

Modelling Respiratory Syncytial Virus Burden and Public Health Impact of RSVPreF3 vaccine among Adults Aged ≥60 Years Old in Five Countries in South-East Asia

Ru Han^{1*}, Chau Ngo Quy², Kim Paul de Castro³, Henny Jaswantlal⁴, Panutchaya Noivong⁵, Dicky Santoso⁶, Minh Nguyen⁷, Adriana Guzman-Holst¹, Désirée Van Oorschot¹, Jorge A. Gomez⁸

¹GSK, Wavre, Belgium; ²Tam Anh General Hospital, Hanoi, Vietnam; ³GSK, Metro Manila, Philippines; ⁴GSK, Selangor, Malaysia; ⁵GSK, Bangkok, Thailand; ⁶GSK, Jakarta, Indonesia; ⁷GSK, Ho Chi Minh City, Vietnam; ⁸GSK, Buenos Aires, Argentina



In South-East Asia, the **burden of RSV disease** is considerable. Vaccination with **adjuvanted RSVPreF3** could substantially **reduce morbidity and mortality** in this region.

Digital poster
Supplemental data

SCAN ME

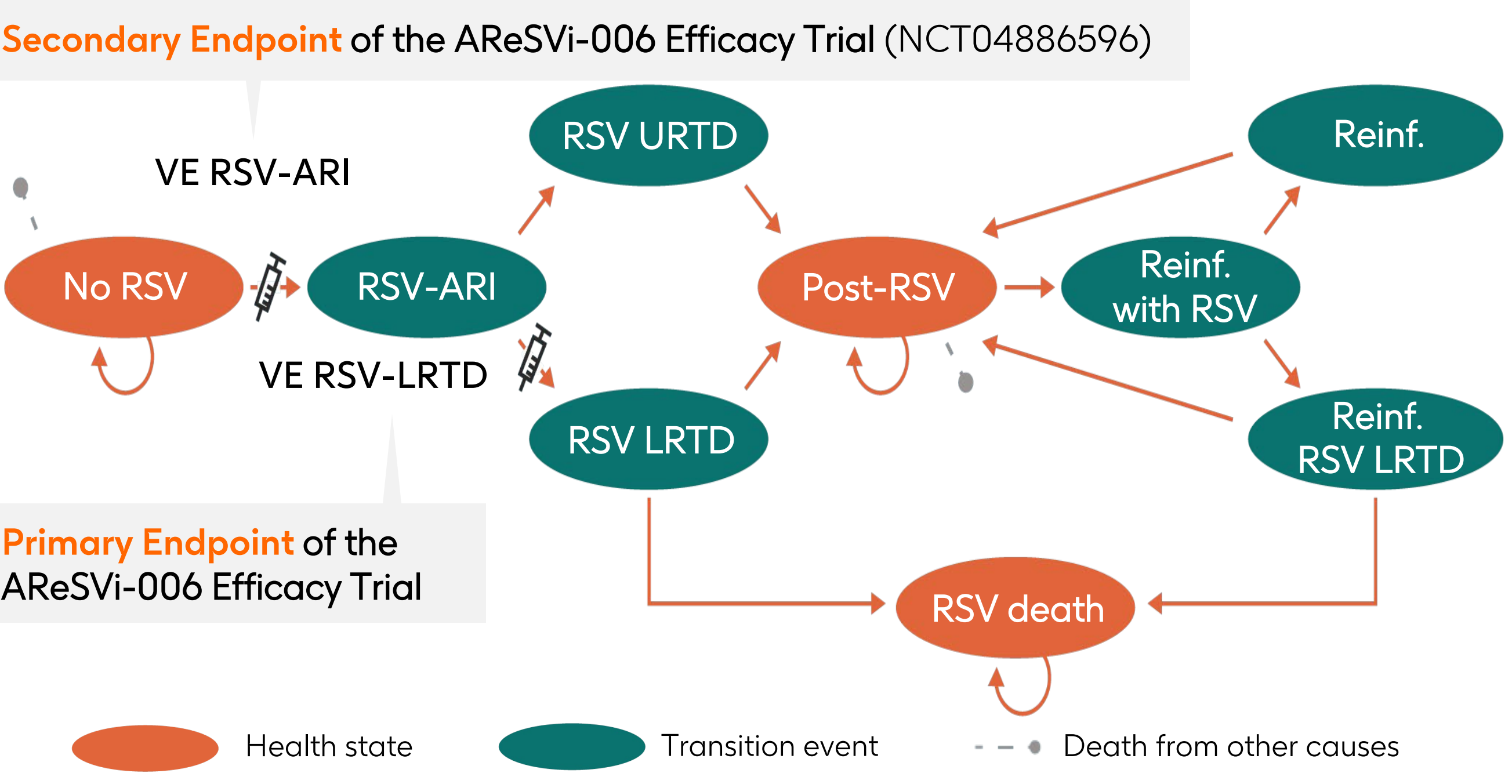
Background

- RSV causes acute respiratory illness (ARI) in individuals of all ages on a global level[1], and leads to severe symptoms, such as lower respiratory tract disease (LRTD), prolonged hospitalization and related pneumonia complication, especially in older adults ≥60 years[2].
- Each year, RSV infections can affect 4–7% of the older adults[3].
- In South-East Asia, RSV data in adults are limited.
- Three RSV vaccines are available : two prefusion F protein vaccines —the RSVFPreF3 vaccine and the AS01_E-adjuvanted RSVPreF3 vaccine— since 2023, and the mRNA vaccine since 2024.

