



Healthy Ageing & Life-Course Immunisation Policy Dialogue Series

Key Takeaways and Action Plan for Vietnam

Organised by:



Ageing Asia™

Knowledge partner:



Supported by:



Healthy Ageing & Life-Course Immunisation

Policy Dialogue Series

Summary

- Vietnam has made great strides in recognising and addressing the challenges that arise from its rapidly ageing population so that older adults continue to live long and healthy lives.
- To discuss how public and private sector can continue to collaborate to further recognise the importance of healthy ageing and life-course immunisation for adults in Vietnam, a roundtable was held with leading experts from various sectors, including government officials, academia, healthy ageing advocates and healthcare providers.
- Participants discussed the barriers faced to recognise life-course immunisation as an important part of healthy ageing, which include low awareness and communication around life-course immunisation, the lack of data around vaccine preventable diseases, as well as accessibility and financing barriers.
- Participants also discussed what can be done to encourage life-course immunisation, which include partnering at the community level to raise awareness of the importance of life-course immunisation, ensure access to vaccines and advocating for policy changes, so that Vietnam can protect its vulnerable older adults.

Introduction

People worldwide are living longer, and this shifting demographic brings about challenges and opportunities. By 2050, one in six people will be over the age of 65, up from one in 11 in 2019.¹ Between now and 2050, Asia Pacific is likely to see the most rapid increase in older citizens.²

Vietnam is facing a similar predicament. From 2020 to 2050, the population of adults aged 65 and above in Vietnam is projected to grow to 20.5%, meaning that one out of every five people is expected to be aged 65 and above. As a result, the old-age dependency ratio is expected to triple from 12.6 to 36.1 old-age persons per 100 working age persons.³

Recognising the challenges of this demographic shift globally, the United Nations has dedicated the years 2021–2030 as the Decade of Healthy Ageing⁴, to improve the lives of older people, their families and communities. Complementing this strategy is the World Health Organization's Immunisation Agenda 2030⁵, which recognises that vaccination can save millions of lives. Immunisation is a crucial pillar to ensure healthy ageing. By increasing the uptake of vaccination globally, individuals of all ages, including older adults, will be able to enjoy longer and healthier lives.

Vietnam has made efforts to adapt and address the challenges brought about by an ageing population. In the country's Socio-Economic Development Strategy (2011 – 2020), Socio-Economic Development Plan (2016 – 2020) and National Strategy of Social Security (2011 – 2020), provision have been made for healthcare for older adults, including building up comprehensive security mechanisms, healthcare and social assistance to better address the economic, social and health risks of older adults.⁶

To discuss how the public and private sectors can continue to collaborate to recognise the importance of healthy ageing and

life-course immunisation for adults in Vietnam, a roundtable was held in Hanoi on 16th August 2022 with leading experts from various sectors, including public health, academia, healthy ageing advocates and healthcare providers.

This roundtable is one of a series of policy dialogues organised across Southeast Asia by Ageing Asia, and supported by Sanofi, to align on progressive policy actions to improve the access to and uptake of life-course immunisation in-country.

This roundtable series builds on the insights in the 2021 report published by the EU-ASEAN Business Council, KPMG and Sanofi, titled '[The Decade of Healthy Ageing in ASEAN: Role of Life-course Immunisation](#)' in 2021⁷, which explored the barriers and solutions to life-course immunisation access and uptake.

The insights and solutions gathered during the 2022 roundtable have been summarised in this report, with no direct attribution to any participants. However, contributing participants and organisations have been credited to these highlights.

We thank all roundtable participants for their valuable contributions.

Life-course immunisation landscape in Vietnam

Vietnam's national Expanded Programme on Immunisation (EPI) currently focuses on infants and Vietnam has met national targets for most childhood vaccines – over 90% of children are fully immunised by the time they are a year old.⁸ However when it comes to adult vaccinations, the situation is reversed. While the Vietnamese government has plans to include influenza vaccines in the EPI from 2030 under Resolution No. 104 of the Government⁹, there is opportunity to ensure that vulnerable groups are covered under this plan and what more can be done to protect vulnerable populations, including the elderly, in the immediate.

