

Use of health and economic impact estimates at Gavi to inform investment decisions and resource mobilization

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Outline

1. About Gavi
2. Routine uses of health and economic impact data at Gavi
3. Specific uses to support resource mobilization and vaccine investment strategies
4. Current context and priorities

Gavi's mission

TO SAVE LIVES

AND PROTECT
PEOPLE'S HEALTH

BY INCREASING EQUITABLE
AND SUSTAINABLE
USE OF VACCINES



Gavi support for routine immunisation since 2000: **78 lower-income countries**

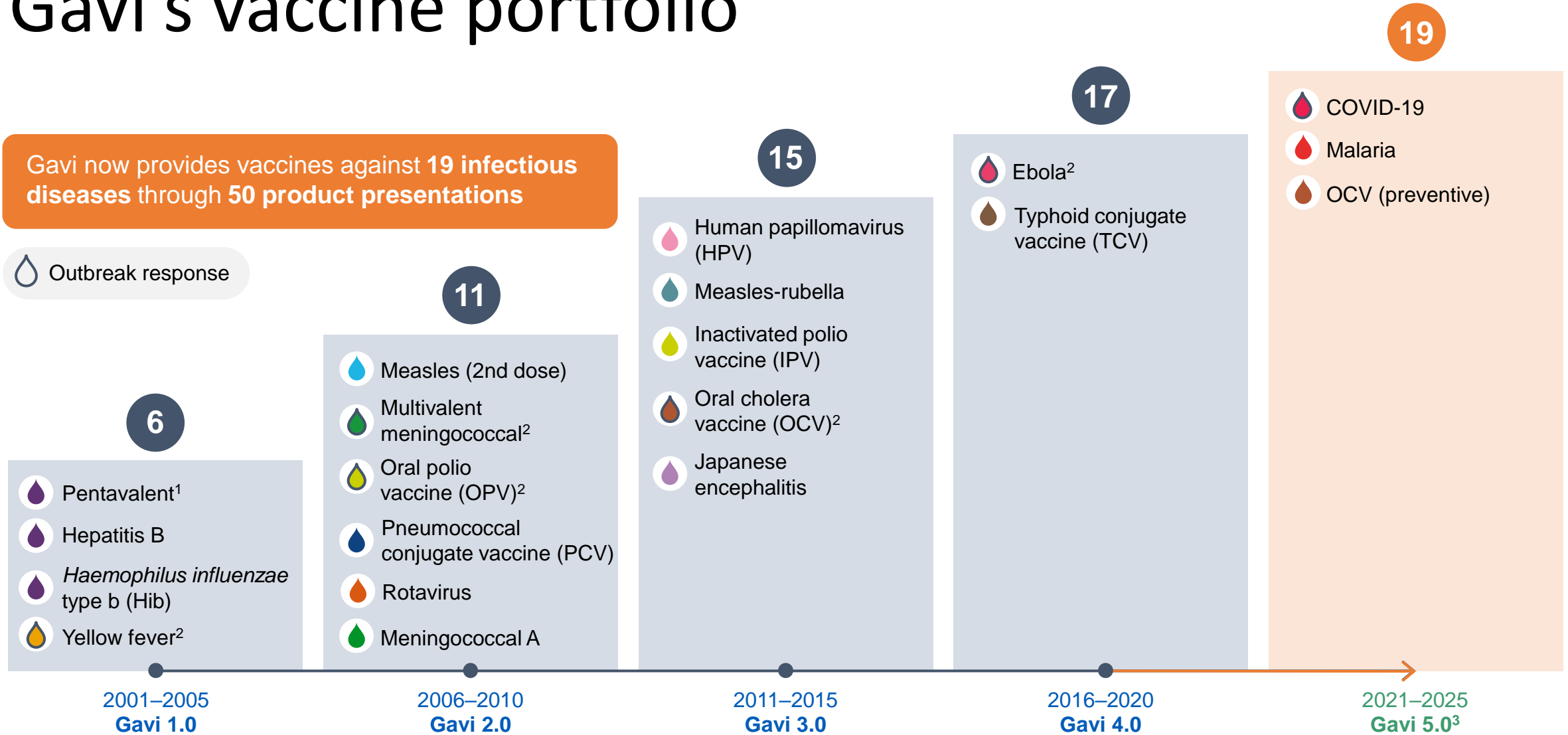
Eligible for Gavi support in 2021–2025: **57 lower-income countries** (54 countries in 2023)

COVAX support for COVID-19 immunisation since 2021: **146 countries** (87 lower-income countries)

Gavi's vaccine portfolio

Gavi now provides vaccines against **19 infectious diseases** through **50 product presentations**