Aims

- To address the burden of Respiratory Syncytial Virus (RSV) disease in South-East Asia
- To project the public health impact of adjuvanted RSVPreF3 vaccine in **Indonesia, Malaysia, Philippines, Thailand, and Vietnam**

Static Markov model structure



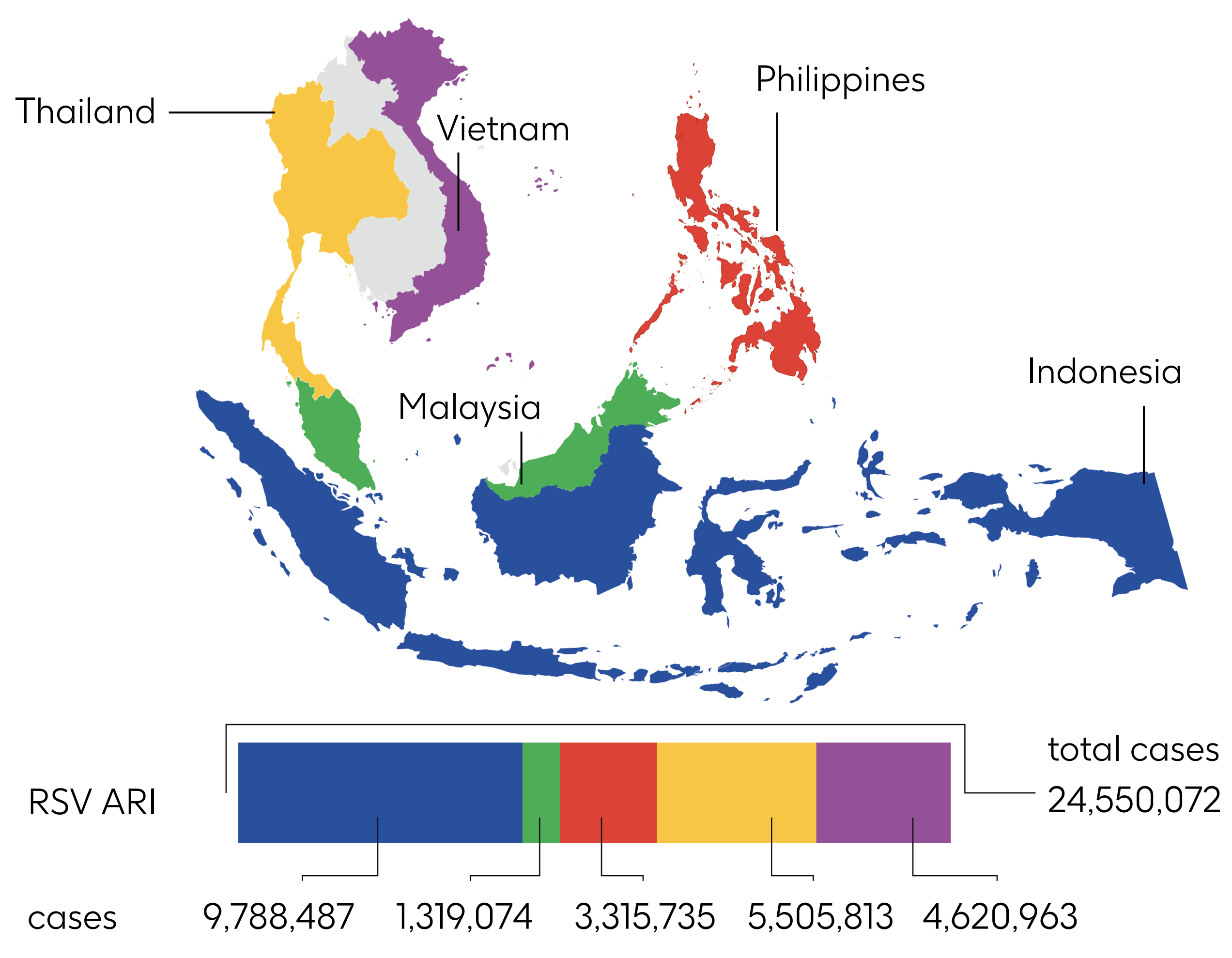
For model inputs, please scan QR code

Conclusions

- The risk of symptomatic RSV ARI might be 19%-20% over the next five years in older adults living in South-East Asia countries, causing a substantial burden to the healthcare system.
- Vaccination might substantially reduce the burden of RSV by avoiding 6,576,503 ARI cases, 4,236,711 LRTD cases, 325,901 pneumonia and 33,611 deaths with a 70% vaccination coverage.
- The numbers needed to vaccinate to prevent RSV-related outcomes were 8-9 for an ARI event, and 13 for an LRTD event.

