Lun Ellis Hon, China **Pneumococcal prevention strategy in the era of novel PCV vaccines** Speaker: Jin Oh Kim, South Korea **Panel discussion and Q&A** All Faculty **Closing** Speaker: Lulu Bravo, Philippines
19:15H	**Gala dinner**

ASVAC Main Conference

10 November 2023, Friday, Santa Maria 3

TIME	SESSION
	novavax
08:30 – 9:15H	**Meet the Experts by Novavax** **Novavax, from small biotech to the world stage. Development of a protein-based COVID-19 vaccine from Pandemic to Endemic use** Session Chair: Lulu Bravo, Philippines **Background to the Novavax development program during the pandemic and an update of current data** Speaker: Seth Toback, USA **Update on safety data and the Novavax pipeline** Speaker: Matthew Rousculp, USA **Discussion and Q&A** Lulu Bravo, Seth Toback, Matthew Rousculp
09:15 – 10:00H	**Plenary Session 3** **Assure: Sharing Successes and Catching Challenges** Updates on Dengue Epidemiology and Control Speaker: Judith Wong, Singapore Chair: Evelyn Alesna Philippines Co-chair: Christine Pena, Philippnes
10:00 – 11:20H	**Symposium 4** **Connect: I get it; but not quite; say huh!?! When Communication is Key!** **Confused State of Mind: Overcoming Vaccine Hesitancy** Speaker: HT Wickramasinghe, Sri Lanka **Handling Mixed Signals** How to convey clear pro-vaccination messages Speaker: Iqbal Ahmad Memon, Pakistan **Impact of Covid 19 Vaccine Mandates** Speaker: Katie Attwell, Australia Chair: Sri Reseki Hadinegoro, Indonesia Co-chair: Shayne Morales, Philippnes
11:20 – 11:35H	**Break** Exhibit Area and Poster Hall Visit

TIME	SESSION
11:35 – 12:20H	**Plenary Session 4** **Assure: Flu is not Forgotten** Influenza epidemiology updates and new vaccine developments Speaker: Pham Quang Thai, Vietnam Chair: Evelyn Alesna Philippines Co-chair: Christine Pena, Philippnes
	moderna
12:20 – 14:05H	**Lunch Symposium** **Welcome and introduction** Speaker: Anna Ong-Lim, Philippines **mRNA vaccines – a new era in vaccinology** Speaker: Chris Clarke, Australia **Keeping pace with SARS-CoV-2 variants** Speaker: Jonathan Van-Tam, United Kingdom **Q&A moderated by** Anna Ong-Lim
14:05 – 15:05H	**Oral Presentation:** Top 5 Papers Chair: Fidji Tambago, Philippines Co-chair: Merrill Van Yu, Philippines
	GSK
15:05 – 15:50H	**Coffee/Tea Symposium** Meet the Experts by GSK **Welcome Remarks** Speaker: Lulu Bravo, Philippines **The Impact of Vaccine Preventable Diseases and its Prevention in Adults and the Elderly** Speaker: Rontgene Solante, Philippines **Advancement in vaccinology: Increasing vaccine effectiveness in adults & elderly** Speaker: Selim Badur, Turkey **Q & A** Moderator: Lulu Bravo, Philippines

TIME	SESSION
15:50 – 16:35H	**Plenary Session 5** **Thrive: Equity in Protection** Diseases of the Most Impoverished: Are Vaccines the answer? Vaccine Safety and Diseases of the Most Impoverished Speaker: Weigong Zhou, WHO Chair: Anabel Laranjo, Philippines Co-chair: Mitzi Rose Inting, Philippnes
16:35 – 17:20H	**Closing Plenary 6** **Thrive: Ready to Renew the Vaxx P.A.C.T.?** Boosting Vaccine Confidence Speaker: Lois Privor-Dumm, IVAC Chair: Anabel Laranjo, Philippines Co-chair: Mitzi Rose Inting, Philippnes
17:20 – 18:00H	**Closing Ceremonies** Awards for best paper/s Industry sponsor appreciation Closing Remarks
	Closing Ceremony Emcee Ma. Theresa Alera, Philippines

**As of November 10, 2023*

TITLE

Fireside Chat: Asia-Pacific In Action, Revitalized Emphasis On National Influenza Vaccination Programs

DETAILS

Date: November 8, 2023
Time: 18:35 – 19:20H

SYNOPSIS

Vaccine remains the most effective countermeasure against morbidity and mortality caused by influenza virus, but national programs and policies differ by region, financial capacity, and immunization strengths. Population aging, socioeconomic, and political contexts contribute to the diversity of health system infrastructures.

Adult vaccination rates in the Asia-Pacific region are suboptimal, necessitating a strong commitment to improving adult vaccination rates. A life course approach to vaccination, concentrating on disease prevention and resolving barriers to vaccination, should be incorporated into health promotion strategies.

A collaborative approach with a renewed emphasis on redesigning, rebuilding, monitoring, and evaluating influenza immunization programs in the Asia Pacific can increase public receptivity and demand for adult immunization by increasing targeted communication for older adults and healthcare professionals, supporting multidisciplinary and cross-sectoral coordination, encouraging political commitment, and constructing robust data to inform policies and programs.

References:

1. Seasonal influenza vaccines: an overview for decision-makers. Geneva: World Health Organization; 2020. Licence: CC BY-NC-SA 3.0 IGO.

2. El Guerche-Séblain, C., Caini, S., Paget, J. et al. Epidemiology and timing of seasonal influenza epidemics in the Asia-Pacific region, 2010-2017: implications for influenza vaccination programs. BMC Public Health 19, 331 (2019). https://doi.org/10.1186/s12889-019-6647-y

3. Cowling, B.J., Caini, S., Chotpitayasunondh, T., Djauzi, S., Gatchalan, S.R., Huang, Q.S., Koul, P.A., Lee, P.I., Muttalif, A.R., Plotkin, S. Influenza in the Asia-Pacific region: Findings and recommendations from the Global Influenza Initiative. Vaccin 2017: 35(6), 856-864

4. Kathleen F. Morales, David W. Brown, et al,Seasonal influenza vaccination policies in the 194 WHO Member States: The evolution of globalinfluenza pandemic preparedness and the challenge of sustaining equitable vaccine access, Vaccine 2021, DOI: doi.org/10.1016/j.jvacx.2021.100097.

5. Stancu Andra, Khan Anusheh, Barratt Jane, Driving the life course approach to vaccination through the lens of key global agendas. Frontiers in Aging,2023, DOI=10.3389/fragi.2023.1200397

6. APEC Action Plan on Vaccination Across the Life Course

OBJECTIVES

- Strengthen Regional and Country action towards Influenza Immunization Programs
- To raise urgency on burden of influenza disease and its complications
- To drive Stakeholder synergies to implement or enhance current influenza vaccination programs public settings
- To facilitate best practice Sharing : Recommendations to Policies and Programs

FACULTY

RONTGENE SOLANTE, PHILIPPINES

- Clinical Assistant Professor 1, Department of Medicine , College of Medicine, University of the East Ramon Magsaysay Memorial Medical Center
- National President, Philippine College of Physicians
- Convenor, Raise Coalition Philippine Foundation for Vaccination

MAW PIN TAN, MALAYSIA

- Professor of Geriatric Medicine at the University of Malaya
- President of the Malaysian Society of Geriatric Medicine
- Honorary General Secretary of the College of Physicians of Malaysia

ALEX RICHARD COOK, SINGAPORE

- Vice Dean (Research) Vice Dean (Research) and Domain Leader (Biostatistics & Modelling), NUS Saw Swee Hock School of Public Health (Primary)
- Associate Professor at the Department of Statistics and Applied Probability, NUS Yong Loo Lin School of Medicine, and the Program in Health Services and Systems Research at the Duke-NUS Graduate Medical School Singapore (Joint)

SCHEDULE

TIME	DESCRIPTION/TITLE
18:35H	**Welcome Remarks and Introduction**
18:38H	**Fireside Chat** Topics • Addressing the Problem: Current Status of Influenza Disease and Surveillance in Asia Pacific • Tailoring Programs: Designing Immunization Programs for Seasonal Influenza: Is there a Standard? • Best Practice Sharing: Learning from the Regional Partners • Call for Integration: Maximizing public health programs with influenza vaccination
19:18H	**Final Remarks**

TITLE

Advancing Dengue Control: Clinical Management and Vaccination

DETAILS

Date: November 9, 2023
Time: 12:20 – 13:30H

SYNOPSIS

Dengue remains a significant public health concern worldwide, causing widespread morbidity and mortality. This symposium, "Advancing Dengue Control: Clinical Management and Vaccination," seeks to bring together experts and stakeholders to explore comprehensive strategies in the fight against dengue. Through two informative talks and a subsequent Q&A session, the symposium aims to address the latest advancements in clinical management of dengue and the role of vaccination as a powerful tool in integrated dengue control.

OBJECTIVES

1. To provide a current overview of dengue fever's global impact, highlighting its prevalence, transmission dynamics, and the challenges it poses to healthcare systems.

2. To discuss clinical management strategies, including latest developments in dengue vaccines, including the safety and efficacy of TAK-003, Takeda's tetravalent dengue vaccine candidate.

3. To foster knowledge exchange and collaboration among healthcare professionals, researchers, policymakers, and public health experts, with the aim of enhancing dengue control efforts on a global scale.

4. To engage the symposium audience through a dynamic Q&A session with the panel of speakers, enabling participants to seek clarifications, share insights, and discuss critical issues related to dengue control and prevention.

FACULTY

RONTGENE SOLANTE, PHILIPPINES
PRESIDENT, PHILIPPINE COLLEGE OF PHYSICIANS

Dr. Rontgene M. Solante has played integral roles in advancing healthcare and infectious disease control in the Philippines. As the former treasurer of the PCP Board of Regents and Regent of PCP's Committee on Accreditation, he has demonstrated his commitment to the healthcare needs of Filipinos. Dr. Solante's extensive contributions extend to his role as the President of the Philippine Society for Microbiology and Infectious Disease (PSMID) from 2011 to 2012, where he worked to combat infectious diseases in the country. Currently, he chairs several committees, including those related to media and communication, standards of care in tuberculosis, and infection control. In addition to his leadership within PSMID, Dr. Solante serves as Chairperson of the Section of Infectious Disease and Committee on Infection Control at Medical Center Manila, Chair of the Adult Infectious Diseases and Tropical Medicine Fellowship Program at San Lazaro Hospital, and Co-Chair of the Standards of Care Subcommittee on Sexually Transmitted Infections, among others. Concurrently, Dr. Solante dedicates his expertise as an Assistant Clinical Professor of the Department of Medicine at the University of the East Ramon Magsaysay Memorial Medical Center (UERMMMC).

ALBERTA DI PASQUALE
REGIONAL MEDICAL AFFAIRS HEAD, VACCINES GROWTH & EMERGING MARKETS
TAKEDA

Dr. Alberta Di Pasquale is a distinguished Vaccinology expert with over two decades of experience. She currently serves as a Visiting Professor of Vaccinology at the University of Antwerp, Belgium. She has supported new vaccine introductions with scientific and educational activities across many infectious disease and target age groups. This includes awareness and action efforts on modern vaccines, new technologies, vaccine confidence and the life-course immunization.

She is presently the Regional Medical Affairs Head Vaccines for Growth and Emerging Markets (GEM) at Takeda Pharmaceuticals International AG Singapore Branch, where she continues to shape the landscape of vaccine science on a global scale.

CHOO BENG GOH
HEAD OF MEDICAL AFFAIRS
INDIA–SOUTHEAST ASIA
TAKEDA

Dr Choo-Beng Goh is currently the Head of Medical Affairs, India and South East Asia, Takeda Pharmaceuticals (Asia Pacific) Pte Ltd. Prior to this he was heading medical affairs for Asia Pacific at Takeda. He has more than fifteen years of experience with pharmaceuticals and vaccine medical affairs as well as clinical development having worked in Singapore, Taiwan and the United Kingdom with GSK and Takeda. A trained clinical oncologist, he is passionate about medical affairs and building high performing medical teams. Dengue will be the second vaccine launch after his experience with the GSK human papillomavirus vaccine. Exploring healthcare partnerships and innovative financing models are of his keen interest as well as working towards an Access First strategy for many of Takeda's current portfolio assets.

SCHEDULE

TIME	DESCRIPTION/TITLE
12:20H	**Introduction** – Choo Beng Goh
12:25H	**Navigating Dengue: Enhancing Clinical Management Strategies** – Rontgene Solante
12:45H	**Vaccination as a Powerful Shield: Preventing Dengue Disease** – Alberta Di Pasquale
13:05H	**Panel Q&A**

TITLE

Trends in pneumococcal diseases and prevention strategy in the AP region

MSD

DETAILS

Date: November 9, 2023
Time: 18:10 – 18:55H

SYNOPSIS

The MSD symposium will provide updated information about pneumococcal diseases and prevention in the Asia Pacific region. It will summarise changes of pneumococcal disease epidemiology and will highlight the importance of emerging serotype 3 related diseases in AP region. It will also introduce strategies in pneumococcal disease prevention in the era of novel pneumococcal vaccines.

