

# How does Gavi make vaccine investment decisions?

---

Judith Kallenberg

Global Vaccine and Immunization Research Forum  
Johannesburg, South-Africa, 16 March 2016



# Vaccine Investment Strategy (VIS)

## **Evidence-based approach to identifying potential new vaccine priorities for Gavi support**

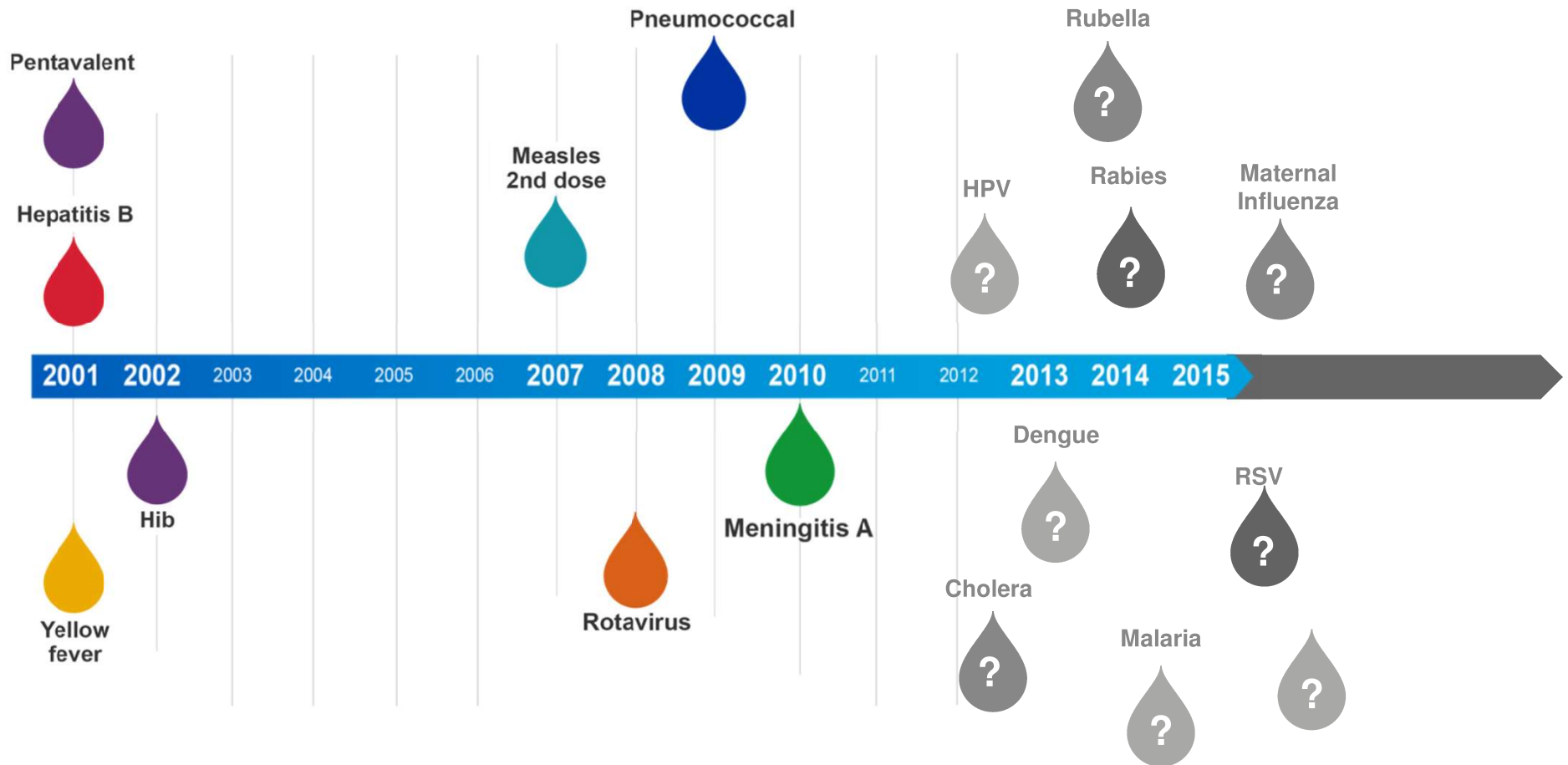
- Evidence review, analyses, stakeholder consultations, independent expert advice
- Once every five years, aligned with strategic cycle

## **All existing commitments maintained**

## **Implementation of VIS recommendations depends on**

- available resources
- vaccine development outcomes
- WHO normative guidance
- country demand

# Gavi-supported vaccines



Refers to the first Gavi-supported introduction of each vaccine.