Results

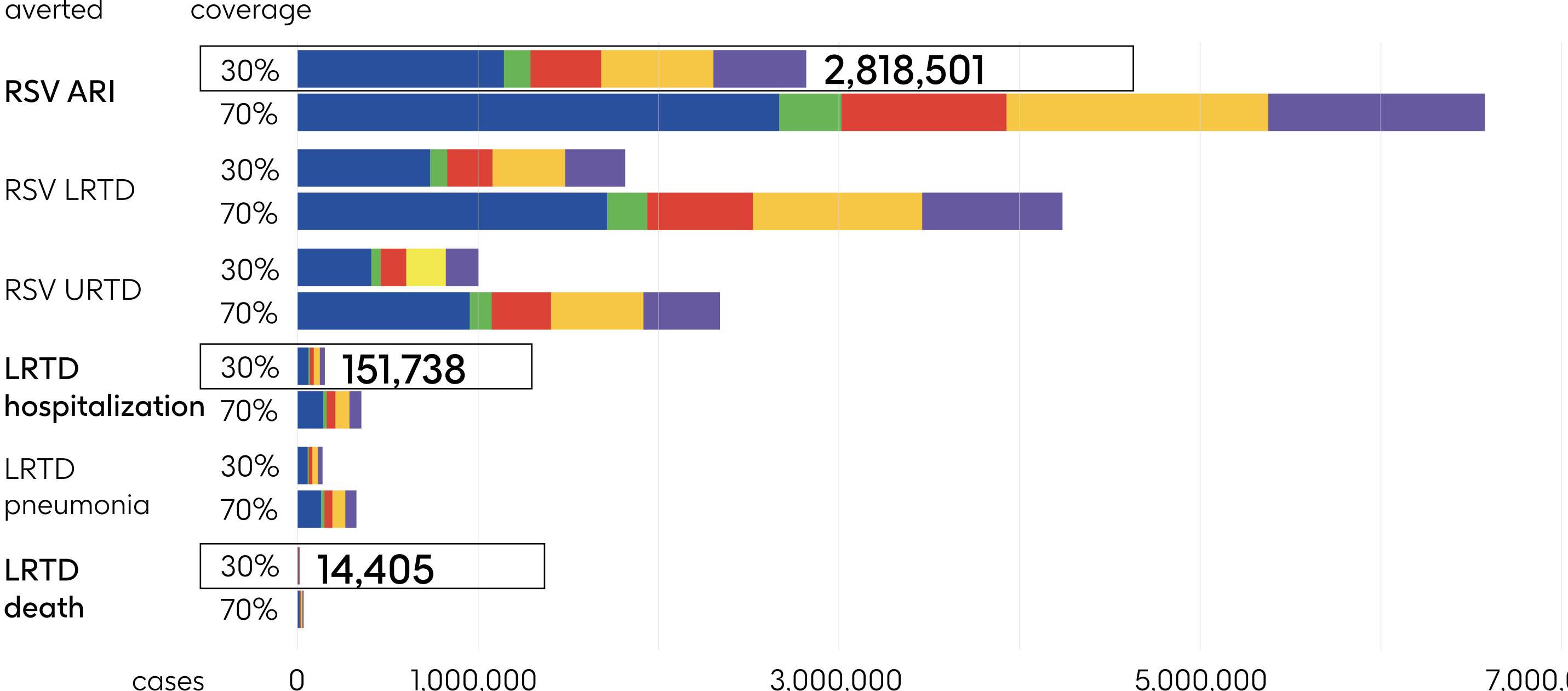
Without vaccination, a total of **24.5 million RSV ARI** are expected to occur over 5 years in adults ≥60 years