OBJECTIVES

- To provide updated information about pneumococcal disease trends in the Asia Pacific region
- To provide scientific rationales of pneumococcal prevention strategy in the Asia Pacific region in the era of novel pneumococcal vaccines

FACULTY

LULU BRAVO, PHILIPPINES

Lulu Bravo is a Professor Emeritus at the College of Medicine, University of the Philippines Manila. She is the former Vice Chancellor for Research and Executive Director of the National Institutes of Health, University of the Philippines Manila (2005 – 2011) and current head of the Vaccine Study Group of the NIH – UPM. She is the President of the Immunization Partners in Asia Pacific (IPAP), current Executive Director and past President of the International Society of Tropical Pediatrics (ISTP) 2008 – 2011, past Chair and Founder of the Asian Strategic Alliance for Pneumococcal Disease Prevention (ASAP) 2007 – 2011, and Executive Director, Sec-General (1998 – 2006) & past President of the Asian Society for Pediatric Infectious Disease (ASPID) 2006 – 2008. She has served in various capacities in many other Asian medical and professional societies and as WHO Technical Advisor. She has served as well in national medical organizations such as PMA, PPS, PIDPS, PSMID and the Philippine Foundation for Vaccination (PFV) of which she is the founding President and current Executive Director. In the international scene, she is a member of the Rota Council, Pneumococcal Awareness Council of Experts (PACE) and member of the Dengue Vaccine Initiative (DVI). Her work has earned for her various national and international honors and awards in the professional, academic and research fields, including the Outstanding Physician (2009) and the prestigious Dr. Jose

P. Rizal Memorial Award for Academe (2011) given by Philippine Medical Association, the 2012 Asian Outstanding Pediatrician Award given by the Asia Pacific Pediatric Association and 2018 Outstanding Professional in Medicine given by the Professional Regulation Commission of the Philippines. In 2008, she presented both written and oral evidence to the UK's House of Commons to justify the $ 2.5 Billion vaccination advance market commitment to provide needed vaccines for the developing world. She was named Pneumonia Fighter in 2018 by the JustActions Organization, a US-based advocacy movement and corporation associated with People Empowerment. Dr. Lulu Bravo completed her MD, pediatric residency and subspecialty training in infectious disease at Philippine General Hospital-College of Medicine of the University of the Philippines Manila. She supplemented her fellowship in pediatric infectious disease at the University of Texas Southwestern Health Science Center in Dallas, USA in 1986. She has published more than 100 scientific articles, books and book chapters in both local and international circles.

KAM LUN ELLIS HON, HONG KONG, SAR, CHINA

Dr. Ellis Hon is (1) Consultant at the CUHK Medical Centre, (2) Professor of Practice/Clinical Professional Consultant, Department of Paediatrics, and (3) Director, CCTCM Institute of Chinese Medicine, The Chinese University of Hong Kong. He received undergraduate medical education at the University of Western Australia. He is a Fellow of the American Academy of Pediatricians (FAAP) and Fellow of Critical Care Medicine (FCCM). He received his Doctor of Medicine (MD) at the Chinese University of Hong Kong. He is the President of the Hong Kong Society of Paediatric Respirology and Allergy, Vice President of the Hong Kong Paediatric and Adolescent dermatology Society. He has authored and co-authored nearly 500 peer-reviewed scientific papers, books and book chapters. He has performed extensive research on atopic diseases, traditional Chinese medicine and many paediatric critical care and health issues. He is particularly keen to promote health in children + their family and educate parents to dismiss a lot of myths and fallacies that hinder good child health in Hong Kong.

JIN OH KIM, MSD ASIA PACIFIC REGION

Jin Oh Kim is Regional Director of Medical Affairs (RDMA) in the MSD Asia-Pacific region. Since 2017, he has been responsible for diverse vaccines in AP region including pneumococcal, HPV, rotavirus, varicella, zoster, MMR, hepatitis, and so on. More recently, he has primarily worked on new pneumococcal vaccines, PCV15 and V116. He graduated from the School of Medicine in Kyungpook National University, Daegu, Korea in 1999 and received his master's and PhD in immunology from the same school. He has done a postdoctoral fellowship in the division of rheumatology, University of Washington, USA, between 2007 and 2010. His main research topics during his postdoc fellow period were autoimmune diseases such as lupus and rheumatoid arthritis. He worked in the Medical Affairs department in UCB Korea (2010-2012) and MSD Korea (2012-2016) and moved to MSD Asia-Pacific region as RDMA of vaccines in 2017.

SCHEDULE

TIME	DESCRIPTION/TITLE
18:10H	**Welcome and introductions** – Lulu Bravo
18:15H	**Emerging burden of ST3 and challenges in prevention** – Kam Lun Ellis Hon
18:35H	**Pneumococcal prevention strategy in the era of novel PCV vaccines** –Jin Oh Kim
18:50H	**Panel discussion and Q&A** – All faculty
18:55H	**Closing** – Lulu Bravo

TITLE

Novavax, from small biotech to the world stage. Development of a protein-based COVID-19 vaccine from Pandemic to Endemic use.

DETAILS

Date: November 10, 2023
Time: 8:30 – 9:15H

SYNOPSIS

The Novavax Symposium will review the Clinical Development Programme of Novavax's Covid19 vaccine (Nuvaxovid) including the latest development of the monovalent XBB1.5 vaccine, the latest paediatric data, an update of safety data, and the Novavax future pipeline.

OBJECTIVES

Inform participants of the Novavax clinical development program since the start of the COVID-19 pandemic.

FACULTY

LULU C. BRAVO, MD, FPPS, FPSMID, FPIDSP, PHILIPPINES

Lulu Bravo is a Professor Emeritus at the College of Medicine, University of the Philippines Manila. She is the former Vice Chancellor for Research and Executive Director of the National Institutes of Health, University of the Philippines Manila (2005 – 2011) and current head of the Vaccine Study Group of the NIH – UP having done studies on vaccines and vaccine-preventable diseases throughout her professional career.

SETH TOBACK, MD, UNITED STATES OF AMERICA

Dr. Toback is currently a Senior Vice President of Medical Affairs at Novavax. He has worked in the pharmaceutical and biotechnology fields for the past ~20 years focusing on vaccines and therapeutics against respiratory viruses. Prior to that he was in private practice pediatrics in Pittsburgh Pennsylvania close to where he trained at the Children's Hospital of Pittsburgh. He is a board-certified Pediatrician with degrees from Carnegie-Mellon, Heinz School of Public Policy and Management, Tufts University School of Medicine and McGill University.

MATTHEW ROUSCULP, PHD, MPH, UNITED STATES OF AMERICA

Matthew is Vice President, RWE at Novavax (a biotech company committed to help address serious infectious diseases). He has over 20 years of industry experience in bio-pharma, with the majority of his experience in Global and U.S. leadership roles in health economics and outcomes research. Matthew has also held various roles at Eli Lilly, MedImmune/AZ, GSK, and Takeda leading evidence generation across a wide portfolio as well as roles in market access public policy, quality measures, and innovative financing policies. Matthew completed his studies at Rutgers University and The University of Alabama at Birmingham.

SCHEDULE

TIME	DESCRIPTION/TITLE
8:30H	**Chairperson Introduction** – Lulu Bravo
8:35H	**Background to the Novavax development program during the pandemic and an update of current data** – Seth Toback
8:55H	**Update on safety data and the Novavax pipeline** – Matthew Rousculp
9:10H	**Q & A moderated by** Lulu Bravo

TITLE

Lunchtime scientific symposium
Beyond the pandemic: The future potential of mRNA vaccines

DETAILS

Date: November 10, 2023
Time: 12:20 – 14:00H

SYNOPSIS

Knowledge gained from mRNA technology used to combat COVID-19 is supporting the development of new medicines to fight existing diseases and future pandemic threats. A key benefit of mRNA vaccines is the speed of their development and ability to rapidly update in response to emerging variants.

Join us to hear about the latest advancements in mRNA platform technology and vaccine development, and have your questions answered by global vaccine experts.

OBJECTIVES

Learn about:

- The application and benefits of mRNA platform technology for vaccines and therapeutics
- Moderna's respiratory disease vaccine pipeline
- The changing landscape of COVID-19 and importance of strain-matched booster doses for continued protection

FACULTY

ANNA ONG-LIM MD, FPPS FPIDSP FIDSA, PHILIPPINES

Prof. Ong-Lim is a Professor and Chief of the Division of Infectious and Tropical Disease in Pediatrics at the University of Philippines and Philippine General Hospital (UP-PGH).

She has been at the forefront of Philippines' COVID-19 management efforts and serves as a member of the DOH Technical Advisory Group, the IATF Technical Working Group on COVID-19 vaccines and the Interim National Immunization Technical Advisory Group for COVID-19 vaccines.

Prof. Ong-Lim is extensively involved in clinical trials for paediatric vaccines against measles, mumps, rubella, polio, pneumococcal disease and influenza.

CHRISTOPHER CLARKE, PHD, AUSTRALIA

Dr. Clarke is Director of Scientific Leadership, Asia Pacific at Moderna. He has >13 years of vaccines industry experience and has participated in vaccine development to support the launch and implementation of influenza, pneumococcal and herpes zoster vaccines into National Immunisation Programs in Australia and across the world.

Dr Clarke was previously an academic, researching immunological and molecular mechanisms linking innate and adaptive immunity, particularly in the context of viral infections and cancer. He completed his PhD degree at the Imperial College School of Medicine, London.

JONATHAN STAFFORD
NGUYEN-VAN-TAM, MBE FRCPATH FRSB FMEDSCI, UNITED KINGDOM

Sir Jonathan is a world-renowned expert in public health and epidemiology, specialising in influenza and respiratory viruses. He was an Associate Professor at the University of Nottingham and a Consultant Regional Epidemiologist at the Public Health Laboratory Service.

Sir Jonathan has held key positions within the UK government, spearheading efforts to combat the influenza pandemic and other emerging viral threats. Notably, he served as the Deputy Chief Medical Officer of the Department of Health and Social Care from 2017 to March 2022.

In 2022, Sir Jonathan received a Knighthood for his services to public health, together with the Royal Society Attenborough Lecture and Medal for public communication of science.

SCHEDULE

TIME	DESCRIPTION/TITLE
Arrive at 12:20 to collect lunch for 12:30 start	
12:30H	**Welcome and introduction** – Anna Ong Lim
12:40H	**mRNA vaccines – a new era in vaccinology** – Chris Clarke
13:05H	**Keeping pace with SARS-CoV-2 variants** – Jonathan Van-Tam
13:40H	**Q&A moderated by Dr Lim**

TITLE
Advances in Vaccine Technology and it's Impact on Healthy Aging

DETAILS
Date: November 10, 2023
Time: 15:05 – 15:50H

SYNOPSIS
Where are we today with adult vaccinology? With the increasing population of older adults, the waning immunity and the increased risk of vaccine preventable diseases in this age group, there is an equally increasing need to share available scientific updates on vaccines innovation towards improving patient care and outcomes. It is important to emphasize the impact of vaccination in long term health complications and its role in Healthy aging.

OBJECTIVES
Discuss broadly on the VPD patterns in adults and the impact of vaccination in long term health complications

Learn about Immunosenescence and advances in vaccine technology .

FACULTY

LULU C. BRAVO, MD – PHILIPPINES
Dr Lulu Bravo is a Professor Emeritus at the College of Medicine, University of the Philippines Manila (UPM) and the current head of the Vaccine Study Group of the NIH – UPM. She has served in various capacities in many Asian medical and professional societies and as WHO Technical Advisor. Currently she is the president of the Immunization Partners in Asia Pacific (IPAP) and– current Executive Director and of the International Society of Tropical Pediatrics (ISTP) 2008 – 2011.

RONTGENE M SOLANTE, FPCP, FPSMID, FIDSA – PHILIPPINES
Currently, Dr Gene Solante is the President of Philippine College of Physicians (2023–2024). He acts as Chair, Adult Infectious Diseases and Tropical Medicine San Lazaro Hospital and Infection Control and Prevention Chair, Manila Med Medical Center Manila and Adventist Medical Center Manila.

He is a Clinical Associate Professor, Dept of Medicine University of the East Ramon Magsaysay Memorial Medical Center (UERMMMC).

He is likewise the Infectious Disease Section Chair, UERMMMC and Adventist Medical Center Manila.

Dr. Solante is the past President, Philippine Society for Microbiology and Infectious Diseases (PSMID).

SELIM BADUR, PHD – TURKEY

Dr. Selim is currently the Area Medical Lead for COVID in GSK Vaccines Emerging Markets.

Dr. Badur obtained his PhD in Microbiology from the University of Istanbul. He was a member of French Academy of Science, advisory member of Viral Hepatitis Prevention Board (VHPB), member of Global Hepatitis Network–WHO and European Scientists Working on Influenza Group (ESWI). He was also a member of Vaccine Advisory Board, Pandemic Flu Emergency Response Program, and STD Advisory Board, Ministry of Health, Turkey.

