

# Forecasting as a Foundation: Gavi, the Vaccine Alliance's Strategic Demand Forecast (SDF)

As part of the fourth goal to shape vaccine markets, Gavi, the Vaccine Alliance, produces a Strategic Demand Forecast (SDF) to understand the long-term potential of a market. The SDF has proven useful beyond its use of sizing a vaccine market. Gavi uses the SDF to (1) Inform Gavi's medium and long-term view of required volumes for Gavi73 & non-Gavi LMICs included in the Decade of Vaccines; (2) Inform Gavi's impact projections – number of children vaccinated, coverage achieved – which are in turn used for Alliance communication and resource mobilisation efforts; (3) Serve as the basis for Gavi financial expenditure forecast for Gavi73 countries through the Adjusted Demand Forecast (ADF). The SDF also provides a portfolio view of vaccine activities (introductions, SIAs, demonstration projects, etc.) to support strategic planning and priority setting. The SDF is the result of consultations with more than 60 experts from WHO, UNICEF, the Bill and Melinda Gates Foundation, and other partner organizations. Forecast assumptions are tested and validated on an on-going basis to enable the most accurate view into vaccine markets.

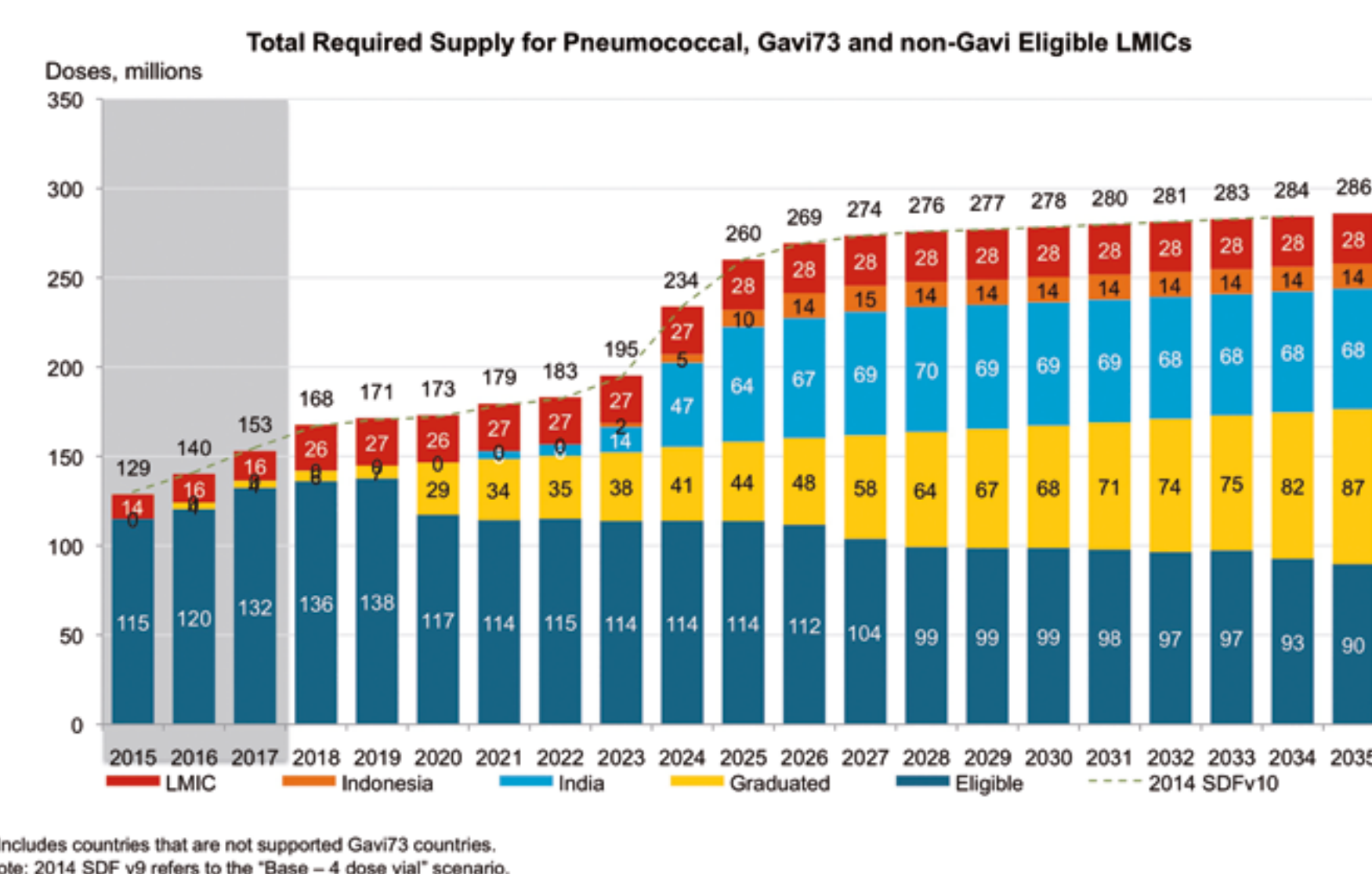
## Strategic Demand Forecast Assumptions: Pneumococcal Vaccines