Healthy Ageing & Life-Course Immunisation

Policy Dialogue Series

There is currently no population-wide immunisation policies and the uptake of immunisation beyond childhood remains low in comparison to other countries in the region. For example, Vietnam falls significantly short of the 75% target rate set by the World Health Organization for influenza vaccination – only 1% of adults aged 65 years and above and 7% of physicians in Vietnam take up influenza vaccines.¹⁰

Current policies in Vietnam are focused on caring for and promoting the role of older adults in a societal context. These include the National Action Program for the Vietnamese Elderly 2012–2020, which aims to enhance both physical and mental health for older adults. However, because life-course immunisation is not yet recognised, these policies do not include provisions for vaccination.

The threat of infectious diseases, especially to vulnerable populations including older adults, cannot be underestimated. As we age, our immune system starts to decline and this increases the risk of infectious diseases, such as influenza. While data on the burden of influenza in Vietnam is scarce, studies have found that influenza was detected in up to 23% of severe acute respiratory infection patients, the majority of which are older adults.¹¹

Older adults are especially vulnerable because they suffer from immunosenescence¹², which is the progressive decline of the immune system's ability to fight infections caused by ageing. As such, there is an acute need to protect them.

Beside the impact on health outcomes for older adults, an ageing population also has implications for healthcare spending. Between 2020 and 2060, public health expenditure is expected to increase by 1.84 percentage points as a result of an ageing population.¹³

As a key pillar of healthy ageing, life-course immunisation can protect older adults in Vietnam from influenza and other infectious diseases, minimising the health and economic burden of influenza and other infectious diseases and their associated health complications. An analysis of 94 low- and middle-income countries concluded a \$44 return on every \$1 spent on immunisation.¹⁴ Another study in the United States found cost savings of more than \$15,000 per quality-adjusted life-year in adults aged 65 years and above.

In Vietnam, it is estimated that health spending would make up a comparatively lower share of Gross Domestic Product (GDP) in 2060 if people age in better health – population ageing health expenditure as a share of GDP will only increase by 1.75 percentage points between 2020 and 2060.¹⁵ This is compared to the increase of 1.93 percentage points if people age in poor

health. While these figures may seem small, based on 2018 GDP estimates, it would amount to savings of US\$440 million in 2060. This shows that policies to promote healthy ageing, including life-course immunisation, can help to reduce growth in health spending as a result of population ageing.

What are the barriers faced to recognise life-course immunisation as an important part of healthy ageing in Vietnam?

Lack of awareness and communication around healthy ageing and life-course immunisation

Currently, the approach to healthcare for older adults focuses on providing treatment for acute care rather than on prevention. In addition, efforts are concentrated on the prevention and control of chronic diseases such as cancer and cardiovascular diseases.

However, healthy ageing goes beyond providing treatment and encompasses a holistic view to wellbeing, including life-course immunisation as a pillar of healthy ageing.

In addition, there is limited communication for adult immunisations as the focus has traditionally been on childhood vaccination. As a result, older adults may not be aware of what immunisations they need to take over the life-course.

“Communication for life-course immunisation is very limited in Vietnam and is usually focused on children. As a result, many adults do not even know what vaccinations they need to get, therefore there is a need to do more to communicate to this group.”