SCHEDULE

TIME	DESCRIPTION/TITLE
15:05H	**Welcome remarks** – Lulu Bravo
15:10H	**The Impact of Vaccine Preventable Diseases and its Prevention in Adults and the Elderly** – Rontgene Solante
15:25H	**Advancement in vaccinology: Increasing vaccine effectiveness in adults & elderly** – Selim Badur
15:40H	**Q & A** – Lulu Bravo

24th Philippine National Immunization Conference

11 November 2023, Saturday, Santa Maria 3

TIME	SESSION
08:00 – 08:15H	**Registration**
08:15 – 08:30H	**Opening Ceremonies** Emcee: Dr. Jemilly Margaux Po-Rosell
	Inter-faith Invocation **Philippine National Anthem** **Welcome Remarks** Speaker: Dr. Enrique Tayag
	Opening Remarks Speaker: Jaime Bernadas, MD, DOH7 Reg Director
	Scientific Program Overview **Ground Rules** Speaker: Dr. Mitzi Chua
	MORNING SESSIONS Chair: Dr. Bryan Lim Co-chair: Dr. Ethel Daño
08:30 – 09:00H	**Plenary 1** **Have we conquered?** The Philippine Immunization Status Dr. Madonna Anabieza
09:00 – 09:30H	**Plenary 2** **We can conquer!** Updates on Recommended Philippine Schedule of Immunization Speakers: Dr. Marimel R. Pagcatipunan (PIDSP) Dr. Faith Villanueva (PSMID)
09:30 – 10:15H	**Industry-Sponsored Symposium 1** MSD Speaker: Jonathan Lim, Philippines
10:15 – 11:00H	**Symposium 1 — Vector-borne VPDs** **Japanese B and Dengue** Interactive discussion on vaccine indications and updates Speaker: Dr. Maria Rosario Z. Capeding
	Symposium 2 — Vehicle-borne VPDs **Typhoid and Rotavirus** Case-based discussion on appropriate vaccine use Speaker: Dr. Grace Devota G. Go

TIME	SESSION
11:00 – 11:45H	**Symposium 3 — Respi-partners in Crime** **PCV and Flu** Speaker: Dr. Elizabeth E. Gallardo
	Symposium 4 — Pandemic Blues **COVID-19** Speaker: Dr. Anna Ong-Lim
11:45 – 12:30H	**Industry-sponsored Symposium 2** sanofi
12:30 – 13:15H	**Industry-sponsored Symposium 3** GSK
	AFTERNOON SESSIONS Chair: Dr. Chatie Olasiman Co-chair: Dr. Belle Ranile
12:30 – 13:45H	**Immunize and Conquer** **Parallel Workshops I-III** Moderator/Emcee: Dr. Norren Matig-a
	Workshop 1 **Population in Focus: The Elderly** Facilitators: Dr. Rontgene Solante and Dr. Shayne Morales
	Workshop 2 **Population in Focus: School-aged Children and Adolescents** Facilitators: Dr. Cynthia A. Aguirre and Dr. Kim Basilla
	Workshop 3 **Vaxx in the Workplace** Facilitators: Dr. Enrique A. Tayag and Dr. Larsen Omolon
13:45 – 14:15H	**Group Output Discussion**
14:15 – 15:00H	**Industry-Sponsored Symposium 4** Pfizer Speaker: Jonathan Lim, Philippines
15:00 – 15:45H	**Industry-Sponsored Symposium 5** Takeda Speaker: Jonathan Lim, Philippines
15:45 – 16:00H	**Closing** **Key Takeaways** Dr. Ma. Rosario Capeding
	PNIC Class of 2023 Photo-op

*As of November 10, 2023

POSTER NO.	ABSTRACT NO.	ABSTRACT TOPIC	ABSTRACT TITLE
1	ASVAC 1001	Polio	Persistence of protective anti polio antibody levels in 4-year-old children previously primed with Picovax®, a trivalent, Alum adjuvanted dose sparing inactivated polio vaccine
2	ASVAC1003	Vaccines in specific settings	Vaccination Hesitancy On Childhood Vaccination During COVID-19 Pandemic In A Tertiary Hospital: A Cross-Sectional Study
3	ASVAC1013		Knowledge and Attitudes Perceived by Junior High School Students on COVID-19 vaccines in a Private and a Public High School in Tarlac City
4	ASVAC1048		Assessment of Maternal Knowledge, Attitudes, and Perceptions on HPV Vaccination For Females Aged 9-17 Years in Calamba City, Laguna
5	ASVAC1057		Acceptance Of COVID-19 Vaccination Among Children Who Were Eligible To Receive CYD-TDV in 2017 in Cebu, Philippines
6	ASVAC1060		The Philippine COVID-19 Vaccine Effectiveness Project
7	ASVAC1056	Enteric Vaccines e.g. Cholera, Typhoid and Rotavirus	Australia's rotavirus immunisation program: impact on acute gastroenteritis hospitalisations over 13 years
8	ASVAC1017	Mosquito-borne viruses e.g Dengue, Japanese encephalitis, Zika, Malaria and Chikungunya	Evaluating the immunogenicity, efficacy, and safety of TAK-003 by age group: an analysis of the DEN-301 phase 3 clinical trial
9	ASVAC1033		TAK-003 dengue vaccine clinical experience: an integrated analysis of safety data by baseline serostatus
10	ASVAC1035		An open-label, phase 2 study evaluating cell-mediated immune response and safety of a tetravalent dengue vaccine in children and adolescents aged 4-16 years
11	ASVAC1020	Disease-specific vaccines	COVID-19 vaccine effectiveness research in Southeast Asia: current capability using secondary data
12	ASVAC1024		Safety and immunogenicity of a bivalent omicron BA.4/BA.5 vaccine against COVID-19
13	ASVAC1034		The indirect costs and burden of vaccine preventable cancers mortality in Asia-Pacific countries
14	ASVAC1037		A case of invasive pneumococcal disease by non-vaccine serotype 15C
15	ASVAC1044		Relative effectiveness of mRNA-1273, BNT162b2, and Ad26.COV2.S vaccines in adults at higher risk for severe COVID-19 outcomes
16	ASVAC1047		Factors Associated with Death in Adult COVID-19 Patients Admitted to Two Referral Hospitals in the Philippines

POSTER NO.	ABSTRACT NO.	ABSTRACT TOPIC	ABSTRACT TITLE
17	ASVAC1021	Respiratory viruses e.g Influenza, Respiratory Syncytial virus	Presenteeism: The Reality to be Discussed With COVID-19 Vaccine Recipients
18	ASVAC1025		Burden and Impact of Reactogenicity Among United States and Canadian Adults Receiving COVID-19 Vaccines: Vaccine Impact on Productivity (VIP) Study
19	ASVAC1026		How Much of a Burden is Vaccine-Related Reactogenicity? Results from a 6-Day Symptom Diary Among United States and Canadian Adults Receiving COVID-19 Vaccines.
20	ASVAC1039		Influenza Associated Acute Necrotizing Encephalopathy (ANEC) and the role of Influenza Vaccination: A Case Study
21	ASVAC1040		Salmonella-delivered COBRA-HA1 antigen derived from H1N1 hemagglutinin sequences elicits broad-spectrum protection against influenza A subtypes
22	ASVAC1030	Evidenced-based introduction of new vaccines	Remaining Lifetime Burden of Herpes Zosters and Public Health Impact of Adjuvanted Recombinant Zoster Vaccine among Adults ≥50 Years in Five Countries in Southeast Asia
23	ASVAC1038	Monitoring and surveillance	MesVaccins.net: A New Digital Vaccination Card to Empower People and Healthcare Professionals
24	ASVAC1058		Do you speak vaccines? Proposal for a structured global terminology on vaccines
25	ASVAC1059		Standardization and Harmonization of COVID-19 Case and Vaccination Data in Selected Philippine Cohorts
26	ASVAC1041	Vaccines in development	Novel pro-and eukaryotic expression plasmid expressing omicron antigens delivered via Salmonella elicited MHC class I and II based protective immunity
27	ASVAC1042		Salmonella-mediated oral delivery of multiple-target vaccine constructs with conserved and variable regions of SARS-CoV-2 protect against the Delta and Omicron variants in hamster
28	ASVAC1046	Targeted vaccination strategies	Capabilities, Post-Coup And Cataclysm; covid-19 Vaccine Acceptance And Its Determinants Among Myanmar Migrant Workers In Southern Thailand, Myanmar's Responses To Covid-19
29	ASVAC1055		Effect of Web-based Short Message Service (SMS) Reminders on Vaccination Coverage and Timeliness of Routine Immunizations Among Infants in Baguio City: A Randomized Controlled Trial
30	ASVAC1052	Vaccine Implementation	Interchangeability of Pneumococcal Conjugate Vaccines in Children – Systematic Review and Meta Analysis

ABSTRACT TOPIC: POLIO

ASVAC1001

Persistence of protective anti polio antibody levels in 4-year-old children previously primed with Picovax®, a trivalent, Alum adjuvanted dose sparing inactivated polio vaccine

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Objectives:
The primary objective of this study was to assess seroprotection against poliovirus types 1, 2 and 3 in healthy children previously immunized with Picovax® by measuring the responses to an additional dose of the same vaccine administered at 4 years of age. Picovax® is an inactivated polio vaccine (IPV) adjuvanted with alum allowing for a 10-fold reduction in antigen content as compared to standard IPV.

Methods:
A phase 4, multicentre, open-label clinical extension trial (NCT04448132) was conducted in Panama. Subjects previously vaccinated with Picovax® at 2, 4, 6 and 15-18 months of age received Picovax® again at age 4.

During baseline visit blood was collected and vaccines were administered. Injection site reactions (ISRs) for Picovax® and concomitant routine vaccines from the national vaccination programme were recorded, as were axillary temperature and solicited adverse reactions. At follow-up visit, one month later, blood was sampled, and systemic adverse events (AEs) documented.

Results:
98.8% completed the trial. At baseline, prior to the additional dose, seroprotection rates were 89%, 100% and 91% for poliovirus types 1, 2, and 3, respectively. One month after the additional Picovax® dose, seroprotection rates (titre ≥8) were 99,4%, 100% and 100% for poliovirus types 1, 2 and 3, respectively.
In the safety analysis, 678 AEs were reported by 92% of the vaccinees (150/163 subjects). 259 were systemic AEs, and 419 ISRs.

Conclusions:
This trial demonstrated that an additional dose of Picovax® induced a robust immune response in all but one of the children previously immunized with the same vaccine. This pronounced anamnestic response was indicative of persistence of protection, two-and-a-half years after completion of the 15-18-month booster vaccination.

Picovax® administered at four years of age was shown to be an effective and safe polio vaccine to support the Global Polio Eradication Initiative by increasing availability of affordable IPV.

ABSTRACT TOPIC: VACCINES IN SPECIFIC SETTINGS

ASVAC1003

Vaccination Hesitancy on Childhood Vaccinations During Covid-19 Pandemic in A Tertiary Hospital: A Cross-Sectional Study

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Objectives:
To determine the parents' attitude about childhood vaccination during the COVID Pandemic at the Pediatrics Department in Private Tertiary Hospital in Manila using the validated Filipino translated Parents Attitude about Childhood Vaccination (PACV) Questionnaire.

Methods:
A cross-sectional analytic was done in a tertiary care hospital in Metro Manila from May 2021 to July 2021. 286 Filipino-speaking parents and caregivers of children aged 0-5 years of age who consulted at the Pediatrics Outpatient Department - Charity Division and Private clinic of affiliated Consultants. Filipino-speaking parents and caregivers of Filipino children aged 0-5 years of age who were admitted at Charity Ward and Pay Ward Division were also included in the study. 21 item- validated Filipino translated Parents Attitude about Childhood Vaccination (PACV) Questionnaire was answered by 286 Filipino parents and caregivers with children aged 0 to 5 years old who consulted or had their child admitted at the Hospital.

Results:
286 participants were included in the study. 55.2% of which are in pay division while 29.7% are in charity. Based on the sociodemographic data, most of the respondents were mothers. 60.4% of them are at least 30 years old. The percentage of parents or caregivers who are vaccine hesitant is 4.9%. There is a significant association with older parents and vaccine hesitancy (p = 0.0011).

Conclusions:
The validated Filipino translated Parents Attitude about Childhood Vaccination (PACV) Questionnaire is a useful tool in determining the vaccine hesitant among Filipino parents in a tertiary hospital. It also determines the sociodemographic factors that affecting vaccine hesitancy.

ABSTRACT TOPIC: VACCINES IN SPECIFIC SETTINGS

ASVAC1013

Knowledge and Attitudes Perceived by Junior High School Students on COVID-19 vaccines in a Private and a Public High School in Tarlac City

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Objectives:
The main objective of this study is to describe the association between vaccination compliance with the knowledge and attitudes towards COVID-19 vaccination of public and private Junior High School Students in Tarlac City.

Methods:
This was an analytical cross-sectional study where all grade 7 to 9 students from one public and private high school in Tarlac City answered a validated questionnaire on COVID-19 vaccines. Knowledge and Attitudes of the students were determined and comparison between the private and public school computed. Binary logistic regression was used to associate their knowledge and attitudes with vaccine compliance.