<sup>1</sup> Contribution towards a cholera vaccine stockpile 2014-2018; <sup>2</sup> New support for additional yellow fever vaccination campaigns

# VIS process: 5 steps

1. WHO 'landscape analysis' of vaccines in **scope**: anticipated licensure within next 5 years
2. Development of prioritisation **criteria** through Gavi stakeholder consultations: impact, cost, implementation feasibility

## 2013 criteria:

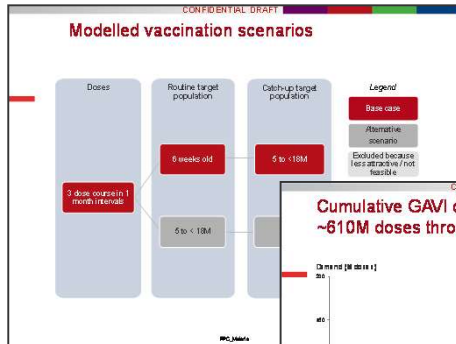
Impact	Additional impact considerations	Implementation feasibility	Cost and value for money
Child mortality	Epidemic potential	Capacity and supplier base	Vaccine procurement cost
Overall mortality	Global or regional public health priority	Gavi market shaping potential	In-country operational cost
Overall morbidity	Herd immunity	Ease of supply chain integration	Procurement cost per event averted
	Availability of alternative interventions	Ease of programmatic integration	
	Socio-economic inequity	Vaccine efficacy and safety	
	Gender inequity		
	Disease of regional importance		

## VIS process: 5 steps

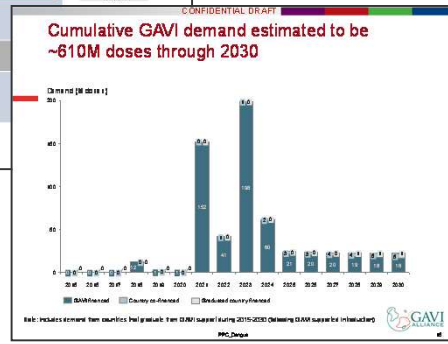
---

1. WHO 'landscape analysis' of vaccines in **scope**: anticipated licensure within next 5 years
2. Development of prioritisation **criteria** through Gavi stakeholder consultations: impact, cost, implementation feasibility
3. **Assessment** of vaccines against criteria based on demand/cost projections, market analysis, etc.

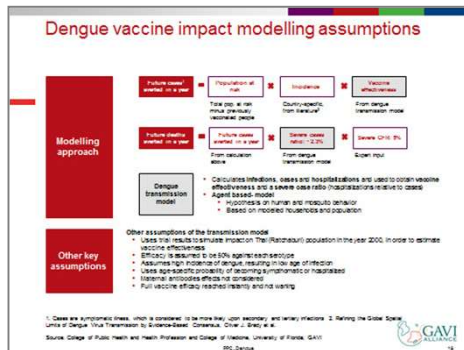
# Methodology for vaccine evaluation



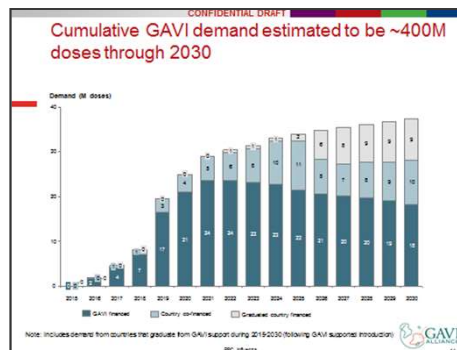
## 1. Identify vaccination scenarios



## 2. Develop demand forecast



## 3. Develop impact estimates



## 4. Develop cost estimates

**Scoring methods for implementation feasibility criteria (I)**

Criteria	Indicators and thresholds		
	Current/ planned capacity to meet <75% GAVI demand	Current/ planned capacity to meet 75-100% GAVI demand	Current/ planned capacity to meet >100% GAVI demand
Capacity and supplier base	3+ manufacturers by 2020	Green	Green
	2 manufacturers by 2020	Yellow	Green
	1 manufacturer by 2020	Red	Yellow