Outbreak response

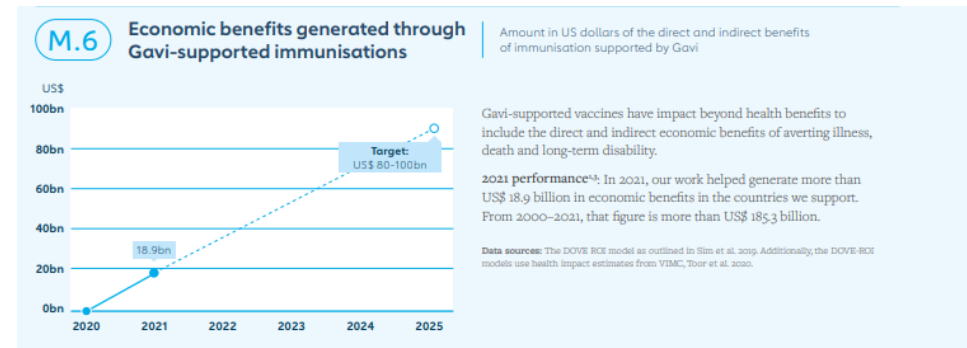
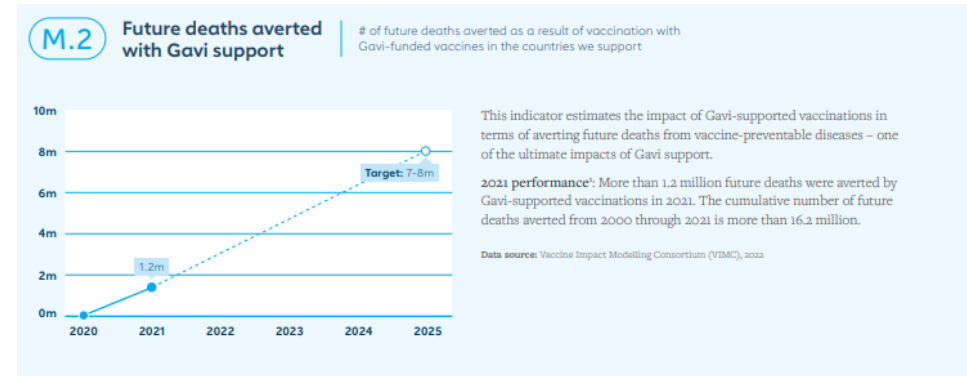


¹ Diphtheria, tetanus, pertussis (DTP) boosters, hepatitis B, *Haemophilus influenzae* type b (Hib) ² Emergency stockpiles

³ Paused vaccines from VIS 2018: DTP boosters, rabies, hepatitis B birth dose, RSV; delayed: multivalent meningococcal conjugate vaccine (MMCV)

Routine uses of health and economic impact estimates

- Inform strategic direction and set targets
- Report on strategy progress
- Inform advocacy and communication messages
- Support resource mobilization
- Inform portfolio level investments and policy decisions



Use of health and economic impact to support resource mobilization: the Gavi 2021-2025 Investment Opportunity

The 2021-2025 Investment Opportunity outlined the Gavi 5.0 vision and the investment opportunity for donors

Top line commitments

- 7- 8 million deaths averted
- \$80-\$100bn in economic benefits

Tool for donor managers to facilitate communication with donors with indicative return on investment for a potential investment in Gavi 5.0



VACCINE	2016-2020			2021-2025		
	Expenditure in US\$ millions	Number immunised	Deaths averted	Expenditure in US\$ millions	Number immunised	Deaths averted
Pneumococcal	2,402	190m	500k	1,304	280m	~700k
Rotavirus	668	140m	90k	558	220m	~150k
Pentavalent ^a	544	310m	3.5m	348	210m	~2.8m
IPV ^b	495	210m	-	800	190m	-
Measles and rubella ^b	376	690m	1.7m	294	490m	~1.4m
HPV ^{b,c}	206	14m	300k	516	50m	~950k
Typhoid ^d	41	40m	20k	302	250m	~150k
Yellow Fever ^b	263	150m	650k	424	240m	~700k
Meningitis A ^b	169	140m	150k	115	80m	~100k
Japanese encephalitis ^b	9	19m	8k	9	13m	~5k
Ebola	20	140m	-	150	-	-
Cholera ^e	133	19m	-	32	-	-
VIS vaccines ^f	46	-	-	360	180m	~40-90k
Other ^g	39	-	-	55	-	-
CEPI outbreak vaccines ^h	77	-	-	0	1	-
TOTAL	5.5 billion		~7 million original forecast: 5-6 million	5.3 billion		7-8 million

1. Global Impact

The expected impact of a donor contribution is computed as the ratio of the donor contribution amount to Gavi's total 2021-2025 forecasted expenditures applied to the total expected impact. Total expenditures and total expected impact based on analyses conducted for the Investment Opportunity 2021-2025 and rely on the November 2018 Gavi financial forecast.

