

Building resilient healthcare systems: The economic and health benefits of adult immunisation

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Speakers list

- Professor Lotte Steuten, PhD, Executive Director of the Office of Health Economics
- David Sinclair, Chief Executive of the International Longevity Centre UK
- Dr Raymond Hutubessy, Health Economist and Team Lead Value of Vaccines Team at the Department of Immunisation, Vaccines and Biologicals at the WHO in Geneva, Switzerland
- Dr Michael Moore, AM, Former Minister of Health and Adjunct Professor at the University of Canberra
- Prof. Dr. Dennis Ostwald, Founder & CEO at the WifOR Institute

Moderator

- Mark Chataway, Managing Partner, FINN Partners

Executive summary

- Societies are growing older, and healthy longevity is becoming an ever more important issue
- Investments must be made to promote health at all ages, fostering not only a longer life expectancy but also a higher quality of life. Enhancing health and well-being allows individuals to contribute more effectively to their communities and stimulate economic growth
- Adult vaccination will play a key role in this strategy
- There is a growing body of evidence supporting vaccination as a key driver of economic productivity, with the recent OHE report indicating that adult vaccination shows returns of around nineteen times the initial investment
- In order to convince policymakers effectively of the benefits of adult vaccination, the communication strategy needs to change. “COVID-fatigue” threatens to undermine future vaccination campaigns, and acceptance can be improved by learning from extensive research on vaccine confidence
- For policymakers and their advisers, messaging needs to move beyond the concept that the vaccine will just reduce the chances of the target disease. Policymakers need to be made aware that vaccination has far broader implications
 - Reduced hospitalisation rates keep people out of the hospital, freeing healthcare resources
 - Many vaccinations have been shown to reduce the rates of illnesses such as heart attack, stroke and asthma, sometimes for many years after the person is vaccinated
 - Reduced illness symptoms and better health lead to better productivity, more time spent with family, and more time volunteering. These activities are vital to prosperous societies
- Vaccination must be reframed as a long-term investment, a virtuous circle, where money spent on vaccination improves health, improves productivity, and in turn, creates wealth that can be used to finance the next phase of vaccination

Exposing the challenges posed by an ageing global population

The demographics of societies worldwide are changing. Older individuals form an increasing proportion of most Western societies. “Across the world, there is a 10-year gap between life expectancy and healthy life expectancy,” said David Sinclair, Chief Executive of the International Longevity Centre UK. This situation is evident in almost every country, with quality of life not keeping up with advances in medical care. Some people stay alive longer but are inactive towards the end of their lives.

John Maynard Keynes predicted in 1930 that people would work 15 hours per week by 2030. Working weeks have reduced dramatically in the past hundred years, but those over 65 need

to work more to get closer to that 15-hour average, while those under 65 may move in the opposite direction, Sinclair implied.

“It’s a daft way to create a society, and the main activity we then do in older age, in the UK and in many rich countries, is spending time alone watching TV,” said Sinclair. He notes that life in advanced age is miserable for some people, spending prolonged periods alone, and in poor health. Were they healthier, and were society better adapted to its current demographic make-up, people might work part-time, volunteer or form active communities.

Life expectancies have risen across almost the entire world, but older groups are often plagued with poor health and isolation in industrialised nations because a gradual demographic shift has allowed complacency to develop. In countries such as China and Korea, life expectancy shifts have occurred over 30 years, which took 300 years in Europe. This rapid advancement will force innovation.

Longevity and health at all ages need to become focal areas of health spending. Adult vaccinations can play a crucial role.

Value calculation and the OHE report

For every euro spent on vaccination, nineteen times that value is returned to society, according to a recent report published by the Office of Health Economics (OHE), a leading authority on global health economics. Vaccinations deliver this value by preventing illness or making diseases less severe and through enabling work and spending. People will not need to go to the hospital or GP as often, thereby alleviating pressure on health systems. More value is generated through increased economic activity, resulting in greater revenues to the government.