Results:
750 students were included in this study. 87.6% are compliant to COVID-19 vaccine. Generally, compliant students are older, females and attending private school. Only 11.2% of students have adequate knowledge. The source of information that most significantly affected vaccine perception were healthcare providers. Private school students were more vaccine compliant (P value = 0.020), have higher knowledge (P-value ‹0.001), and more positive attitudes (P value ‹0.001). Vaccine compliance is not associated with knowledge (P value =0.748), but is associated with positive attitudes.

Conclusions:
Most of the adolescents in Tarlac City are compliant to COVID-19 vaccination. The main driver for compliance is positive attitudes towards the vaccines, hence it is crucial to be reminded of the importance of vaccines and of boosters in the future.

ABSTRACT TOPIC: VACCINES IN SPECIFIC SETTINGS

ASVAC1048

Assessment of Maternal Knowledge, Attitudes, And Perceptions on Hpv Vaccination for Females Aged 9–17 Years in Calamba City, Laguna

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[1]Dr. Mariano Que College of Pharmacy, De La Salle Medical and Health Sciences Institute, Philippines

Objectives:
Human papillomavirus (HPV) is a prevalent viral infection linked to cervical cancer, preventable through regular screening and HPV vaccine immunization. In the Philippines, maternal skepticism towards HPV vaccination hinders its adoption. This study investigates maternal knowledge, attitudes, and perceptions (KAP) regarding the HPV vaccine, examining differences based on vaccine accessibility. This study aims to assess the knowledge, attitudes, and perceptions; as well as the level of acceptance towards HPV vaccination, among mothers in Calamba City, Laguna who have daughters aged 9–17 years old.

Methods:
Conducted in Calamba City, Laguna, this quantitative study surveyed 383 mothers with daughters aged 9–17. KAP surveys were distributed through the Serbisyong Tama Kababaihan (STK), a non-governmental organization of women in Calamba City. Quota sampling ensured diverse participation. Sociodemographic factors were analyzed, and relationships between vaccine accessibility, KAP, and acceptance were assessed.

Results:
Results showed that mothers from Calamba City, Laguna have insufficient knowledge, neutral attitudes, and neutral perceptions towards the HPV vaccine. Significant differences emerged based on religion, education, and income. Access to the vaccine correlated positively with KAP. The levels of KAP significantly influenced vaccine acceptance.

Conclusions:
Maternal knowledge concerning HPV and its vaccination in Calamba, Laguna is insufficient, contributing to low vaccine acceptance for daughters. Enhanced maternal education and health literacy could improve KAP, fostering positive attitudes towards HPV vaccination. This study underscores the importance of targeted education campaigns to increase vaccine acceptability among mothers in Calamba, Laguna.

ABSTRACT TOPIC: VACCINES IN SPECIFIC SETTINGS

ASVAC1057

Acceptance of Covid-19 Vaccination Among Children Who Were Eligible to Receive Cyd-Tdv in 2017 In Cebu, Philippines

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Objectives:
The Philippine Department of Health embarked on a mass dengue vaccination program in 2016 using the first licensed dengue vaccine, CYD-TDV. The release of additional results that showed the differential performance of the vaccine by serostatus at baseline and the subsequent suspension of the dengue vaccination program was followed by wide-scale political and public turmoil and decline in national immunization coverage. The objective of this report is to assess acceptance of COVID-19 vaccination among children who were eligible to receive CYD-TDV in 2017 in Cebu, Philippines.

Methods:
From May to June 2017, we enrolled 2,996 children in Balamban and Bogo, Cebu in a prospective, longitudinal cohort study. The children were followed up until October 2022. Sociodemographic and vaccination history against dengue and COVID-19 were also obtained.

Results:
Out of the 2,996 children enrolled in the cohort study, a total of 1,790 (59.7%) received a dose of CYD-TDV while 1,206 (40.2%) were unvaccinated. Of those who received CYD-TDV, 1,247/1,790 (69.7%) and 543/1206 (30.3%) were subsequently vaccinated and not vaccinated against COVID-19, respectively (p=0.00). Majority (97%) of those who received a COVID-19 vaccine received 2 doses of the same brand or a combination of Astrazeneca (0.8%), Janssen (0.2%), Moderna (5%), Pfizer (90%), and Sinovac (4%). The children were aged 13-19 years old at the time of vaccination against COVID-19. There were more female than male COVID-19 vaccine recipient. The majority of children who received the vaccines belong to a household with a head who received more than 6 years of schooling. Half of COVID-19 vaccine recipients belong to a household with 5-8 members, while the majority belong to a household with 5 children or less.

Conclusions:
Despite the reported high vaccination hesitancy in the Philippines after the CYD-TDV controversy, COVID-19 vaccination was accepted by our cohort of children who were directly impacted by the controversy.

ABSTRACT TOPIC: VACCINES IN SPECIFIC SETTINGS

ASVAC1060

The Philippine COVID-19 Vaccine Effectiveness Project

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Objectives:
The Philippine government rolled out COVID-19 vaccines to the entire country. This study aimed to assess the vaccine effectiveness (VE) of the primary series and first booster of COVID-19 vaccines, in preventing the occurrence of COVID-19 infection and the severe forms Covid-19, hospitalization and death.

Methods:
Prospective cohort design of 1,399,113 individuals from March 2021 until June 2023. Ten cohorts included 3 health facilities, 3 urban and 2 rural communities, and 2 workplaces. Phase 1 determined VE for primary vaccines; Phase 2 studied the incremental protection of first booster vaccine. Log-binomial regression estimate the risk ratios (RR) and 95% confidence intervals (CIs) as well as the VE for the association between vaccination status and severe disease, controlling for confounders adjusting for age and sex.

Results:
The 10 cohorts were followed 381,327,975 person-days for Phase 1; and 253,525,266 person-days for Phase 2. A total of 83,273 confirmed cases of COVID-19 were detected from across the 10 cohorts.

- The first cohort are Healthcare workers (HCWs) from a public hospital composed of 5560 HCWs with 1018 confirmed cases in Phase 1; and 5688 HCWs with 1242 cases in Phase 2. The VE of full primary series vaccination for protection for hospitalization is 67%(95%CI46-79%); protection against severe disease is 74% (95%CI43-88). There was one death among unvaccinated versus none among vaccinated HCWs.

- Additionally, COVID-19 vaccines also protected against COVID-19 infections. Fully vaccinated of primary series versus none is 80% (95%CI74-84%), booster vaccination versus none is 85% (95%CI81-88%), and incremental 25% VE for booster versus fully vaccinated (95%CI15-34%).

- Protection using inactivated vaccine against COVID-19 was 74% (95% CI 54-85%). On the other hand, protection of viral vector vaccines was 71% (95% CI 51-83%)

Conclusions:
The COVID-19 vaccines used among HCWs in the cohort of a Philippine public hospital were shown to be protective against mortality, hospitalization, severe COVID-19 as well as COVID-19 infection

ABSTRACT TOPIC: ENTERIC VACCINES e.g., CHOLERA, TYPHOID AND ROTAVIRUS

ASVAC1056

Australia's rotavirus immunization program: impact on acute gastroenteritis hospitalizations over 13 years

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Objectives:
Rotavirus vaccines were included on the National Immunisation Program (NIP) in July 2007. We examined trends in rotavirus gastroenteritis and other acute gastroenteritis (AGE) ICD-coded hospitalisations from before to 13 years after inclusion in NIP.

Methods:
Hospitalisation data from the Australian Institute of Health and Welfare (AIHW) for ICD-coded episodes of rotavirus gastroenteritis (A08.0) and other AGE (K52, A01 to A09 excluding A08.0) from January 2002 to December 2020 were analysed by age; Aboriginal and Torres Strait Islander (hereafter respectfully Indigenous) status; pre-vaccine (2002-2006), late vaccine (2014-2019) and pandemic (2020) period.

Results:
The rotavirus gastroenteritis-coded hospitalisation rate in children aged <5 years was 86% lower in 2014-2019 (39.4/100,000/year) than 2002-2006 (275.1/100,000/year). In 2020, the first year of the COVID-19 pandemic, the rotavirus gastroenteritis hospitalisation rate dropped to 10.9/100,000/year.

The rotavirus gastroenteritis hospitalisation rate in Indigenous children aged <5 years in the four jurisdictions where Indigenous completeness was satisfactory over the entire study period, as per AIHW guidelines (Northern Territory, Queensland, South Australia and Western Australia), was 68% lower in 2014-2019 (667.5/100,000/year) than 2002-2006 (2117.3/100,000/year) and dropped to 128.5/100,000/year in 2020. The rotavirus hospitalisation rate in Indigenous children aged <5 years in 2014-2019 was approximately 20 times higher than in non-Indigenous children.

The hospitalisation rate for other (i.e. not coded as rotavirus) AGE was 38% lower in 2014-2019 (922.9/100,000/year) than 2002-2006 (1497.7/100,000/year). Given that more than one-third of other AGE is coded as unspecified (i.e. causative pathogen not identified), it is likely that the decline in hospitalisation rate for other AGE reflects in considerable part impact of the rotavirus immunisation program.

Conclusions:
For children aged <5 years, a sustained and substantial decline in both rotavirus-specific AGE and other AGE hospitalisations has occurred since introduction of rotavirus vaccines in Australia.

ABSTRACT TOPIC: MOSQUITO-BORNE VIRUSES e.g., CHOLERA, TYPHOID AND ROTAVIRUS

ASVAC1017

Evaluating the immunogenicity, efficacy, and safety of TAK-003 by age group: an analysis of the DEN-301 phase 3 clinical trial

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Objectives:
We evaluated TAK-003, a live-attenuated tetravalent dengue vaccine based on a DENV-2 backbone, in participants in the phase 3 DEN-301 trial (NCT02747927) stratified by age (4-5, 6-11, or 12-16 years).

Methods:
Participants in dengue-endemic areas were randomized 2:1 to receive 2 TAK-003 doses or placebo 3 months apart. Serostatus was evaluated at baseline. Vaccine efficacy (VE) against virologically confirmed dengue (VCD) and hospitalized VCD; immunogenicity (geometric mean titers [GMTs]); and safety were evaluated through 4.5 years post-vaccination.

Results:
Overall, 13% of participants were 4-5-year-olds (41% seronegative), 55% were 6-11-year-olds (31% seronegative), and 32% were 12-16-year-olds (16% seronegative). Causative serotype distribution varied by age, with DENV-3 most commonly identified in placebo-group cases in 4-5-year-olds (35.4%), compared with 16.5% in 6-11-year-olds and 19.0% in 12-16-year-olds. VE against VCD across serotypes was 43.5% (95% confidence interval: 25.3-57.3%) for 4-5-year-olds, 63.5% (56.9-69.1%) for 6-11-year-olds, and 67.7% (57.8-75.2 %) for 12-16-year-olds. VE against hospitalized VCD was 63.8% (21.1-83.4%), 85.1% (77.1-90.3%), and 89.7% (77.9-95.2%), respectively, with similar point estimates in seronegative (4-5 years: 69.8%; 6-11 years: 79.1%; 12-16 years: 90.8%) and seropositive (4-5 years: 57.6%; 6-11 years: 87.8%; 12-16 years: 89.5%) participants. GMTs remained elevated against all four serotypes for ~4 years post -vaccination, with no evident differences across age groups. No important safety risks were identified.

Conclusions:
While VE estimates appeared lower in the youngest group, no clear age effect was observed once low participant numbers in the youngest group, year-by-year differences, VE by individual age, and frequency of DENV-3 infections were accounted for. These data show positive benefit-risk balance of TAK-003 across age groups, supporting its use in children ≥4 years old.

Funded by Takeda.

ABSTRACT TOPIC: MOSQUITO-BORNE VIRUSES e.g., DENGUE, JAPANESE, ENCEPHALITIS, ZIKA, MALARIA AND CHKUNGUNYA

ASVAC1033

TAK-003 dengue vaccine clinical experience: an integrated analysis of safety data by baseline serostatus

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Objectives:
The tetravalent dengue vaccine TAK-003, has demonstrated efficacy in the ongoing phase 3 DEN-301 trial in dengue-naïve and -exposed healthy participants aged 4-60 years. An integrated analysis of safety data comprising this ongoing trial plus 4 other phase 2/3 placebo-controlled TAK-003 trials was conducted. Here, we evaluate the safety of TAK-003 by baseline serostatus.

Methods:
Adverse events (AEs) were evaluated following two doses (given 3 months apart) of TAK-003 or placebo: solicited local and systemic AEs within 7 and 14 days of doses, unsolicited AEs within 28 days of doses, medically attended AEs (MAAEs) and serious AEs (SAEs) up to 54 months post second dose. Data are presented as ranges after any dose for children (4-10 years), adolescents (11-17 years) and adults (18-60 years).