Instructions: Insert expected donor contribution in USD in the blue cell to obtain indicative estimate of impact

	Investment	Deaths averted	Children immunised	Economic benefits
Total 2021-2025	\$9,367,000,000	7,500,000	300,000,000	\$90,000,000,000
Proposed investment	\$3,000,000,000	2,400,000	96,000,000	\$28,820,000,000

Estimates are for indicative purposes only. These should not be interpreted as evaluative or promised statements of real-world impact and are not to be tied to any performance framework or targets of expected Gavi impact (e.g. donor reporting).

Use of health and economic impact to support resource mobilization: the Gavi 2021-2025 Investment Opportunity

Top line commitments based on:

- Vaccine level projections of expenditures and associated coverage
- deaths averted estimated in a systematic way across all Gavi-supported vaccines by the Vaccine Impact Modelling Consortium (VIMC)
- Health impacts translated into economic benefits using the VERSE-COI model

Table 3 Deaths averted per 1,000 fully vaccinated persons (FVPs)

Vaccine/ Pathogen	Focal model	Model averages	Model minimum	Model maximum
PCV	2.7	2.2 (1.0 - 4.0)	1.8	2.7
Rota	0.7	0.8 (0.5 - 1.1)	0.7	0.9
Pentavalent HepB	10.1	15.0 (11.7 18.3)	7.2	24.1
Pentavalent Hib	3.6	2.7 (1.1 - 4.0)	1.8	3.6
Measles and rubella Measles	4.2	4.2 (0.0 - 9.7)	3.6	4.8
Measles and rubella Rubella	0.2	0.2*	0.1	0.2
YF	3.5	5.2 (1.5 - 9.9)	3.5	5.2
MenA	1.3	0.8 (0.3 - 1.5)	0.4	1.3
HPV	17.6	18.1 (12.7 - 20.4)	17.1	19.1
JE	0.4	0.5 (0.0 - 21.9)	0.4	0.6

*uncertainty bounds around model averages not available

Technical appendix to the Gavi 2021-2025 investment Opportunity
<https://www.gavi.org/sites/default/files/document/funding/Investment%20Case%20Technical%20Appendix.pdf>

Use of health and economic impact to support investment and policy decisions: The Vaccine Investment Strategy

Gavi's evidence-based approach to identify new immunisation investments for Gavi's next strategic cycle

a. Transparent methodology

b. Analytical review of evidence and modelling

c. Consultations and independent expert advice

d. Conducted every 5 years

Strategic investment-decision making (rather than first come first served)

Predictability of Gavi programmes for long-term planning by governments, industry and donors

Informs:

- Gavi Strategy
- Gavi replenishment

Types of investment:

- Vaccine Programmes
- Stockpiles
- Learning agendas

Two VIS frameworks (endemics & epidemics); public health goal of the vaccine investment informs approach

	1. VIS <u>endemics</u> framework	2. VIS <u>epidemics</u> framework
Vaccination strategy	Routine / preventive campaigns nationally or in high burden areas	Outbreak response and preparedness (e.g., stockpile or stockpile-like mechanism), global or regional
Examples	Measles, cholera preventive programme, typhoid conjugate vaccine	e.g. Ebola stockpile; licensed vaccines for R&D Blueprint priority pathogens
Approach to evaluate potential Gavi investment	<ul style="list-style-type: none">• Projected deaths averted• Cost per deaths averted• Other impact, cost and feasibility considerations	Given uncertainty, alternative approach to gauge: <ul style="list-style-type: none">• magnitude of risk• Vaccine impact and feasibility• Relevance to Gavi• Cost and need for market shaping