The OHE calculation was created using pre-COVID-19 data, according to Professor Lotte Steuten, the deputy chief executive at OHE and one of the authors of the report. The true value of vaccination could be up to twice as high because prevention has more value during periods when a severe strain is placed on the healthcare system.

“Depending on what approach you take to evaluate life, and to evaluate health gains, you will get a different result, and if you ask five economists, you will get six opinions on how to do that,” said Professor Steuten. “The key message is, we had to torture the data very, very hard to get an estimate that is below one [a one-to-one return on investment]. So, no matter what method you apply, and despite some gaps in the data ...we are very confident that this generates a positive benefit to society.”

Exploring the multifaceted value and impact of vaccines on public health

Sinclair reinforced Steuten's conclusion. "Countries that spend more per capita on immunisation gain more years in life expectancy, and they perform better...If we keep people healthier, they spend more, they care more, they work more, and they volunteer more." However, this clearcut benefit does not reach into current communications regarding vaccination.

In many countries, the uptake of adult vaccines is dire, even in at-risk groups. Sinclair added that there is an emerging body of evidence of the links between vaccination and non-communicable diseases. Notably, a reduction in the likelihood of developing cardiac conditions and dementia, two conditions that become significant health concerns in later life.

"These illnesses are expensive," said Professor Dennis Ostwald, the Founder and CEO of WifOR Institute. "For instance, cardiovascular diseases in Europe impose substantial costs on society, which I estimate to account for approximately four to five percent of GDP. If we could prevent just one-third of these costs, we could achieve up to 1.7 percent more growth."

For much of the world currently facing economic stagnation, prevention through vaccination may be an effective way to drive economic growth. Improving health and increasing productivity means that wealth is generated, Professor Ostwald said.

Communication failures and vaccine attitude

Many individuals and even many policymakers have not really learned from the COVID-19 pandemic. The pre-pandemic mindset still exists, and issues such as missed adult immunisations remain a problem. The post-pandemic vaccination rates are significantly lower. This may be due to the concept of "COVID fatigue," in which individuals are effectively burnt out from health messaging, said Dr Ken Rabin, the Special Projects Editor of the Journal of Health Communications.

Ideology and attitude also play a major role in vaccine acceptance. Studies suggest that individuals with right-wing beliefs are less likely to be well-informed about vaccination. Additionally, studies regarding bird flu indicate that rural individuals, those most likely to be impacted, are also less likely to be willing to receive a vaccination.

"COVID-19 health communication simply was not being done well," noted Rabin. "The CDC published a chart outlining who should receive the COVID-19 vaccine. Following this, they released another chart to clarify how to read the first one." During this time, misinformation and disinformation flourished and continue to pose a growing problem. Unclear messaging enables misinformation to spread. During the COVID-19 pandemic, some political decisions

were not backed by robust evidence and prevented efficient health system responses in several contexts, added Dr Philipp Lambach, Executive Secretary of Immunisation and Vaccine-related Implementation Research Advisory Committee, Value of Vaccines at the WHO. Making correct, evidence-based decisions is key to politicians or decision-makers who want their decisions to be backed by robust data on the safety and benefits of health interventions.

Ministers of Health saw clearly the impact of vaccine-preventable diseases during COVID-19, with many facing calls from intensive care units reporting capacity shortages, said Sinclair.

Investment in health: evaluation of adult vaccine programmes by finance policymakers

Groups in civil society must act to reach those outside the medical community and policymakers, Rodrigo Scotini, Executive Director of the Infectious Disease Alliance, said. Their involvement is crucial for advocacy, lending credibility and support. If policymakers are convinced that it is a community movement, they will think there will be appropriate support to drive vaccination policy at the next election, added Dr Michael Moore AM, Adjunct Professor at the University of Canberra and a former minister of health.

Getting policymakers on board requires clear messaging. Policymakers often operate on relatively short-term political cycles, said Professor Steuten, and so, when given a figure such as the one-to-nineteen return, want to know where this money should come from and when it is returning.

For health ministers, that initial investment often gets crowded out by spending which gives a more immediate return on investment. “The waiting times for elective surgery have to be minimised, and they all use a huge amount of money. The difference is that they are an expenditure, whereas vaccination is an investment,” said Dr Moore.