Results:
21,790 participants received TAK-003 (N=4472 seronegative; N=9808 seropositive) or placebo (N=2063 seronegative; N=4975 seropositive); 476 serostatus unknown. Solicited local or systemic AE rates were 35.1-50.7% (seropositive) and 35.0-65.6% (seronegative) for TAK-003 versus 16.1-41.9% (seropositive) and 21.4-55.1% (seronegative) for placebo; rates were lowest in children. Most common events were injection site pain, headache and myalgia, regardless of serostatus. Unsolicited AE rates were 18.0-25.3% (seropositive) and 18.7-34.3% (seronegative) for TAK-003 versus 19.8-38.7% (seropositive) and 18.9-27.0% (seronegative) for placebo. Most common AEs for any subgroup were nasopharyngitis and upper respiratory tract infection. MAAE rates in aged 12-60-year participants were 21.3-44.0% (seropositive) and 12.5-47.6% (seronegative) for TAK-003 versus 7.7-66.7% (seropositive) and 15.3-34.1% (seronegative) for placebo. SAEs were 4.0-8.80% (seropositive) and 2.01-8.86% (seronegative) for TAK-003 versus 0-10.57% (seropositive) and 4.05-9.60% (seronegative) for placebo.

Conclusions:
TAK-003 was well tolerated, with no notable safety differences between baseline seropositive and seronegative participants aged 4-60 years.

Studies and medical writing were funded by Takeda.

ABSTRACT TOPIC: MOSQUITO-BORNE VIRUSES e.g., INFLUENZA, RESPIRATORY SYNCTIAL VIRUS

ASVAC1035

An open-label, phase 2 study evaluating cell-mediated immune response and safety of a tetravalent dengue vaccine in children and adolescents aged 4-16 years

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Objectives:
This open-label phase 2 study evaluated cell-mediated immune (CMI) responses to the tetravalent dengue vaccine TAK-003 in healthy 4- to 16-year-old participants in dengue-endemic regions (NCT02948829).

Methods:
200 participants were enrolled to receive TAK-003 at Days 1 and 90. Dengue serostatus was tested at baseline (seropositivity: reciprocal neutralizing antibody [NAb; MNT50] titer ≥10 for ≥1 serotype). The primary objective was CMI response rate at Day 120 using T cell interferon-gamma (IFN-γ) enzyme-linked immunospot assay [ELISPOT]. Peptide pools for non-structural (NS) proteins NS1, NS3, and NS5 matching DENV-1, -2, -3, and -4 were used for stimulation. Secondary objectives included further evaluation of CMI, NAb responses, and safety. Participants were followed up to 3 years post-second vaccination. Here we report results for CMI responses up to Day 270 (6 months after administration of the second TAK-003 dose) and overall safety data.

Results:
IFN-γ T-cell response rate against any peptide pool at Day 120 was 76.0% in seropositive participants and 83.1% in seronegative participants and remained stable through Day 270. IFN-γ T-cell response rates at Day 120 to peptide pools matching DENV-1, -2, -3, and -4 were 58.0%, 75.0%, 60.0%, and 50.0% in seropositive participants and 59.7%, 83.1%, 47.4% and 39.0% in seronegative participants, respectively, and remained elevated through Day 270. Multifunctional (secretion of ≥2 cytokines among IFN-γ, interleukin-2 and tumor necrosis factor-α) CD4+ and CD8+ T-cell responses were observed, independent of baseline serostatus. NAb titers and seropositivity rates remained high against all four DENV serotypes through Year 3. TAK-003 was well-tolerated with no important safety risks identified.

Conclusions:
TAK-003 elicited multifunctional, cross-reactive T-cell responses against all four DENV serotypes, irrespective of participant baseline serostatus, in 4- to 16-year-old participants living in dengue-endemic regions.

ABSTRACT TOPIC: DISEASE-SPECIFIC VACCINES

ASVAC1020

COVID-19 vaccine effectiveness research in Southeast Asia: current capability using secondary data

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Objectives:
COVID-19 vaccine effectiveness (VE) monitoring is key to guiding control strategies. Secondary databases analyses are a practical and increasingly common research approach. We assessed the contribution to global VE literature and described the capability of Southeast Asian (SEA) hospitals to conduct COVID-19 VE studies using existing databases.

Methods:
The study was conducted from November 2022 to March 2023. Using the International Vaccine Access Centre's VE studies repository, we estimated the contribution of SEA to global COVID-19 VE publications. Among SEA countries with limited VE publications, IQVIA's research network was used to identify potential hospitals. An online, self-completion survey was adapted from the "vACCine covid-19 monitoring readinESS" protocol, to capture information on hospitals' database characteristics, VE study experience, and clinical and key COVID-19 data availability. Based on these categories three capability groups were defined (Good, Average, Limited). Descriptive analyses for response rate, data availability, and capability group were conducted.

Results:
SEA countries had limited contribution to global COVID-19 VE literature, 2.7%. Despite national initiatives for VE evidence generation Singapore and Malaysia had limited data published. As a result, India, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam were selected.

Of 55 hospitals (4 to 13 per country) emailed, 8 responded for an overall response rate of 14.5% (7.7% – 33.3% per country). No responses were received from Indonesia, Thailand, or Vietnam. Data availability ranged from 61% to 92% per hospital, and 5 hospitals were identified with good or average potential for VE studies (1 in Philippines, Malaysia, and Singapore respectively, and 2 in India).

Conclusions:
The heterogeneity of available data format and variability of COVID-19 vaccination status and PCR results availability (e.g., available for all vs. only for patients vaccinated/tested on site) varied by hospital and is a limitation for patient cohort identification. However, this survey demonstrates secondary database analysis VE research capabilities in SEA.

ABSTRACT TOPIC: DISEASE-SPECIFIC VACCINES

ASVAC1024

Safety and immunogenicity of a bivalent omicron BA.4/BA.5 vaccine against COVID-19

[1]Spyros Chalkias, [1]Nichole McGhee, [2]Joanne E. Tomassini , [3]Xing Chen, [1]Xiaoping Zhao, [1]Bethany Girard, [1]Darin K. Edwards, [3]Jing Feng, [3]Honghong Zhou, [4]David C. Montefiori, [1]Jacqueline M. Miller, [1]Rituparna Das

Objectives:
Given the emergence and worldwide circulation of antigenically divergent SARS-CoV-2 omicron variants, variant-updated bivalent vaccines containing the ancestral SARS-CoV-2 and omicron BA.4/BA.5 were deployed. Clinical safety and immunogenicity data with these bivalent booster vaccines are lacking.

Methods:
This ongoing, open-label, phase 2/3 trial (NCT04927065) evaluated the safety and immunogenicity of the bivalent mRNA-1273.222 vaccine (50 μg; 25 μg each ancestral Wuhan-Hu-1 and omicron BA.4/BA.5 spike mRNAs) versus original mRNA-1273 vaccine (50 μg ancestral mRNA) when administered as second boosters in adults who previously received the mRNA-1273 primary series (2 doses of 100 μg) and a first mRNA-1273 booster dose (50 μg). Participants were sequentially enrolled in in two cohorts and received mRNA-1273 (February 18-March 8, 2022) or mRNA-1273.222 (August 10-23, 2022), as a randomized study was no longer feasible after the deauthorization of mRNA-1273. The primary objectives of the study were safety and immunogenicity 28 days following the booster dose. Immunogenicity was assessed using a validated pseudo virus neutralizing antibody assay.

Results:
Participants received mRNA-1273.222 50 μg (n=511) or mRNA-1273 50 μg (n=376) as a second booster dose. In participants without previous SARS-CoV-2 infection, neutralizing antibody geometric mean titers (GMTs [95% confidence interval]) against omicron BA.4/BA.5 and ancestral SARS-CoV-2 D614G were significantly higher after mRNA-1273.222 (2324.6 [1921.2-2812.7] and 7322.4 [6386.2-8395.7], respectively) than mRNA-1273 (488.5 [427.4-558.4] and 5651.4 [5055.7-6317.3], respectively) at day 29. Cross-neutralization of omicron BQ1.1, XBB.1 and XBB1.5 variants was also assessed in a random subgroup of mRNA-1273.222 recipients (n=60); neutralizing antibody titers were lower than BA.4/BA.5, suggestive of antibody escape by these variants. No new safety concerns were identified.

Conclusions:
The bivalent omicron BA.4/BA.5-containing mRNA-1273.222 vaccine elicited higher neutralizing antibody responses against omicron BA.4/BA.5 than the original mRNA-1273 vaccine, with no apparent safety concerns. Continued monitoring of neutralization and real-world vaccine effectiveness are needed to address divergent variants.

ABSTRACT TOPIC: DISEASE-SPECIFIC VACCINES

ASVAC1034

The indirect costs and burden of vaccine preventable cancers mortality in Asia-Pacific countries

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Objectives:
Human papillomavirus (HPV) and hepatitis B (HBV) are among the most prevalent infections associated with cancer for which vaccines are available. The objective of this study was to estimate the mortality impact and indirect cost of these cancers potentially preventable by vaccination in selected Asia-Pacific countries.

Methods:
Number of deaths and years of life lost (YLL) in 2019 were sourced from the Institute for Health Metrics Evaluation Global Burden of Disease for the following: liver cancer caused by HBV (ICD-10 C22), head and neck cancers (ICD-10 C00-14 and C32), and cancer of the cervix uteri (ICD-10 C53). Cancer deaths and YLL were applied to HPV and HBV attributable fractions based on published data. Other HPV related cancers were not included due to data availability. Five High-Income Countries (HICs) (South Korea, Australia, New Zealand, Singapore) and five Low- or Middle-Income Countries (LMICs) were included (Thailand, Philippines, Indonesia, Malaysia, Vietnam). The value of YLL (VYLL) was estimated by multiplying GDP per capita (World Bank; USD) and YLL.

Results:
In 2019, the modeled vaccine-preventable cancers in Asia-Pacific caused 45,944 deaths (126 deaths/day), and 1,356,086 YLL, with an indirect cost due to premature mortality of $10.8B. On average, 30 years of life were lost per death in Asia-Pacific regions. LMICs had an average YLL of 31, whereas HICs had an average YLL of 26 indicating deaths occurred at a younger age in LMICs. The highest indirect costs were in South Korea (VYLL of $5.6B), Thailand (VYLL of $1.7B), and Indonesia (VYLL of $807M). The range of indirect cost/death was $70,548 (Vietnam) – $1,211,204 (Singapore), demonstrating variations in YLL and GDP.

Conclusions:
In the Asia-Pacific region there is a large economic impact and burden of potentially vaccine preventable cancers. Improved implementation and increase of vaccine coverage of HPV and HBV vaccination programs could be prioritized to decrease this burden.

ABSTRACT TOPIC: DISEASE-SPECIFIC VACCINES

ASVAC1037

A case of invasive pneumococcal disease by non-vaccine serotype 15C.

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Objectives:
Invasive pneumococcal disease is a major cause of Pediatrics morbidity and mortality globally. Pneumococcal conjugate vaccines (PCVs) are effective at protecting against carriage and infections by vaccine serotypes, however, current vaccine serotypes only target a fraction of known serotypes. Consequently, despite an overall decline in invasive disease, the introduction of PCV has been followed by the emergence of non-vaccine serotype (NVT). We report a case of a 17-month-old fully vaccinated girl with non-vaccine serotype 15C pneumococcal meningitis complicated by subdural collections, post-infectious non-obstructive hydrocephalus and developmental regression. It is thus imperative that we survey and anticipate relevant emerging serotypes when developing higher-valency PCV.

ABSTRACT TOPIC: DISEASE-SPECIFIC VACCINES

ASVAC1044

Relative effectiveness of mRNA-1273, BNT162b2, and Ad26.COV2.S vaccines in adults at higher risk for severe COVID-19 outcomes

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Objectives:
Older age and underlying chronic medical conditions are risk factors associated with severe COVID-19 outcomes. Herein, we evaluated the relative vaccine effectiveness (rVE) of a primary series of mRNA-1273 (2 doses) versus BNT162b2 (2 doses) or Ad26.COV2.S (1 dose) and of monovalent mRNA boosters against COVID-19-related medically attended, outpatient, and hospitalization cases in adults (≥18 years) with ≥1 underlying medical condition.

Methods:
Data from a US electronic health records system linked with medical claims data were used. Part 1 evaluated rVE of the primary series (February-October 2021). Part 2 evaluated rVE of a single monovalent mRNA booster dose (October 2021-January 2022). Individuals were matched by sex, geographic region, age group, and race.

Results:
In Part 1, mRNA-1273 prevented more medically attended COVID-19 cases than BNT162b2 and Ad26.COV2.S; rVE was 24% (95% CI, 22%-25%) and 51% (49%-52%), respectively. Similarly, mRNA-1273 prevented more COVID-19-related outpatient visits and hospitalizations than the 2 comparator vaccines (Table 1). Findings were consistent across age groups. In Part 2, rVE of mRNA-1273 versus BNT162b2 against medically attended COVID-19 cases was 14% (95% CI, 9%-19%). Following a booster dose, mRNA-1273 prevented more hospitalizations than BNT162b2, with an rVE of 22% (95% CI, 3%-37%) in the overall study population, and increased with age, with estimates of 32% (13%-47%) and 46% (19%-65%) in adults ≥50 years and ≥65 years, respectively.

