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

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.

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

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

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

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.