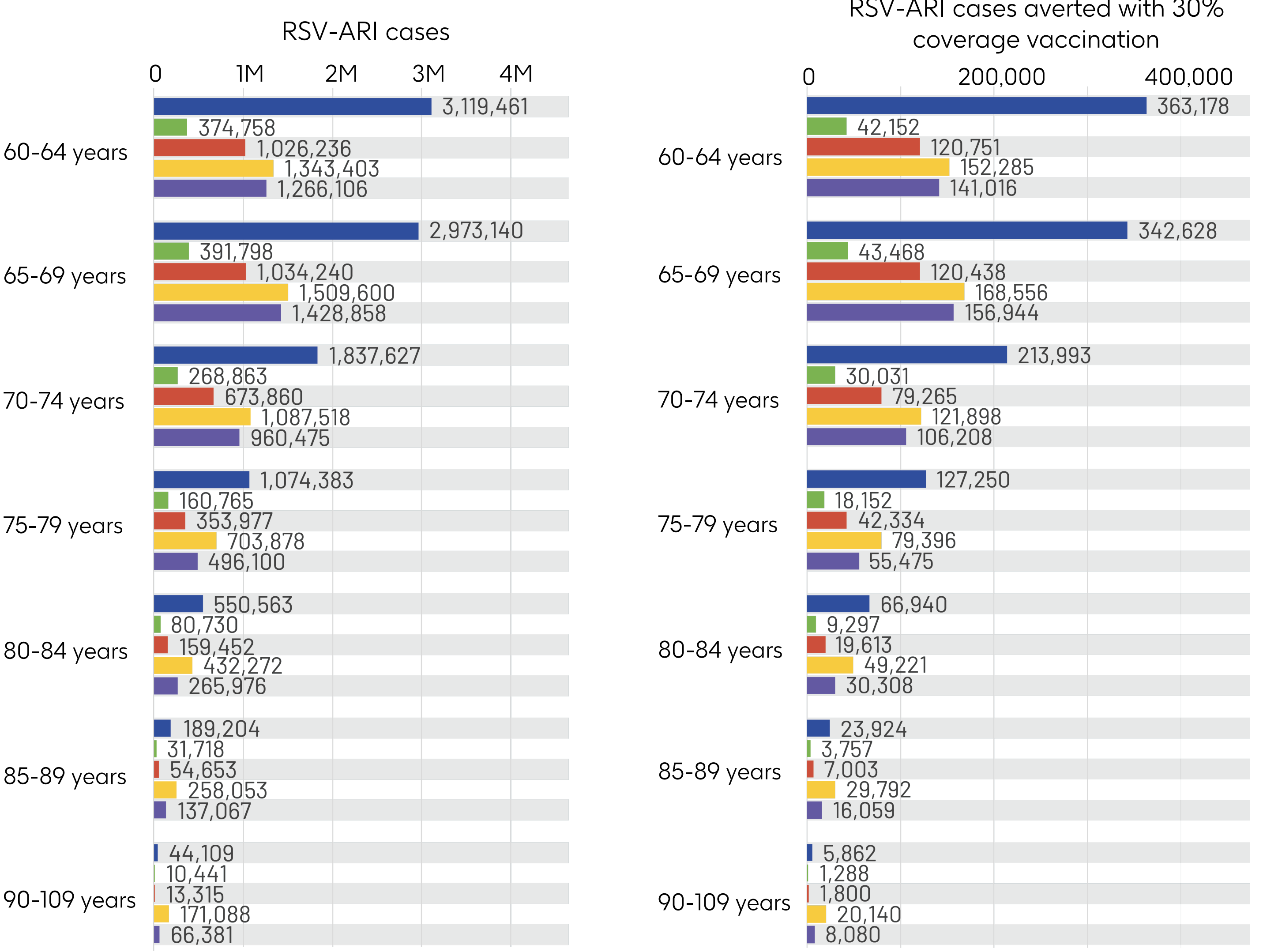
Vaccinating 13 older adults would prevent one RSV LRTD case

NNV	Indonesia	Malaysia	Philippines	Thailand	Vietnam
For 1 RSV ARI	8	9	8	8	9
For 1 RSV LRTD case	13	13	13	13	13

Introducing adjuvanted RSVPreF3 vaccination (30% coverage) could avoid **2.8 million RSV ARI, 151,737 hospitalizations, and 14,405 deaths**



RSV cases can be avoided across all age groups



Abbreviations

ARI, acute respiratory infection; LRTD, lower respiratory tract disease; M, million; Reinf., reinfection; RSV, respiratory syncytial virus; URTD, upper respiratory tract disease; VE, vaccine efficacy

References

[1] Coultas JA, et al., Thorax. 2019; 74(10): 986-993.
[2] Villanueva DH et al. Ther Adv Infect Dis. 2022;9.
[3] Korsten K, et al., Eur Respir J. 2021; 57(4): 2002688.

Acknowledgements

The authors would like to thank Otavio Cintra for his contributions to this work. Business & Decision Life Sciences Medical Communication Service Center c/o GSK provided editorial support. Malack Abbas and Jonathan Ghesquière provided writing support.

Disclosures

Funding: GSK (Study-ID: VEO-001019).
Conflicts of interest: See supplementary slide (QR code).
Trademark: AS01_E is an Adjuvant System containing MPL, QS-21 and liposome (25 mg MPL and 25 µg QS-21)