Nguyen Ngoc Quynh – United Nations Population Fund

Paucity of data and surveillance around vaccine preventable diseases

The roundtable participants also cited the lack of data around vaccine preventable diseases in Vietnam – especially around influenza – as a reason to why influenza vaccines are not subsidised or promoted within the healthcare system. While human influenza surveillance programmes – routine monitoring for influenza-like-illness and severe acute respiratory illness in hospital settings and passive reporting of severe viral pneumonia – have been well-established in Vietnam since 2006, there have been no systematic assessments of the Vietnam-specific

Healthy Ageing & Life-Course Immunisation

Policy Dialogue Series

influenza disease burden or the cost-effectiveness of vaccines.¹⁵ The lack of data has implications for the private sector and insurance companies. Due to the lack of data on the burden of influenza, as well as the cost effectiveness of vaccines, insurance companies are not compelled to develop policies and products covering immunisation.

Additionally, while Vietnam has developed the National Immunisation Information System (NIIS) to track vaccination records in 2017, as of 2020, the NIIS is focused on childhood immunisation and covers less a quarter of the country's population, most of whom are women and children.^{17,18} There is an opportunity to leverage this system to onboard older adults too. By inclusion in the registry, this will enable the consolidation of health records, including immunisation, which can subsequently support scheduling of appointments and sending calendar reminders to people due for vaccination.¹⁹

“Vietnam does not have data on vaccine preventable diseases, especially in elderly, therefore there is not enough supporting evidence for insurance companies to provide immunisation policies”

Lam Minh Yen – *Infectious Diseases Specialist*

Lack of infrastructure and skilled healthcare professionals

Older persons seek medical attention at district or provincial hospitals. While the Vietnamese government has issued directives requiring all provincial general hospitals to establish a geriatric department, not all provincial hospitals have resources to train for geriatric specialties.²⁰ As it is, as of 2016, there were only 50 geriatric departments in provincial hospitals and central hospitals and 302 geriatric clinics in the total of more than 800 hospitals in the country.²¹ The lack of resources to train for geriatric specialties, coupled with limited existing geriatric facilities and specialists, mean that there are limited geriatric specialists who understand and can advocate for life-course immunisation.

In addition, Vietnam's low physician to population ratio of 0.8 per 1,000 persons hinder the accessibility to vaccines, as vaccines are primarily administered by physicians.

Furthermore, the involvement of family doctors, who are closer to the community, to advocate for life-course immunisation has not been fully realised. The uptake of influenza vaccination among healthcare professionals remains low at 7%²², implying that they do not have high confidence in vaccines and subsequently are not recommending them to their patients and the community.²³

Financing barriers

High out-of-pocket vaccine costs for individuals

Influenza vaccines are primarily accessed through private, fee-based vaccination centres. Adult vaccines are not covered under the social health insurance or the Expanded Programme on Immunisation (EPI) and are financed entirely out-of-pocket, costing between VND 120,000 to 350,000 (US\$5.20 – US\$15.00) per dose.²⁴ This can be expensive for an average citizen. The average monthly income per capita in 2021 is approximately VND 4.2 million²⁵, which means that one vaccine costs about 4% of an individual's monthly income.

Lack of consensus around how vaccines should be funded

On a national level, there is a lack of consensus around how vaccines should be funded. There are proponents who argue that life-course immunisation should be funded by health insurance but without data around the cost effectiveness of vaccines, health insurance companies are not compelled to cover vaccinations. Others argue that vaccination should be provided through social protection funds, and deeper discussions are needed to understand the feasibility and sustainability of utilizing these funds.

What can be done to encourage life-course immunisation so that we protect the older adults in Vietnam?

To further complement existing efforts by the Vietnamese government in promoting healthy ageing, the recognition of life-course immunisation as an important pillar of healthy ageing, is urgently needed in these three areas:

- Raise awareness on the importance of life-course immunisation – **Awareness**
- Ensure adequate and efficient access to life-course immunisation – **Access**
- Drive the uptake of life-course immunisation – **Action**

Awareness: Raising awareness on the importance of life-course immunisation

Partnering at a community/grassroots level to improve advocacy around healthy ageing

Participants at the dialogue session stressed the importance of partnering with grassroot organisations to spread messages around the importance of healthy ageing.