Element	Assumptions <sup>1</sup>	Confidence
Country scope	Gavi73 and non-Gavi eligible LMICs	n/a
Target population	Surviving infants	Medium
Schedule	3 doses (4 week intervals between doses)	High
Product(s)	Current: 1-dose (PCV13) and 2-dose liquid vials (PCV10) Future: 4-dose vial with preservative assumed available for use from 2017 (PCV13) and 2018 (PCV10). First new licensure and introduction of PCV domestic products assumed for India and Indonesia in, respectively, 2020 and 2023.	Current products: High Future products: Low
Wastage factor	WHO wastage factor recommendations based on country specific product presentation: - 1-dose: 1.05 wastage factor - 2-dose: 1.11 wastage factor - 4-dose vial: 1.11 wastage factor - 5-dose vial: 1.11 wastage factor	Current products: Medium Future products: Low
Co-financing policy	• All doses are co-financed by Gavi-eligible countries • After graduation, Gavi support ends and countries fully finance this vaccine • LMIC demand fully country financed	High
Other	• No supply or financial constraints applied in the base case • Buffer: 25% of change in demand between years (routine only) • Assume all products are suitable and WHO prequalified	n/a

1: Base Unconstrained Scenario

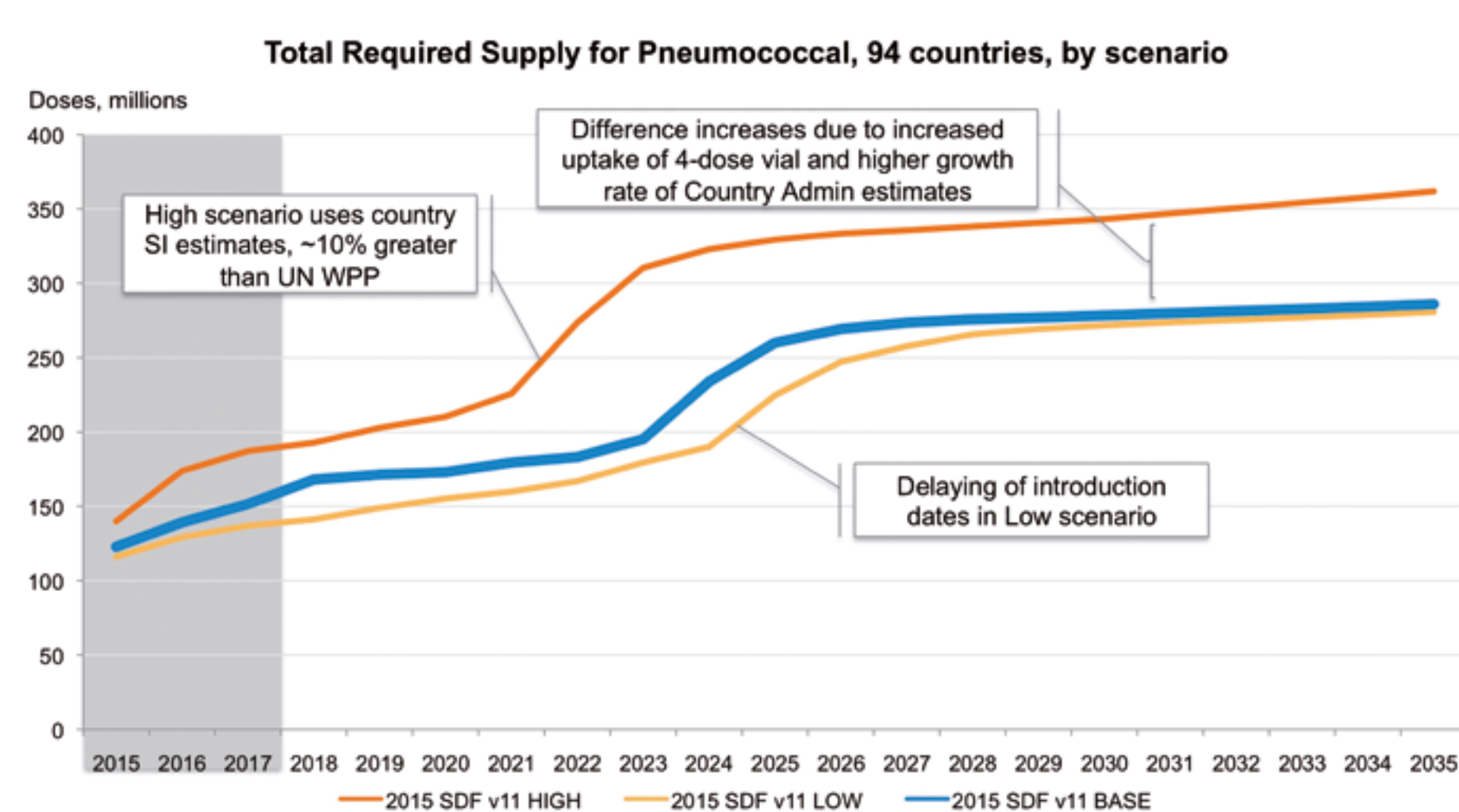
The SDF includes demand from 73 Gavi countries as well as lower middle income countries (LMICs) included in the Decade of Vaccines (DoV) Global Vaccine Action Plan (GVAP). Transparent assumptions are critical to having a credible forecast. Gavi SDFs make use of publicly available data sources including WHO/UNICEF Estimates of National Immunisation Coverage (WUENIC), United Nations World Population Prospect (UN WPP), and World Bank Gross National Income (GNI) data.