## 5. Assess other disease/vaccine features



## VIS process: 5 steps

---

1. WHO 'landscape analysis' of vaccines in **scope**: anticipated licensure within next 5 years
2. Development of prioritisation **criteria** through Gavi stakeholder consultations: impact, cost, implementation feasibility
3. **Assessment** of vaccines against criteria based on demand/cost projections, market analysis, etc.
4. Development **vaccine shortlist** based on relative comparisons
5. In-depth analysis and consultations, and **comparison with current portfolio** → vaccine investment recommendations



# Gavi vaccine investment decisions

---

## 2008 VIS:

- **Portfolio decisions:** HPV, rubella, JE
- Typhoid conjugate pending

## 2013 VIS:

- **Expanded support** for yellow fever campaigns
- **Time-limited contribution** to global cholera stockpile
- **Learning agenda:** rabies and cholera studies to fill evidence gaps
- Malaria vaccine support to be re-assessed following trials

## Other vaccine investment decisions:

- IPV, measles, Ebola

## Lessons learned

---

- **Varied data availability and data quality a challenge for comparisons**
- **Uncertainty of projections for pipeline vaccines, e.g. Typhoid**
- **Critical and persistent evidence gaps for ‘neglected’ vaccines’, e.g. rabies**

# Looking forward to VIS 2018 (1/2)

---

## Scope – preliminary view (TBC)

- **For re-assessment:** dengue, Oral Cholera Vaccine, (maternal) influenza, rabies PEP, meningococcal multivalent, Hepatitis E, DTP booster, Hepatitis B birth dose
- **New:** RSV, Group B Streptococcus, norovirus, ...?

# Looking forward to VIS 2018 (2/2)

---

## Strategic and epidemiological shifts

- Coverage and equity goals in 2016-2020 Gavi strategy
- Emerging infectious diseases and increased focus on outbreak preparedness and response

## Changing vaccine profiles and funding rationales

- Special target groups (geographies, populations)
  - Maternal vaccines: influenza, Tetanus Toxoid, pertussis, GBS, RSV
- Morbidity vs mortality
- Broad rollout vs. smaller catalytic investments (e.g. pilots)
- Health impact vs preparedness: influenza, OCV, mening, Zika, ...?

**THANK YOU**

---



[www.gavi.org](http://www.gavi.org)

# Evaluation criteria and indicators (VIS 2013)

Category	VIS Criteria	Phase I Indicator
Health impact	Impact on child mortality	U5 future deaths averted, 2015 – 2030 U5 future deaths averted per 100,000 vaccinated population
	Impact on overall mortality	Total future deaths averted, 2015 – 2030 Total future deaths averted per 100,000 vaccinated population
	Impact on overall morbidity	Total future cases averted, 2015 - 2030 Total future cases averted per 100,000 vaccinated population Long-term sequelae
Additional impact considerations	Epidemic potential	Epidemic potential of disease
	Global or regional public health priority	Presence of global / regional (UN) resolution on elimination or eradication
	Herd immunity	Herd immunity threshold
	Availability of alternative interventions	Current use of alternative interventions for effective disease control (prevention and treatment) and potential for scale up
	Socio-economic inequity	Disproportionate impact on poor
	Gender inequity	Disproportionate impact on one gender
Implementation feasibility	Disease of regional importance	Burden concentrated in a subset of GAVI countries within the same region
	Capacity and supplier base	Capacity to meet GAVI demand and # of manufacturers by 2020
	GAVI market shaping potential	GAVI demand (by volume) as % of global demand
	Ease of supply chain integration	Packed volume (cm <sup>3</sup> )
	Ease of programmatic integration	Alignment with other vaccine schedules and significant change in health worker practices/behavior required
Cost and value for money	Vaccine efficacy and safety	Vaccine efficacy (as defined by clinical endpoints) and safety
	Vaccine procurement cost <sup>1</sup>	Total procurement cost to GAVI and countries, 2015 - 2030
	In-country operational cost	Incremental in-country operational costs per vaccinated person
	Procurement cost per event averted <sup>2</sup>	Procurement cost per death / case averted

1. Procurement cost includes vaccine, syringe, safety box, and freight 2. Scoring based on cost per future death averted