The full return on that investment may not be in that individual’s term of government; however, they need to be aware that there will be near-term rewards. For example, immunisation against respiratory infections will improve access to hospitals. There is strong evidence for these points, but we need anecdotes as well as evidence.

Part of the nineteenfold return goes back to the health system in the form of reductions in health system usage. Much of it will go to the individuals receiving the vaccination, businesses, or the pension system. Value assessments must incorporate data across a wide range of metrics to explain this return on investment. The data presented must then be tailored to the individuals involved in the discussion. A minister of health will want to know that healthcare capacity is being efficiently used, while a minister of the economy would be

more likely to advocate for vaccine policies with data on productivity and reductions in sick leave.

“We need to convince presidents of the world that they can win elections with better health,” said Professor Ostwald. The language used must adapt, and the importance of prevention must be underlined both in the short term and in the longer term. Life-saving vaccines are in competition for funding with other areas such as infrastructure and industry; the point must be made that they are a good investment.

Professor Ostwald said credit rating agencies should be interested, as these groups judge country-level performance. Countries that invest in health perform better economically and are more resilient over time, leading to higher credit ratings and, thus, better capacity to refinance themselves.

Productivity due to good health is key to this message. Vaccines are a potential tool to stabilise economies against poverty. “We need to be more productive to create more growth. How can we create more productivity? We’re talking about AI, longer lives, or postponing the retirement age. We need healthy people who are productive. And how can we enhance people’s health? We need to invest in prevention and vaccination,” said Professor Ostwald.

This increase in productivity will, in turn, raise tax revenue, providing funding to reinvest in more vaccination campaigns and innovative vaccines, creating a positive feedback loop. This cycle requires communication and coordination across the different stakeholders involved in the vaccine product development pipeline, from early development to registration to the uptake of vaccines, said Dr Raymond Hutubessy, Health Economist and Team Lead of the Value of Vaccines Team at the Department of Immunisation, Vaccines and Biologicals at the WHO.

Vaccines must reach those who need them most

In underserved populations, life expectancy is significantly lower—sometimes by as much as ten years—than in the general population, said Professor Cath Chamberlain of the University of Melbourne. Vaccination is critical in closing this gap, but Chamberlain noted that access to vaccines is still a major hurdle for these groups. Chamberlain’s work is principally amongst Australia’s First Nations, Aboriginal and Torres Strait Islander communities.

Disparities in vaccine access are not just an issue in low-income countries; they are also prevalent across wealthier nations where marginalised groups, including ethnic minorities and rural populations, face significant barriers to receiving healthcare services. As Professor Steuten pointed out, while vaccines have proven to reduce mortality and severe illness, they are not reaching those who need them most.

Community-led solutions are essential for improving vaccine uptake, particularly in marginalised communities. Drawing on the example of indigenous Australian communities during the COVID-19 pandemic, Chamberlain explained that grassroots efforts to combat misinformation and encourage vaccination had led to higher rates of protection compared to the broader population. “When we have community-led solutions, we can do better,” she concluded.

Conclusion

Many vaccines are currently in development. Some will succeed in clinical trials, deliver important benefits, and require sustainable investment. Without that investment, all the work on developing these vaccines is undermined.

If we want a higher share of spending to go to prevention, vaccine advocates have to be ready to deal with a much more complex world - one of credit rating agencies, ministers, and the corresponding political language to deal with multiple different stakeholders.

As Professor Ostwald concluded, “We need to invest in prevention and health... Healthy people not only enjoy a higher quality of life, but are also more productive, and thereby create more societal wealth.” In a world facing rapid population ageing and unprecedented health challenges, the call to invest in vaccination has never been clearer or more urgent.

“As we are currently also doing with climate change. We really need to think of longer-term investments,” said Dr Hutubessy. Adult vaccination must be considered as an investment and one that will pay off dividends that will allow for further reinvestment. The evidence exists; it is now a case of changing our thinking.