## Demand forecast to climb dramatically from 2024 following India introductions



The SDF categorizes demand by Gavi eligibility. Large country demand is called out clearly to illustrate the impact of that demand on the broader market.

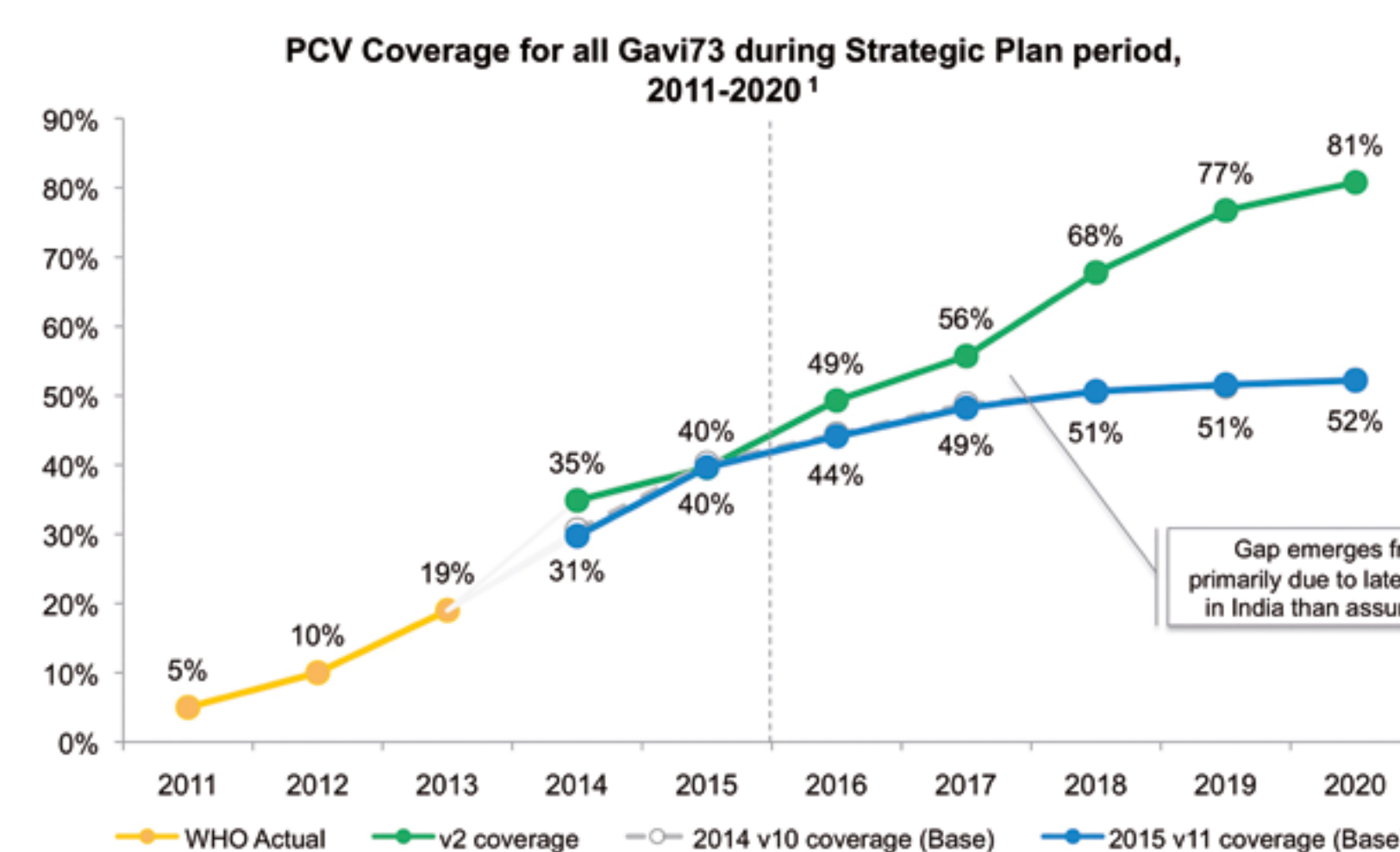
## Significant increases in High scenario from higher population assumptions and 4-dose vial uptake



Forecast scenarios are created to understand the uncertainty of the demand. Sensitivity analyses are conducted using alternative assumptions for

- introduction dates
- target population
- demand projections
- coverage projections
- ...

## Projected coverage to reach targets in 2015, then lags behind from 2016



1. Includes non-Gavi supported countries.

The strategic demand forecast also projects the number of individuals to be reached with vaccines and the level of immunisation coverage. The Alliance uses the SDF as an input to set targets for vaccine coverage as well as to estimate the number of future cases and deaths averted attributed to immunisation.