Vietnam traditionally views the family as an important factor in the care of older people, and family members are considered the primary caregivers of older people.²⁶ This implies that the benefits of vaccination for older people should be communicated to young people. As caregivers, young people can influence

Healthy Ageing & Life-Course Immunisation

Policy Dialogue Series

the healthcare decisions for their older family members and can even pay for immunisations on behalf of their parents and older family members.

There is also the opportunity to engage with patients, caregivers, advocates and organisations such as the Vietnam Association of the Elderly, the Vietnam Youth Union and the Vietnam Women's Union to amplify the messages on the benefits of life-course immunisation at the community level.

Intergenerational Self-help Clubs (ISHCs), which are community-based organisations that promote healthy longevity through a variety of inter-generational activities, are also key stakeholders to engage as they promote healthy and active lifestyles and provide access to health screenings, check-ups and treatments to older adults.

Through these partners, as well as working with communal health centres, immunisation information and services can be provided to vulnerable older adults in Vietnam.

“The discussion on healthy aging and life-course immunisation in Vietnam is very timely. For us to achieve our goals, advocacy for policy changes is needed and we need to include vaccinations in insurance coverage. However, before policy changes are enacted, we must strengthen communication to three stakeholder groups – older adults, caregivers, advocates and grassroot organisations such as the unions and other associations.”

Dang Thi Kim Hanh – University of Public Health

Increase advocacy efforts with government officials and policy makers to further recognise the importance of life-course immunisation

Leverage the voice of grassroot organisations to advocate with the government officials and policy makers (including national assembly members and the relevant ministries such as the Ministry of Labour and Ministry of Health) to highlight the pressing issues and barriers around life-course immunisation and pave the way towards deeper conversations on this topic. This is especially important as Vietnam makes progress on its aim to achieve universal healthcare by 2025 with 95% of the population covered by health insurance.²⁷

Access: Ensure adequate and efficient access to life-course immunisation

The establishment of an adult immunisation schedule and is crucial in adoption a preventative healthcare strategy. Vietnam has taken the first step in its vaccination programme roadmap by expanding its EPI to include seasonal influenza vaccines in 2030. However, there is further opportunity to work with partners and stakeholders, both in the public and private sector, to jointly determine the groups covered in the EPI, as well as mobilise efforts to implement and achieve the goals outlined in the roadmap. Additional initiatives can include covering vaccination under Vietnam's universal health coverage programme and providing subsidies for vaccines in the schedule, which will help to drive the uptake of vaccines among older adults.

Action: Implement the relevant mechanisms to enable life-course immunisation

Working with partners to collect data around vaccine preventable diseases

To address the lack of data around vaccine preventable diseases, especially influenza, grassroot organisations and relevant stakeholders could collaborate, pooling their resources together to commission research studies on the burden of influenza and the cost-effectiveness of vaccines in Vietnam. The data collected could help convince insurers and policymakers on the need to prioritise life-course immunisation.

Provide incentives to drive vaccination uptake

To entice insurance companies to play a role in the funding ecosystem for life-course immunisation, there is a need to create a business case to include adult vaccination in their policies and products. This could include demonstrating the cost effectiveness of vaccines. Studies have shown that the cost effectiveness of influenza vaccination ranged from US\$8,000 to US\$39,000 per quality-adjusted life-year for adults aged 18 and above.²⁸

Healthcare professionals can also be provided with incentives to drive vaccination uptake. For example, the United Kingdom offers financial incentives that are linked to vaccine coverage rate for healthcare professionals to encourage the uptake of influenza vaccines.²⁹

Leverage sin taxes to finance health promotion and vaccination efforts

The use of sin taxes – a tax levied on a specific activity or goods (e.g., tobacco and alcohol) that are deemed harmful to individuals or society – may be a viable means to fund health promotion efforts such as life-course immunisation. This has worked in other countries. For example, Taiwan and the Philippines have used the revenue from sin taxes to procure new vaccines for public immunisation programmes.³⁰

Healthy Ageing & Life-Course Immunisation Policy Dialogue Series

Conclusion

The Vietnamese government has made strides to recognise and address the challenges brought about by an ageing population, and this report discusses where more can be done to ensure that the older adult population continue to live healthy lives and that the vision of the United Nations' Decade of Healthy Ageing is met.