Conclusions:
A primary series of mRNA-1273 was more effective than BNT162b2 or Ad26.COV2.S in preventing COVID-19-related medically attended illness in adults at higher risk for severe COVID-19 outcomes. A booster dose of mRNA-1273 was more effective than BNT162b2, with additional significant benefits against COVID-19-related hospitalizations in older adults. This abstract was previously accepted: Presenter: Hagit Kopel. Relative effectiveness of mRNA-1273, BNT162b2, and Ad26.COV2.S vaccines in adults at higher risk for severe COVID-19 outcomes. Poster presented at IDWeek; October 11-15, 2023; Boston, MA. https://idweek.org.

ABSTRACT TOPIC: DISEASE-SPECIFIC VACCINES

ASVAC1047

Factors Associated with Death in Adult COVID-19 Patients Admitted to Two Referral Hospitals in the Philippines

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Objectives:
The COVID-19 pandemic significantly impacted the Philippines with over 4 million cases and 66,000 deaths reported. We aimed to describe epidemiological and clinical features of adult patients with COVID-19 and the factors associated with death.

Methods:
We enrolled and collected data from adult patients as part of an ongoing COVID-19 vaccine effectiveness study (ClinicalTrials.gov: NCT05518760). Patients ≥18 years of age with fever and/or acute respiratory symptoms and admitted to Vicente Sotto Memorial Medical Center (Cebu) and Mariano Marcos Memorial Medical Center (Ilocos Norte) were invited to participate in the study. After informed consent was obtained, a standard case report form was completed, a nasopharyngeal swab for SARS-COV-2 RT-PCR was obtained, and participants were followed-up during their admission.

Results:
From November 2022 until June 2023, we invited 1,786 patients and enrolled 817. There were 76/817 (9.3%) who had a positive RT-PCR result. Age ranged from 20 to 99 years (mean 61.98, median 65.40, SD=19.80), with 48/76 (63.2%) >60 years old. The most common presenting symptoms were difficulty of breathing (55 or 72.4%), cough (50 or 65.8%), and fever (30 or 39.5%). 52/76 (68%) reported comorbidities, including hypertension (26 or 34.2%), heart disease (14 or 18.4%), and diabetes (13 or 17.1%). Admission length ranged from 0 to 79 days (mean 12 days, median 8 days, SD=11.93). 52/76 (68.4%) required oxygen support, 5/76 (6.6%) required intubation, 13/76 (17.3%) required ICU admission, and 18/76 (23.7%) died. Death was significantly associated with disease severity upon enrolment (P<.001), oxygen support (P<.001), ICU admission (P=.002) and pre-existing heart disease (P=.03).

Conclusions:
Adult patients admitted with COVID-19 tended to be elderly, with co-morbidities and requiring significant hospital resources. Death was associated with increased disease severity classification, need for oxygen support and ICU admission, and pre-existing heart disease.

ABSTRACT TOPIC: RESPIRATORY VIRUSES e.g., INFLUENZA, RESPIRATORY SYNCYTIAL VIRUS

ASVAC1021

Presenteeism: The Reality to be Discussed With COVID-19 Vaccine Recipients

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Objectives:
COVID-19 led to the development of numerous vaccine candidates based on a variety of vaccine technologies. The available vaccines have been shown to be effective with acceptable safety profiles in clinical trials. These COVID-19 vaccines are cost-effective, and in some instances, cost-saving. However, many vaccinated individuals experience local or systemic reactogenicity events such as injection site reactions, headache, or fatigue. Although most events are not severe and resolve quickly, they may affect an individual's ability to perform daily activities, temporarily resulting in absenteeism from work or impaired work performance (presenteeism). This study provides policy makers and clinicians insight for further consideration of vaccine guidelines.

Methods:
Working adults (≥18 years) from the United States and Canada who received their first, second, or booster dose of Novavax vaccine (NVX-CoV2373 [NVX]) or an authorized/approved mRNA COVID-19 vaccine were evaluated. Participants completed a baseline survey on the day of vaccination and filled out a daily diary for six days after receiving the COVID-19 vaccine to record absenteeism, presenteeism, and reactogenicity symptoms.

Results:
1367 adults completed the questionnaire (929 mRNA, 438 NVX), with most respondents (1130) answering after a booster dose. The average percentage of presenteeism (hours with work impairment) over Days 1-6 (Figure 1) or Days 1-2 (Figure 2) post-vaccination was higher for mRNA than NVX recipients. A higher percentage of these hours resulted from mild/moderate work impairment for mRNA than NVX recipients.

Conclusions:
Presenteeism (post-vaccine reactogenicity on working hours) for adults in the United States and Canada was lower for NVX than mRNA recipients, when considering either the first 2 days or up to 6 days post-vaccination. Understanding the impact of vaccines on presenteeism provides policy makers and clinicians the opportunity to share additional insights with patients. Further, our findings show that neither COVID-19 vaccine resulted in significant impairment, as measured by self-reported, vaccine-associated impairment.

ABSTRACT TOPIC: RESPIRATORY VIRUSES e.g., INFLUENZA, RESPIRATORY SYNCYTIAL VIRUS

ASVAC1025

Burden and Impact of Reactogenicity Among United States and Canadian Adults Receiving COVID-19 Vaccines: Vaccine Impact on Productivity (VIP) Study

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Objectives:
A variety of COVID-19 vaccine platforms with acceptable safety profiles have been authorized, however, many vaccinated individuals experience local or systemic reactogenicity. Although most events are not severe and resolve quickly, they may affect an individual's ability to perform daily activities, resulting in absenteeism from work or impaired work performance. To understand the burden of reactogenicity, the VIP study was designed as a prospective, observational study examining COVID-19 vaccine-related absenteeism, presenteeism, and work productivity loss in the real-world.

Methods:
Working adults (aged ≥18) from the US and Canada who received a primary series dose (1 or 2) or a booster dose of either Novavax (NVX) or other authorized/approved COVID-19 vaccines were evaluated. Participants completed a baseline survey on the day of their vaccination and a daily diary for six days afterwards to record absenteeism and presenteeism, and reactogenicity symptoms. Participants completed a Health Care Resource Utilization questionnaire on Day 6. The VIP study's primary endpoint estimated the difference in the percentage of participants with overall work impairment of ›50% on any of the six days post-vaccination.

Results:
1367 adults completed the questionnaire (929 mRNA, 438 NVX-CoV2373) with most (1130) answering after a booster dose. Both the booster dose and the primary series doses (1 or 2) found a propensity-score adjusted lower percentage for work impairment (95% CI) in NVX-CoV2373 recipients [-3.3% (-10.1%, 3.6%)] and [-7.5% (-21.9%, 6.8%)] than mRNA recipients, respectively. In descriptive analyses, differences were seen in the mean percentage of impairment while working due to COVID-19 booster [7.7% vs 10.6%, NVX vs mRNA] and average percentage of non-work-related impairment due to booster ([8.2% vs 11.0%, NVX vs mRNA].

Conclusions:
The NVX-CoV2373 vaccine recipients trended towards less work impairment however, there is not enough evidence to differentiate NVX-CoV2373 from the mRNA vaccines.

ABSTRACT TOPIC: RESPIRATORY VIRUSES e.g., INFLUENZA, RESPIRATORY SYNCYTIAL VIRUS

ASVAC1026

How Much of a Burden Is Vaccine-Related Reactogenicity? Results from a 6-Day Symptom Diary Among United States and Canadian Adults Receiving COVID-19 Vaccines

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Objectives:
The coronavirus disease 2019 (COVID-19) pandemic resulted in development of multiple vaccine candidates using different technologies. Clinical trials have shown the currently approved COVID-19 vaccines to be effective and well-tolerated. However, transient local or systemic reactogenicity events that vaccinated individuals experience (including injection site pain/swelling, myalgia, fatigue, malaise, or headache) may affect their work attendance (absenteeism) or performance (presenteeism). Although most of these events resolve quickly and are not severe, it is unclear what the productivity burden of these events are. To understand the burden of reactogenicity among COVID-19 vaccine recipients, the Vaccine Impact on Productivity (VIP) study was performed. VIP was a prospective, observational study examining vaccine-related absenteeism, presenteeism, and work productivity loss in a real-world setting.

Methods:
A symptom diary was completed over the 6 days post-COVID-19 vaccination. The diary was completed by working adults (aged ≥18 years) from the United States (US) and Canada who received a primary series dose (Dose 1 or 2) or booster dose of NVX-CoV2373 (NVX), mRNA COVID-19 vaccine or other approved/authorized COVID-19 vaccine.

Results:
929 adults receiving mRNA COVID-19 vaccine and 438 receiving NVX-CoV2372 completed the questionnaire with most respondents (1130) receiving a booster dose. Among those that received a booster dose, a lower percentage of recipients experienced reactogenicity events for NVX than for mRNA vaccines (Figure 1). The greatest differences were observed for symptoms related to tolerability of the vaccination itself (injection site reactions and post-injection fatigue). Muscle pain, fatigue, and injection site tenderness/pain were the most frequent events reported for both NVX and mRNA (Figures 1 & 2).

Conclusions:
Findings show that for each symptom captured, a lower percentage of recipients of NVX reported symptoms than for the mRNA vaccines. NVX was well-tolerated, particularly with regard to injection site reactions.

ABSTRACT TOPIC: RESPIRATORY VIRUSES e.g., INFLUENZA, REPIRATORY SYNCYTIAL VIRUS

ASVAC1039

Influenza Associated Acute Necrotizing Encephalopathy (ANEC) and the role of Influenza Vaccination: A Case Study

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Objectives:
Influenza-associated Acute Necrotizing Encephalitis of Childhood (ANEC) is a rare disease which results in rapidly progressive encephalopathy that results in high mortality and morbidity. Although the exact etiologies of this disease remain unknown due to the rarity of the disease, the commonly associated viruses include Influenza A, B, mycoplasma, herpes simplex virus, human herpes virus-6. Although the influenza vaccine is readily available in Singapore, the uptake among preschool children remains low. We report the case study of an 11-year-old boy with influenza A-associated ANEC complicated by cerebral edema, brainstem dysfunction, central diabetes insipidus further complicated by multiorgan dysfunction who had no brainstem function recovery despite treatment with intravenous immunoglobulin (IVIG), Methylprednisolone, tocilizumab and plasma exchange. We use this case to demonstrate the rare but devasting consequence of an Influenza associated infection to encourage vaccine uptake in the community.

ABSTRACT TOPIC: RESPIRATORY VIRUSES e.g., INFLUENZA, REPIRATORY SYNCYTIAL VIRUS

ASVAC1040

Salmonella-delivered COBRA-HA1 antigen derived from H1N1 hemagglutinin sequences elicits broad-spectrum protection against influenza A subtypes

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Objectives:
A universal vaccine is in great demand to address the uncertainties of antigenic drift and mismatch of current influenza vaccines. In this study, a strategy called computationally optimized broadly reactive antigens (COBRA) was used to generate a consensus sequence of the hemagglutinin globular head portion (HA1) collected from 1900 to 2021 to trace evolutionary changes and reflect them in the designed constructs.

Methods:
Mice immunized with the designed constructs produced a humoral response, with a significant increase in IgG level and cell-mediated immune response, including a 2-fold increase in CD4+ and CD8+ T cells. The protective efficacy was shown by up to 4-fold higher production of neutralizing antibodies. A broad protective immune response was conferred by a notable reduction in viral titer in lungs challenged with the influenza A/PR8/34, A/Brisbane/59/2007, and A/California/07/2009 strains. Furthermore, minimal inflammation in the lung tissues of immunized mice demonstrated the efficacy of the Salmonella-delivered COBRA-HA antigen.

Results:
Participants received mRNA-1273.222 50 µg (n=511) or mRNA-1273 50 µg (n=376) as a second booster dose. In participants without previous SARS-CoV-2 infection, neutralizing antibody geometric mean titers (GMTs [95% confidence interval]) against omicron BA.4/BA.5 and ancestral SARS-CoV-2 D614G were significantly higher after mRNA-1273.222 (2324.6 [1921.2-2812.7] and 7322.4 [6386.2-8395.7], respectively) than mRNA-1273 (488.5 [427.4-558.4] and 5651.4 [5055.7-6317.3], respectively) at day 29. Cross-neutralization of omicron BQ1.1, XBB.1 and XBB1.5 variants was also assessed in a random subgroup of mRNA-1273.222 recipients (n=60); neutralizing antibody titers were lower than BA.4/BA.5, suggestive of antibody escape by these variants. No new safety concerns were identified.

Conclusions:
This opens a new horizon for influenza vaccine design and delivery based on Salmonella-mediated COBRA-HA as a highly efficient in vivo antigen presentation strategy against seasonal influenza and pandemic outbreaks.

