# Name: Simon Brassel



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**Function: Senior Principal Economist** 

Main expertise: Economic modelling & evaluation, quantification of the broader value of vaccines, value frameworks for vaccines and antibiotics





## Simon Brassel

Senior Principal Economist

## Disclaimer:

Tł	ne Ask	Considerations			
-	What evidence demonstrates the economic and societal benefits of adult immunization programs, such as cost- effectiveness and return on investment?	<ul> <li>Which benefits?</li> <li>What evidence?</li> <li>Whose perspective?</li> </ul>			
•	How can policymakers incorporate these broader benefits into decision- making frameworks while addressing evidence gaps?	<ul> <li>What is required?</li> <li>Which tools/methods can help?</li> </ul>			
•	What strategies ensure a balance between immediate costs and long-term benefits in funding adult vaccination programs?	<ul><li>What is the challenge?</li><li>What mechanisms can help?</li></ul>			



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What evidence demonstrates the economic and societal benefits of adult immunization programs, such as cost-effectiveness and return on investment?

# What are broader benefits?



Source: OHE (Bell et al. 2022) but see other Value Frameworks by Jit (2015), Bloom (2017), Beck (2022), DiFusco (2023) or Hutubessy (2023)

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What evidence demonstrates the economic and societal benefits of adult immunization programs, such as cost-effectiveness and return on investment?

# What related evidence does exist for adult immunisation ?

- Narrative lit review, 4 adult immunisation programmes, 10 countries.
- While there is ample literature describing the broader value of vaccination in general, our research shows that many elements of value are currently underrepresented in the academic literature.
- Without such evidence, the full value of immunisation programmes is likely underestimated by policy and decision makers, risking suboptimal investment decisions.



What evidence demonstrates the economic and societal benefits of adult immunization programs, such as cost-effectiveness and return on investment?

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# Whose perspective requires which type of evaluation?

	Outcome focused	Financed focused		
	Cost – Effectiveness Analysis	Fiscal Health Modelling	Benefit Cost Analysis	
Goal	Maximise health using cost-effectiveness analysis in combination with threshold or comparison	Estimate the return on investment for the public sector	Estimate the return on investment for the society	
Decision maker	Ministry of Health or third-party payers (e.g. public and private insurers)	Government (e.g. Ministries of Finance, Economic Development or Welfare)	Government (e.g. Ministries of Finance, Economic Development or Welfare) and society	
Outcome	ICER Net benefits Comparative ICERs	Cost and consequences combined in aggregated form (e.g. NPV, IRR, ROI,)	Benefit Cost Ratios, Net Benefits	

Source: Own visualisation based on Mauskopf et al (2022), with adaptations based on Robinson et al (2019) and Standaert (2020)

How can policymakers incorporate these broader benefits into decision-making frameworks while addressing evidence gaps?

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## Different economic evaluations can serve as complementors



# What evidence does exist?

Outcome focused	Financed	Financed focused				
Cost – Effectiveness Analysis	Fiscal Health Modelling	Benefit Cost Analysis				
<ul> <li>Vaccination is one of the most effective things health care systems can undertake (Plotkin and Mortimer 1988)</li> <li>Majority of adult vaccinates have favourable cost-effectiveness profiles in US and Canada (Leidner et al. 2019)</li> </ul>	<ul> <li>HPV, Shingles and PD: £2.18 per £1 invested (Brassel &amp; Steuten, 2020)</li> <li>HPV in Germany (adolescence): investing €1 in universal HPV vaccination could yield €1.7 in gross tax revenue over the lifetime of the</li> </ul>	<ul> <li>On average, childhood immunisation programmes in 94 countries delivered a return on investment of \$52 per \$1 invested, Sim et al. (2020)</li> <li>Adult vaccines return up to 19 times their costs to society (el Banhawi,</li> </ul>				

cohorts (Kotsopoulos, 2015)

 Next generation vaccines likely to be highly cost-effective as well (see Waterlow et al. 2023 for an example)

Respiratory vaccinations in the UK return up to 27 times their costs over 5 years (Harrison et al. 2025)

Large amounts of evidence related to allocating constrained health resources.

More evidence needed to assess broader benefits and their impact on public short-, medium- and long-term budgets.

2024)



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Uncommonly and informally considered

Not considered

# What is required?

Value elements	Belgium	Canada	France	Germany	Italy	Japan	Sweden	UK	US
Disease impact on length of life									
Disease impact on QoL of patients									
Disease impact on QoL of carers									
Burden of disease									
Value to other interventions									
Transmission value									
Prevent the development of AMR									
Social equity									
Productivity of patients						*			
Productivity of carers									
Costs-offset to healthcare system									
Macroeconomic effects									
* Note that although productivity of patients and carers should be considered according to the Japanese guidelines, to date there is no evidence that this has happened except in recent discussions of vaccinations for rotavirus (productivity of carers) – source: Pfizer Japan, personal communication. QoL = Quality of Life; AMR = Antimicrobial Resistance									

Commonly and informally considered

For HTA policymakers and practitioners to fully recognize any aspect of value created by vaccines, they must have

- Evidence: empirical high-quality data demonstrating the value accrued for each relevant value element
- Willingness: motivation to incorporate this evidence into HTA and broader decision-making processes
- Ability: technical/analytic tools and approaches to incorporate this evidence into HTA and broader decision-making processes

Formally considered

Key:

# How can policymakers incorporate these broader benefits into decision-making frameworks while addressing evidence gaps?







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What strategies ensure a balance between immediate costs and longterm benefits in funding adult vaccination programs?

# The prevention challenge

- Short-term focus of policy makers
  - Prevention (immunisation) often delivers long-term benefits
- Narrow focus of current HTA methods
  - Broader value elements often not considered
- At the same time: HTA relies (rightly) on consistency.
  - Should vaccines get special treatment?
- Reality: on average, countries spend 0.08% of their GDP on immunisation, and less than 1% of healthcare expenditure (Tunnicliffe et al. (2025)
- First step: Re-assess some of the HTA principles for vaccines (e.g. through Joint Clinical Assessment in 2030)

#### FIGURE 4: IMMUNISATION EXPENDITURE PER CAPITA AS A % OF GDP 2016-2023



#### FIGURE 5: HEALTH AND PREVENTION EXPENDITURE AS A SHARE OF GDP



What strategies ensure a balance between immediate costs and long-term benefits in funding adult vaccination programs?

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# Explore new financial and contracting options



## **Social impact bonds** third party investor, receives a positive return if the programme is effective



Payment over time spread large upfront cost over time, debt can be held by an investor



## A prevention investment standard mandating proportionate increases in prevention spending



#### A central ringfenced prevention fund similar to Cancer Drugs Fund and Innovative Medicines Fund in the UK, but with greater benefits for health system, government and society

![](_page_13_Picture_11.jpeg)

## Adjusting accountability

non-health organisation have a role to play and will reap benefits.

One promising solution could be increased vaccination through occupational health programs

## CAVEAT:

- Budgets are necessary, but not sufficient
- What matters is population level uptake and impact
- Implementation matters

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# For further enquiries, please contact:

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![](_page_14_Picture_3.jpeg)

# THANK YOU