Life-course immunisation is an important pillar of healthy ageing to reach these goals, as it protects against vaccine-preventable diseases, such as influenza and reduces complications due to chronic diseases.

While there are barriers in recognising the importance of life-course immunisation, there are also opportunities to champion and advocate for life-course immunisation for healthy ageing. Complementing existing efforts by the government, community-level engagement will be crucial to reach stakeholders from the ground up so that Vietnam can protect its vulnerable older adults.

Healthy Ageing & Life-Course Immunisation Policy Dialogue Series

Attendees (in alphabetical order)

- Bach Thi Chinh – *Vietnam Vaccine Company*
- Camilla Williamson – *HelpAge International*
- Dang Thi Kim Hanh – *University of Public Health*
- Do Si Hien – *National Immunization Technical Advisory Group, Vietnam*
- Do Thai Hung – *Pasteur Institute Nha Trang*
- Janice Chia – *Ageing Asia*
- Lam Minh Yen – *Infectious Diseases Specialist*
- Luke Treloar – **Moderator**
- Nguyen Minh Hong – *National Institute of Hygiene and Epidemiology*
- Nguyen Ngoc Quynh – *United Nations Population Fund*
- Nguyen Viet Anh – *National Institute for Control of Vaccine and Biologicals*
- Pham Quang Thai – *National Institute of Hygiene and Epidemiology*
- Vo Thi Kim Ngan – *KPMG*
- Ada Wong – *Sanofi*
- David Tick – *Sanofi*
- Hoang Nguyen Lan Anh – *Sanofi*
- Le Thanh Man – *Sanofi*
- Le Thuy Hanh – *Sanofi*
- Nguyen Duc Quynh Loan – *Sanofi*
- Nguyen Minh Quoc – *Sanofi*
- Nguyen Thi Luong Phong – *Sanofi*
- Pham Thi Thu Ha – *Sanofi*