ABSTRACT TOPIC: EVIDENCED-BASED INTRODUCTION OF NEW VACCINE

ASVAC1030

Remaining Lifetime Burden of Herpes Zosters and Public Health Impact of Adjuvanted Recombinant Zoster Vaccine among Adults >=50 Years in Five Countries in Southeast Asia

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Objectives:
Herpes zoster (HZ) may be underestimated as a public health concern in Southeast Asia. We estimated the disease burden of HZ and assessed the public health impact of vaccinating adults ≥50 years in Malaysia, Philippines, Vietnam, Thailand, and Indonesia with adjuvanted recombinant zoster vaccine (RZV), compared with no vaccination.

Methods:
A static multicohort Markov model with one-year cycle length and lifetime horizon was adapted to each country. Demographics were obtained from the World Health Organization, HZ incidence from a worldwide meta-regression reporting Asian-specific values, proportions of post-herpetic neuralgia (PHN) and non-PHN complications from local/regional studies, and vaccine efficacy from the long-term follow-up trial ZOE-LTFU (NCT02723773). First-dose coverage and second-dose compliance were assumed as 30% and 70%, respectively. One-way sensitivity analysis (OWSA) was conducted to assess robustness of model results.

Results:
Without RZV, there would be 10,203,542 HZ cases (Malaysia: 524,122, Philippines: 1,333,625, Vietnam: 1,817,876, Thailand: 2,496,571, Indonesia: 4,031,347), 2,131,315 PHN cases (Malaysia: 109,102, Philippines: 271,636, Vietnam: 379,158, Thailand: 565,526, Indonesia: 805,893), and 1,384,080 non-PHN complications (Malaysia: 71,096, Philippines: 180,902, Vietnam: 246,590, Thailand: 338,653, and Indonesia: 546,840). Introducing RZV could avoid 2,230,245 (22%) HZ cases (Malaysia: 115,274, Philippines: 297,990, Vietnam: 398,679, Thailand: 513,903, Indonesia: 904,399), 450,895 (21%) PHN cases (Malaysia: 23,312, Philippines: 59,018, Vietnam: 80,646, Thailand: 111,976, Indonesia: 175,943), and 302,526 (22%) non-PHN complications (Malaysia: 15,637, Philippines: 40,421, Vietnam: 54,080, Thailand: 69,709, Indonesia: 122,679). Numbers needed to be vaccinated to avoid one case of HZ or PHN were 15-21 and 68-104 respectively across countries. OWSA showed that first-dose coverage, initial HZ incidence, and vaccine efficacy waning had the largest impact on the estimated number of HZ cases avoided.

Conclusions:
This study highlights a substantial HZ disease burden in Southeast Asia and that introducing RZV in older adults could benefit public health.
Funding: GlaxoSmithKline Biologicals SA (VEO-000513).

ABSTRACT TOPIC: MONITORING AND SURVEILLANCE

ASVAC1038

MesVaccins.net: A New Digital Vaccination Card to Empower People and Healthcare Professionals

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Objectives:
Address the growing complexity and rapid changes in vaccine recommendations, which can lead to contradictory information, doubts, and vaccine hesitancy among both citizens and healthcare professionals (HCPs). The digital vaccination card of MesVaccins.net aims to simplify this complexity through personalization and thereby empower individuals and facilitate better decision-making by HCPs.

Methods:
MesVaccins.net uses a deterministic and provable immunization rule-based decision support system (IDSS) that provides a personalized vaccine diagnostic coupled with a reminder system. Rules, encompassing new recommendations or vaccine shortages, are updated by vaccinology professionals within 48 hours. The system is interoperable with various information systems through the Fast Healthcare Interoperability Resources (FHIR) standard. This IDSS can be used as a stand-alone application called Mentor or can be integrated in a digital vaccination card accessible on desktops or smartphones and shared between citizens and HCPs. This integration allows a common view of vaccine recommendations between persons and HCPs and accurate calculation of the dates of next vaccine doses, sent by email or SMS.

Results:
MesVaccins.net transforms the complicated web of vaccine recommendations into personalized, evidence-based information, increasing the impact of that information and empowering individuals. The tool provides contextual support to HCPs and contributes to their continuing education regarding vaccines. It ensures online traceability of vaccination history, sends personalized reminders, and provides health authorities with real-time data. A study shows that MesVaccins.net changed the physician's initial decision every second time.

Conclusions:
Available on various platforms, MesVaccins.net contributes to the customization, harmonization, and reconciliation of vaccine-related information, directly combating misinformation. By transforming complex information into tailored guidance, the method represents a new way to increase adherence to vaccinations and prevent vaccine hesitancy, supporting public health authorities, HCPs and individual citizens.

ABSTRACT TOPIC: MONITORING AND SURVEILLANCE

ASVAC1058

Do you speak vaccines? Proposal for a structured global terminology on vaccines

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Objectives:
This work proposes the Unified Vaccine Nomenclature (NUVA) to enhance the long-term traceability of vaccinations. Due to variations in vaccine names and brands over time and across geographical areas, and the lack of structured information attached to these denominations, vaccination histories are difficult to interpret. NUVA is used to gather vaccination trails from digital or physical sources. The objective is to build a comprehensive vaccination history, as precise as allowed by the sources and interpretable by information systems.

Methods:
The authors have inventoried vaccine names used in vaccination records, scientific publications, and medical agencies. They have defined "valence" as a functional unit of a vaccine, necessary for assessing vaccination status. A hierarchical representation was used for valences (Figures 1 and 2). A comparative analysis was conducted to examine the characteristics of existing coding systems, evaluating exhaustiveness, ambiguity, informativeness, inclusion of paper and digital traces, and the ability to convert.

Results:
As of July 31, 2023, NUVA includes 970 vaccines, 322 valences, 4,815 external codes and 55 target diseases. Comparison with other terminologies shows that NUVA unambiguously represents the majority of vaccines, providing information on their mode of action in a high percentage of cases (Table 1). The information conveyed by the NUVA codification proves sufficient to calculate vaccination status and the date of the next dose, if necessary.

Conclusions:
NUVA is designed to provide a unified representation of vaccination histories, transcending geographical and temporal variations. The authors believe that this will enable more effective interpretation of vaccine histories and personalisation of vaccination recommendations, contributing to a better understanding and management of global vaccination programmes. The authors intend to make NUVA a public health asset under the Creative Commons CC-BY-ND licence.

ABSTRACT TOPIC: MONITORING AND SURVEILLANCE

ASVAC1059

Standardization and Harmonization of COVID-19 Case and Vaccination Data in Selected Philippine Cohorts

[1]Arturo Jr Ongkeko, [2]Peter Lazo, [2]Manuel O. Gaspar, [2]Terrence Mendoza, [2]Raymond Francis Sarmiento, [3]Regina P. Berba, [3]Marissa Alejandria, [4]Eva Maria Cutiongco-dela Paz

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Objectives:
The study aimed to comprehensively address the problem of data quality in nearly 2 million COVID-19 case and vaccination records from 10 different Philippine cohort sites. Our main objective was to standardize and harmonize these disparate records to produce a clean, de-identified dataset suitable for advanced statistical analyses on COVID-19 vaccine effectiveness among Filipino adults.

Methods:
We systematically performed data cleaning processes to manage missing values and correct errors. A comprehensive, standardized data dictionary was carefully developed to unify variable names, data types, and units. Multiple harmonization techniques such as data merging, outlier analysis, and transformation were applied to seamlessly integrate disparate databases of COVID-19 cases and vaccinations, effectively addressing inconsistencies across various sources.

Results:
The rigorous process significantly improved the data quality, transforming the 1,938,984 raw records into a robust, de-identified data warehouse containing 1,418,472 entries, which includes 83,273 confirmed COVID-19 cases. The refined database also incorporates calculated "total person-days"—381 million for the primary vaccine series and 254 million for the first booster. These calculations set the stage for accurately estimating real-world COVID-19 vaccine effectiveness.

Conclusions:
The study underscores the critical role of thorough data standardization and harmonization in reliably estimating vaccine effectiveness, which is vital to inform future public health strategies. The resulting robust database is now optimally primed for complex epidemiological analyses. As a next step, future work will focus on mapping this invaluable dataset to the Observational Medical Outcomes Partnership (OMOP) standard to further enhance its utility and ensure interoperability for subsequent, comprehensive epidemiologic research.

ABSTRACT TOPIC: VACCINES IN DEVELOPMENT

ASVAC1041

Novel pro-and eukaryotic expression plasmid expressing omicron antigens delivered via Salmonella elicited MHC class I and II based protective immunity

[1]John Hwa Lee

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Objectives:
The latest omicron variants are emerging with mutations in the receptor binding domain (RBD) that confer immune evasion and resistance against current vaccines. Such variants have raised the peril of future vaccine effectiveness, as leading vaccines target the spike protein. Type-IV hypersensitivity, and other ailments due to the dominant Th1 response by leading vaccines, is also to be resolved. Therefore, vaccine that target diverse SARS-CoV-2 proteins and provide broad-spectrum protection and a balanced Th1 and Th2 response is an indispensable armament against the pandemic.

Methods:
In that prospect, a novel dual expression plasmid pJHL270 was developed and demonstrated the expression of omicron antigens exogenously from Salmonella and endogenously in the host cells. The simultaneous activation of MHC class I and II molecules culminated in a balanced Th1 and Th2 response, which was evident through the upsurge of IgG, IgA antibodies, IgG2a/IgG1 ratio, cytokine responses and CD4+, CD8+ T-lymphocytes.

Results:
The level of CD44+ cells showed the trigger for Th1 and Th2 balance and memory-cell activation for long-lasting immunity. The level of IFN-γ+ cells and neutralizing antibodies signifies the anti-viral response. The vaccine protected the hamsters from BA.5 and BA.2.75 omicron viral-challenge, exhibited a significant reduction in lung viral-load and histopathological lesions.

Conclusions:
In addition to two-way antigen expression and bilateral immune elicitation, this Salmonella-based vaccine delivery system can be prospectively applied to humans and a broad range of animals as a convenient alternative to viral and chemical vaccine delivery approaches.

ABSTRACT TOPIC: VACCINES IN DEVELOPMENT

ASVAC1042

Salmonella-mediated oral delivery of multiple-target vaccine constructs with conserved and variable regions of SARS-CoV-2 protect against the Delta and Omicron variants in hamster

[1]John Hwa Lee

[1]College of Veterinary Medicine, Jeonbuk National University, REPUBLIC OF KOREA

Objectives:
Since the emergence of the global pandemic coronavirus disease 2019 (COVID19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the development of vaccines has been the priority as a strategy to control the spread of the disease.

Methods:
Most of the developed vaccines target the spike protein, however, the emerging variants have alterations, particularly in the spike receptor-binding region which may pose resistance to neutralizing antibodies. In this study, we explored the variable (NTD and RBD) and conserved (HR, N, RdRp) regions of SARS-CoV-2 as potential inclusion in a multiple-target vaccine with the exploitation of a Salmonella-based vector for oral mRNA vaccine delivery against Delta and Omicron variants.

Results:
The elevated IgG and IgA level implies the induction of humoral response and the CD4 and CD8 sub-population level exhibits cell-mediated immune responses. The rise in cytokine level states the elicitation of Th1 and Th2 responses. Furthermore, we assessed the protectivity of the vaccine constructs against the Delta and Omicron variants in the hamster model. Immunization of hamsters with the developed vaccine constructs induced neutralizing antibodies and protected the viral-challenged hamsters as supported by the significant decrease in lung viral load and reduced histopathological lesions.

Conclusions:
These results reinforce the use of the conserved and variable regions as potential antigen targets of SARS-CoV-2 as well as the exploitation of bacteria-mediated delivery for oral mRNA vaccine development.

TARGETED VACCINATION STRATEGIES

ASVAC1046

Capabilities, Post-Coup and Cataclysm; covid-19 Vaccine Acceptance and Its Determinants Among Myanmar Migrant Workers in Southern Thailand, Myanmar's Responses to Covid-19

[1]Aung Than Oo

[1]Development and planning, ASEAN Center for Biodiversity, MYANMAR

Objectives:
Myanmar is Thailand's most engaged nation and travel between Thailand and Myanmar, people's home countries, caused the second wave of the Thai pandemic in December 2020. Due to a lack of vaccines at that time in Thailand, both nationals and migrant workers received very few doses. Infection among workers in the seafood market spurred local transmission to over 30 areas. The Coronavirus virus 2019 infected approximately half of the 4000 workers from Myanmar. The purpose of this study was to provide an evidence-based report on the willingness to obtain COVID-19 immunization and the factors related to its acceptance among Myanmar migrant workers in southern Thailand.