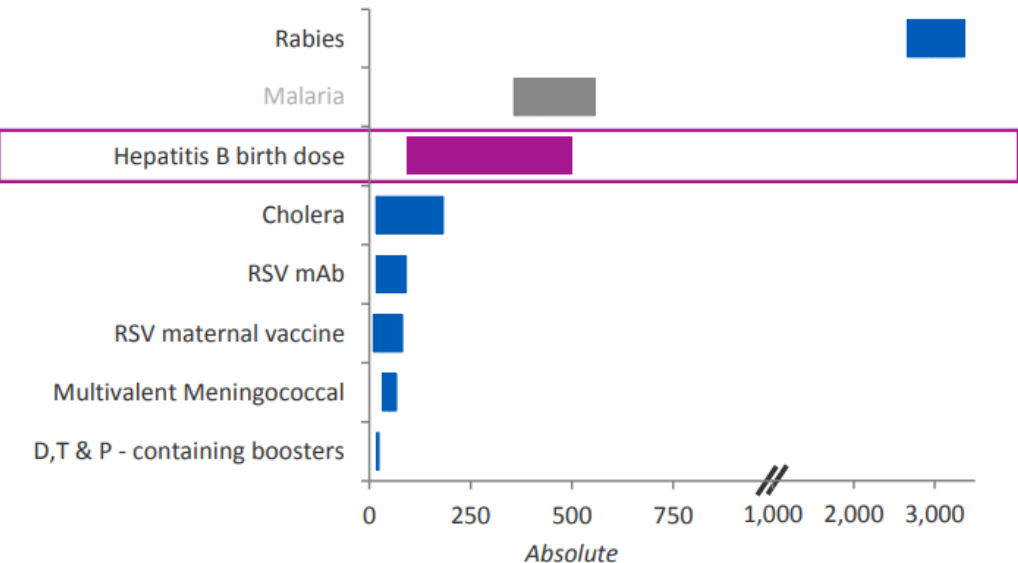
Strategy / investment may evolve over time (e.g., changing disease epidemiology or understanding of epidemiology; new vaccines that are more suitable for prophylactic use)

Endemic framework – key ranking criteria

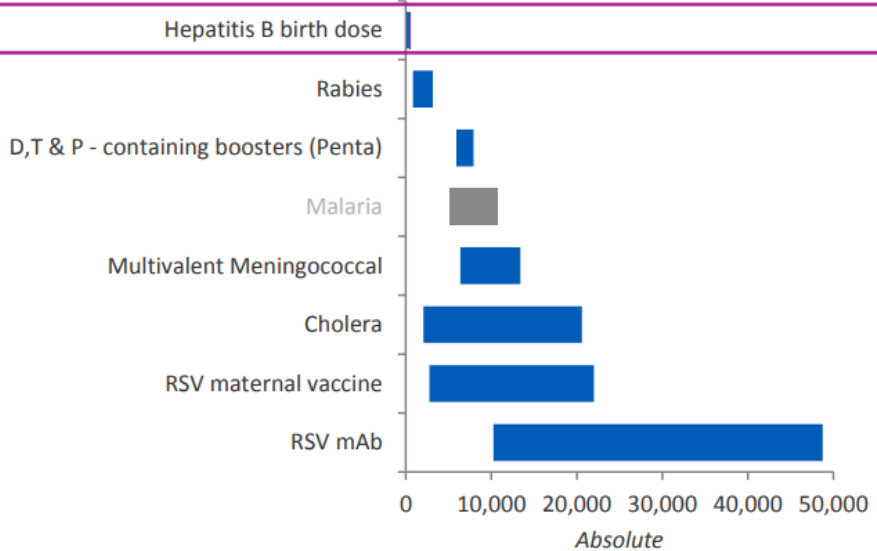
	Criteria	Indicators
Key ranking criteria	Health impact	Total future deaths averted 2026-2040, and per 100,000 vaccinated Total DALYs averted 2026-2040, and per 100,000 vaccinated
	Value for money of vaccine procurement	Vaccine procurement cost per death averted Vaccine procurement cost per DALY averted Vaccine cost per fully vaccinated person
	Equity and social protection impact	Disproportionate impact of disease on vulnerable groups (e.g. zero-dose children/missed communities) Vaccination contributes to addressing underlying gender-related barriers faced by caregivers, adolescents and health workers and/or gender associated differences in immunisation coverage
	Gavi comparative advantage	Degree of vaccine market challenges / Gavi market shaping opportunity Potential for catalytic effect from Gavi investment
	Economic impact	Direct medical costs averted Indirect costs averted

Example from the VIS 2018: HepB BD investment case

Total future deaths averted per 100K vaccinated, 2021-2035



Procurement cost to Gavi & countries per death averted (\$), 2021-2035



Source: <https://www.gavi.org/sites/default/files/document/ppc-meeting-18-19-october-2018---vis-06a---annex-c--hepatitis-b-birth-dose-investment-casepdf.pdf>

Current context and priorities

- Gavi operates on 5-year funding/strategy cycles
- Currently in 5.0, 2021-2025
 - Focus on equity and reaching zero-dose children
- Development of next strategy and eventual 6.0 investment case
 - Equity agenda
 - Expansion of vaccines throughout the life course
 - Impact of outbreak response

Thank you



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