Healthy Ageing & Life-Course Immunisation Policy Dialogue Series

References

- 1 United Nations, Department of Economic and Social Affairs. (2019). 'World Population Ageing 2019: Highlights'. [Online]. Available: <https://www.un.org/en/development/desa/population/publications/pdf/ageing/WorldPopulationAgeing2019-Highlights.pdf> [Accessed August 2022].
- 2 World Economic Forum. 2021. Is Asia Pacific ready to age gracefully? Available: <https://www.weforum.org/agenda/2021/10/is-asia-pacific-ready-to-be-the-world-s-most-rapidly-ageing-region/> [Accessed August 2022].
- 3 EU-ABC, KPMG, Sanofi and WPPF. 2021. 'The Decade of Healthy Ageing in ASEAN: Role of Life-course Immunisation'. Available: <https://healthyageingasean.org>. [Accessed August 2022].
- 4 World Health Organisation. 'UN Decade of Healthy Ageing: 2021-2030'. Available: <https://www.who.int/initiatives/decade-of-healthy-ageing>. [Accessed August 2022].
- 5 World Health Organisation. 2020. 'Immunisation Agenda 2030: A Global Strategy to Leave No One Behind'. Available: <https://www.who.int/teams/immunization-vaccines-and-biologicals/strategies/ia2030>. [Accessed August 2022].
- 6 Ageing Asia. 2020. 4th Asia Pacific Silver Economy Business Opportunities Report.
- 7 EU-ABC, KPMG, Sanofi and WPPF. 2021. 'The Decade of Healthy Ageing in ASEAN: Role of Life-course Immunisation'. Available: <https://healthyageingasean.org>. [Accessed August 2022].
- 8 Nguyen T. D. Dang A. D. Van Damme P. Nguyen C. V. Duong H. T. Goossens H. Theeten H. & Leuridan E. 2015. Coverage of the expanded program on immunization in Vietnam: results from 2 cluster surveys and routine reports. *Human Vaccines & Immunotherapeutics* 1526–33. Available: <https://pubmed.ncbi.nlm.nih.gov/25970593/#:~:text=According%20to%20both%20methods%2C%20the,TT%2B%20for%20childbearing%20aged%20women>. [Accessed August 2022].
- 9 Vietnam Plus. 2022. Four more vaccines to be included in Expanded Immunisation Programme. Available: <https://en.vietnamplus.vn/four-more-vaccines-to-be-included-in-expanded-immunisation-programme/235669.vnp> [Accessed August 2022].
- 10 EU-ABC, KPMG, Sanofi and WPPF. 2021. 'The Decade of Healthy Ageing in ASEAN: Role of Life-course Immunisation'. Available: <https://healthyageingasean.org>. [Accessed August 2022].
- 11 Khanh N. C. Fowlkes A. L. Nghia N. D. Duong T. N. Tu N. H. Tu T. A. McFarland J. W. Nguyen T. T. M. Ha N. T. & Gould P. L. 2021. Burden of influenza-associated respiratory hospitalizations Vietnam 2014-2016. *Emerging Infectious Diseases* 2648–2657. Available at: <https://stacks.cdc.gov/view/cdc/110417> [Accessed August 2022].
- 12 Varnica Bajaj, Nirupa Gadi, Allison P. Spihlman, Samantha C. Wu, Christopher H. Choi, and Vaishali R. Moulton. 2021. "Aging, Immunity, and COVID-19: How Age Influences the Host Immune Response to Coronavirus Infections?" *Frontiers in Physiology*. 11. Available: <https://www.frontiersin.org/articles/10.3389/fphys.2020.571416/full> [Accessed August 2022].
- 13 World Health Organization. 2020. How will population ageing affect health expenditure trends in Viet Nam and what are the implications if people age in good health? Available: <https://apps.who.int/iris/bitstream/handle/10665/337713/WHO-EURO-2020-1714-41465-56531-eng.pdf?sequence=1&isAllowed=y> [Accessed August 2022].
- 14 Ozawa, S et al. 2016. Return On Investment From Childhood Immunization In Low- And Middle-Income Countries, 2011-20 Available at: <https://pubmed.ncbi.nlm.nih.gov/26858370/> [Accessed August 2022].
- 15 World Health Organization. 2020. How will population ageing affect health expenditure trends in Viet Nam and what are the implications if people age in good health? Available: <https://apps.who.int/iris/bitstream/handle/10665/337713/WHO-EURO-2020-1714-41465-56531-eng.pdf?sequence=1&isAllowed=y> [Accessed August 2022].
- 16 World Health Organization. 2016. Mande in Vietnam vaccines: efforts to develop sustainable in-country manufacturing for seasonal and pandemic influenza vaccines. Available: <https://apps.who.int/iris/bitstream/handle/10665/254184/WHO-HIS-TTI-172-eng.pdf?sequence=1&isAllowed=y> [Accessed August 2022].