Methods:
This research is a cross-sectional study conducted between October and November 2021. The setting of this study was southern Thailand. The population was composed of Myanmar migrant workers. This cross-sectional study consisted of 301 samples collected between October and November 2021 and analyzed using multiple logistic regression

Results:
Thirty-nine percent of workers intended to receive the COVID-19 vaccine within a year. The following factors were associated with obtaining the COVID-19 vaccine: a high level of perception of COVID-19 (AOR = 5.43)

Conclusions:
High reluctance to accept the COVID-19 vaccine among Myanmar migrant workers can influence efforts to eliminate COVID-19. Collaboration with all stakeholders is critical to helping Myanmar workers understand COVID-19, social measures, and preventive beliefs to increase vaccine uptake. Myanmar performed the main community mitigation measures such as strict quarantine for the people who came back from foreign countries, expansion of testing capacity, enforcement of non-pharmaceutical interventions, and improvement of COVID-19 vaccination coverage. Although decreasing the number of COVID-19 cases and deaths, Myanmar is facing the challenges such as human resource shortages in the health sector, community trust for vaccine safety, and inequitable vaccine demand

TARGETED VACCINATION STRATEGIES

ASVAC1055

Effect of Web-based Short Message Service (SMS) Reminders on Vaccination Coverage and Timeliness of Routine Immunizations Among Infants in Baguio City: A Randomized Controlled Trial

[1]Karla F. Rigos, [2]Elain B. Corpus

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Objectives:
To determine the effect of bidirectional SMS reminders on vaccination coverage and timeliness among infants at 6 weeks, 10 weeks and 14 weeks.

Methods:
A randomized controlled field trial was conducted in ten (10) District Health Centers within Baguio City from September 2021 to May 2022. Subjects were randomized to the intervention arm (with SMS reminders) or control arm (without SMS reminders). Multivariate analysis using unconditional logistic regression were conducted to identify independent predictors of delayed vaccinations. Odds and Adjusted Ratio (OR and AOR) with 95% Confidence Interval (CI) were used to estimate the strength of association of SMS reminders on vaccination coverage and timeliness at 6, 10 and 14 weeks.

Results:
A sample size of 566 was computed with an attrition rate of 20%. However, only 530 (84.26%) subjects were enrolled into the study due to the limited study period. There was a significant relationship between bidirectional SMS reminders and vaccine coverage at week 14 (p-value ‹0.05). However, there was no significant relationship between bidirectional SMS reminders at weeks 6, 10 and 14 on vaccination timeliness (p-value ›0.05). Multivariate analysis was done and identified common statistically relevant factors that were noted to significantly increase vaccination coverage on weeks 6, 10 and 14. These included weight of infant, closest health centers, age of caregiver, monthly income, and distance between household and health center.

Conclusions:
Despite the COVID-19 pandemic that caused limitations encountered during this study, bidirectional SMS reminders were statistically significant to increase vaccination coverage at 14 weeks. Despite the lack of statistical significance between SMS reminders and vaccination timeliness, the results of this study showed that SMS reminders can still be incorporated into any available digital platform to achieve timely fully vaccination coverage among children.

VACCINE IMPLEMENTATION

ASVAC1052

Interchangeability of Pneumococcal Conjugate Vaccines in Children – Systematic Review and Meta-Analysis

[1]John Andrew Camposano, [2]Natasha Ann Esteban-Ipac

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[2]Pediatrics, University of the Philippines-Philippine General Hospital, PHILIPPINES

Objectives:
Review conducted for Philippine Guidelines on Periodic Health Examination (PHEX3). Different PCV brands in the Philippines and switch in NIP provide impetus.

Methods:
PubMed search for pediatric studies for vaccine efficacy against IPD, immunogenicity, adverse events

Results:
Vaccine Effectiveness against IPD. Two case-control studies were found. Canadian study found similar VE between PHiD-CV-only, PCV13-only, and mixed schedules. A Taiwan study found similar VE in PCV13-only and PCV7/PHiD-CV+PCV13 schedules, and lower VE for PHiD-CV-only schedule.

Immunogenicity: 5 RCTs and 1 observational study found: Two enrolled infants ≤ 2months-old for primary series immunogenicity; 5 studies 12-15months-old infants for booster. Safety and serotype-specific Immunoglobulin immunogenicity were pooled when applicable. PHiD-CV&PCV13 Primary Series. Pooled immunogenicity from two RCTs showed no significant difference between mixed and single-brand schedules for all 10 shared serotypes but significant difference for mixed schedule over PCV13-only for serotype3. Booster. Pooled immunogenicity from three studies showed no significant difference between mixed and single-brand schedules for 10 common serotypes and three PCV13-only-serotypes. PCV10-SII&PCV13. Phase I/II study evaluated PCV13-primed toddlers randomized to PCV10-SII or PCV13 booster, IgG GMC ratio against all 10 common serotypes showed no significant difference. PCV13&PCV15. Phase III study evaluating immunogenicity of primary series and booster showed no significant difference between mixed and single-brand for the 13 shared serotypes.

Safety. Pooled analysis of (any) adverse events (2 studies) and serious adverse events (4 studies) showed no significant difference between mixed and single-brand schedules.

Certainty of evidence very low due to serious risk of bias, indirectness, inconsistency, and imprecision.

Conclusions:
Based on the above analysis, we recommended that Among apparently healthy children, PCV brands may be interchanged for primary series or booster if continuing with same brand is not feasible, specifically: PHiD-CV and PCV13 for primary and booster; PCV13 and PCV15 for primary and booster; and PCV10-SII may be used as booster in PCV13-primed children.

Introducing PCV15

MSD

Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed)

Vaxneuvance™

Approved for the prevention of pneumococcal disease in **infants and young children**[a,1]

Approved for the prevention of pneumococcal disease in **adults 18 years of age and older**[1]

Image for representation only.

Vaccinate your patients against pneumococcal diseases TODAY

[a] Infants, children and adolescents from 6 weeks through 17 years of age (prior to 18th birthday).

Reference: 1. VAXNEUVANCE™ Prescribing information. LPC-V114-I-122021. Philippines. 2022.

Selected Safety Information about VAXNEUVANCE™

INDICATIONS[1]: Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) is a vaccine indicated in infants, children, and adolescents from 6 weeks through 17 years of age (prior to the 18th birthday) for active immunization for the prevention of invasive disease, pneumonia and acute otitis media caused by Streptococcus pneumoniae serotypes 1, 3, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F, 22F, 23F and 33F. Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) is indicated in adults 18 years of age and older for active immunization for the prevention of invasive disease and pneumonia caused by Streptococcus pneumoniae serotypes 1, 3, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F, 22F, 23F and 33F. Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) may not prevent disease caused by S. pneumoniae serotypes that are not contained in the vaccine. **DOSAGE AND ADMINISTRATION[1]:** For intramuscular use only. Do not inject intravascularly. Administer a 0.5 mL dose of Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) intramuscularly. The preferred site for injection is the anterolateral aspect of the thigh in infants or the deltoid muscle of the upper arm in children and adults. The vaccine should not be injected in the gluteal area or areas where there may be a major nerve trunk and/or blood vessel. **Pediatrics:** ***Routine Vaccination Schedule for Infants and Toddlers*** 3-Dose Regimen (Two-Dose Primary Series Followed by a Toddler Dose) The vaccination regimen consists of 3 doses of Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE), with the first dose given as early as 6 to 12 weeks of age, and a second dose administered 8 weeks later. The third dose should be administered at approximately 11 through 15 months of age. ***4-Dose Regimen (Three-Dose Primary Series Followed by a Toddler Dose)*** The vaccination regimen consists of 4 doses of Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE), with the first dose given as early as 6 to 12 weeks of age, with an interval of 4 to 8 weeks between doses in the primary series. The fourth dose should be administered at approximately 11 through 15 months of age and at least 2 months after the third dose. ***Preterm Infants*** Preterm infants (<37 weeks gestation at birth) should receive a 4-dose regimen (three-dose primary series followed by a toddler dose) of Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE), with the first dose given as early as 6 to 12 weeks of age, with an interval of 4 to 8 weeks between doses in the primary series. The fourth dose should be administered at approximately 11 through 15 months of age and at least 2 months after the third dose. ***Prior Vaccination with Another Pneumococcal Conjugate Vaccine*** The vaccination regimen can be completed with Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) if initiated with another pneumococcal conjugate vaccine. ***Catch-Up Vaccination Schedule for Children 7 Months Through 17 Years of Age*** For children 7 months through 17 years of age who are pneumococcal vaccine-naïve or not fully vaccinated or completed a dosing regimen with lower-valency pneumococcal conjugate vaccines, the following catch-up schedule should be considered: Three doses, with the first two doses given at least 4 weeks apart. The third dose is given after 12 months of age, separated from the second dose by at least 2 months in Infants 7 through 11 months of age. Two doses, with an interval of 2 months between doses in children 12 through 23 months of age. One single dose in children and adolescents 2 through 17 years of age. If a previous pneumococcal conjugate vaccine was administered, at least 2 months should elapse before receiving Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) single dose in adults. **CONTRAINDICATIONS[1]:** Individuals with a history of a severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine or any diphtheria toxoid-containing vaccine. **WARNINGS AND PRECAUTIONS[1]:** Individuals with altered immunocompetence, including those receiving immunosuppressive therapy, may have a reduced immune response to Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE). The potential risk of apnea should be considered when administering any intramuscular vaccine to infants born prematurely. As the benefit of vaccination is high in this group of infants, vaccination generally should not be withheld or delayed. As with any vaccine, Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) may not protect all vaccine recipients. **Pregnancy** There are no adequate and well-controlled studies of Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) in pregnant women, and human data available from clinical trials with Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) have not established the presence or absence of vaccine-associated risk during pregnancy. The decision to vaccinate a woman who is pregnant should consider the woman's risk of pneumococcal disease; Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) should be administered only if clearly needed. **Nursing Mothers** It is not known whether this vaccine is excreted in human milk. **Pediatric Use** The safety and effectiveness of Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) in children younger than 6 weeks of age have not been established. **Geriatric Use** Of the 4,344 individuals aged 50 years and older who received Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE), 2,470 (56.9%) were 65 years and older, and 479 (11.0%) were 75 years and older. **Individuals at Increased Risk for Pneumococcal Disease** 1. Infants born prematurely. 2. Children with Sickle Cell Disease. 3. Children and adults living with HIV. 4. Individuals 18 to 49 years of age with chronic conditions and other risk factors. **DRUG INTERACTIONS AND OTHER FORMS OF INTERACTIONS[1]** ***Use with other vaccines*** Can be administered concomitantly with other routine pediatric vaccines in infants and children less than 2 years of age. There are no data for its use in children and adolescents 2 through 17 years of age. It can be administered concomitantly with inactivated influenza vaccine in adults. There are no data on the concomitant administration of Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) with other vaccines. ***Use with Immunosuppressive Therapies*** Immunosuppressive therapies, including irradiation, antimetabolites, alkylating agents, cytotoxic drugs, corticosteroids, therapeutic proteins and targeted immunomodulators may reduce the immune responses to vaccines. **SIDE EFFECTS[1]:** The safety of Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) in healthy infants (from 6 weeks of age at first vaccination) and toddlers (11 months through 15 months of age) was assessed in 5 randomized, double-blind, active comparator-controlled clinical studies (Protocol 008, Protocol 025, Protocol 027, Protocol 029 and Protocol 031) of 7,229 participants conducted across the Americas, Europe, and Asia Pacific. In four of these studies (Protocol 008, Protocol 027, Protocol 029 and Protocol 031), the safety of Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) was evaluated when administered as a 4-dose regimen given at 2, 4, 6 and 12 through 15 months of age. A fifth study (Protocol 025) evaluated the safety of Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) when administered as a 3-dose regimen given at 2, 4 and 11 through 15 months of age. All 5 studies evaluated the safety of Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) when administered concomitantly with other routine pediatric vaccinations. Protocol 027 also evaluated the safety of mixed 4-dose regimens in participants who completed the regimen with Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) after receiving one or more doses of Pneumococcal Polysaccharide Conjugate Vaccine, 13-Valent. Additionally, four of these studies evaluated safety in preterm infants (<37 weeks gestation at birth). Across all 5 studies, 4,286 participants received a complete regimen of Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE), 2,405 participants received a complete regimen of Prevnar 13 and 538 participants received a mixed regimen. Safety was evaluated using a Vaccination Report Card for up to 14 days postvaccination. Injection-site adverse events and systemic adverse events were solicited on Day 1 through Day 14 postvaccination. Body temperature was solicited on Day 1 through Day 7 postvaccination. Unsolicited adverse events were reported on Day 1 through Day 14 postvaccination. The duration of the safety follow-up period following the last vaccination with Pneumococcal Polysaccharide Conjugate Vaccine, 15-Valent (Adsorbed) (VAXNEUVANCE) was 1 month in Protocol 008 and 6 months in Protocol 025, Protocol 027, Protocol 029 and Protocol 031. Solicited local and systemic adverse reactions within 14 days postvaccination in infants, toddlers, Children, adolescents and adults with vaccine naïve and previous pneumococcal vaccination receiving a primary series and a catch-up vaccination schedule were local reactions like Pain, Erythema, Swelling, Induration and Systemic Reactions like Decreased Appetite, Irritability, Somnolence, Urticaria, Elevated Body Temperature.

Reference: 1. VAXNEUVANCE™ Prescribing information. LPC-V114-I-122021. Philippines. 2022.

Before prescribing, please consult the full prescribing information

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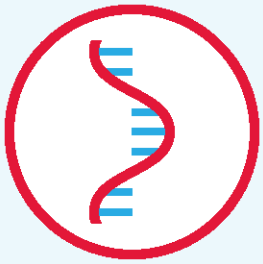

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