- 17 PATH. 2020. 'National Expanded Program on Immunization. Engaging private-sector providers in immunization data management and use: Perspectives from Vietnam.'
- 18 PATH. 2019. Sharing lessons learned from Vietnam's national electronic immunization registry to improve global vaccination coverage. Available: <https://www.path.org/media-center/sharing-lessons-learned-from-vietnams-national-electronic-immunization-registry-to-improve-global-vaccination-coverage/> [Accessed August 2022].
- 19 Vietnam News. 2017. Health ministry launches National Immunisation Information System Available at: <https://vietnamnews.vn/society/health/373535/health-ministry-launches-national-immunisation-information-system.html> [Accessed August 2022].
- 20 Vu, N.C., M.T. Tran, L.T. Dang, and Y. Saito. 2020. 'Discussion, Conclusions, and Recommendations', in Vu, N.C., M.T. Tran, L.T. Dang, C.L. Chei, and Y. Saito (eds.), *Ageing and Health in Viet Nam*, Jakarta: ERIA, pp.183-199. Available at: https://www.eria.org/uploads/media/Books/2020-Ageing-and-Health-VietNam/19_Chapter-14-Conclusion-Recommendations.pdf [Accessed August 2022].
- 21 Vietnam National Committee on Ageing and UNFPA. 2019. Towards a comprehensive national policy for an ageing Vietnam. Available: https://vietnam.un.org/sites/default/files/2019-08/Toward%20a%20comprehensive%20ageing%20policy_ENG_0.pdf [Accessed August 2022].
- 22 EU-ABC, KPMG, Sanofi and WPPF. 2021. 'The Decade of Healthy Ageing in ASEAN: Role of Life-course Immunisation'. Available: <https://healthyageingasean.org>. [Accessed August 2022].
- 23 L. C. Karlsson, S. Lewandowsky, J. Antfolk, P. Salo, et al. 'The association between vaccination confidence, vaccination behavior, and willingness to recommend vaccines among Finnish healthcare workers' *PLoS ONE*. 2019:14(10). Available at: <https://pubmed.ncbi.nlm.nih.gov/31671115/> [Accessed August 2022].
- 24 EU-ABC, KPMG, Sanofi and WPPF. 2021. 'The Decade of Healthy Ageing in ASEAN: Role of Life-course Immunisation'. Available: <https://healthyageingasean.org>. [Accessed August 2022].
- 25 Statista. 2021. Average monthly income per capita in Vietnam 2010-2021. Available at: <https://www.statista.com/statistics/1021888/vietnam-average-monthly-income-per-capita/#:~:text=Average%20monthly%20income%20per%20capita%20in%20Vietnam%202010%2D2021&text=In%202021%2C%20the%20average%20monthly,year%20on%20year%20since%202010>. [Accessed August 2022].
- 26 Laguna, E.P. 2020. 'Caregiving in Vietnamese Families', in Vu, N.C., M.T. Tran, L.T. Dang, C.L. Chei, and Y. Saito (eds.), *Ageing and Health in Viet Nam*, Jakarta: ERIA, pp.146-162. Available at: https://www.eria.org/uploads/media/Books/2020-Ageing-and-Health-VietNam/17_Chapter-12-Caregiving-new.pdf [Accessed August 2022].
- 27 Vietnam Express. 2022. Solutions to increase health insurance coverage in Vietnam. Available at: <https://e.vnexpress.net/news/news/solutions-to-increase-health-insurance-coverage-in-vietnam-4452799.html> [Accessed August 2022].
- 28 Dabestani N. M. Leidner A. J. Seiber E. E. Kim H. Graitcer S. B. Foppa I. M. & Bridges C. B. (2019). A review of the cost-effectiveness of adult influenza vaccination and other preventive services. *Preventive Medicine*. Available at: <https://pubmed.ncbi.nlm.nih.gov/31152830/#:~:text=Results%20are%20presented%20as%20costs,saving%20to%20%2415%2C300%20per%20QALY>. [Accessed August 2022].
- 29 Kassianos G. Banerjee A. Baron-Papillon F. Hampson A. W. McElhaney J. E. McGeer A. Rigoine de Fougerolles T. Rothholz M. Seale H. & Tan L. J. 2021. Key policy and programmatic factors to improve influenza vaccination rates based on the experience from four high-performing countries. *Drugs in Context*. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7789908/> [Accessed August 2022].
- 30 ThinkWell. 2019. Sustainable immunization funding in Asia Pacific. Available at: <https://thinkwell.global/wp-content/uploads/2020/10/Asia-Pacific-Policy-Brief-1.16.20.pdf> [Accessed August 2022].