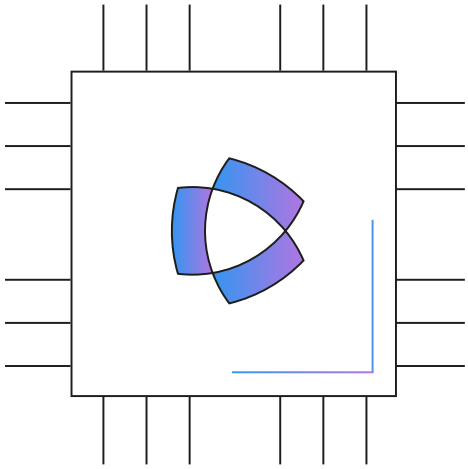
Clarivate

Real-Time COVID-19 Vaccine Forecasting

Case Study | Vaccine Forecasting

Real-Time COVID-19 Vaccine Forecasting to Inform Global Rollout and Capacity Planning



Background

During the COVID-19 pandemic, multiple pharmaceutical companies developing vaccines needed timely, reliable insight into vaccine-eligible populations and the real-world impact of vaccination on disease burden. Rapidly evolving epidemiology and policy decisions required a flexible, data-driven forecasting solution to support global strategy and planning.

The Challenge

Stakeholders required a scalable, real time tool to answer critical questions, including:

- How large is the vaccine eligible population across countries and regions?
- How do vaccine effectiveness and uptake influence COVID 19 cases, hospitalisations, ICU admissions, and deaths?
- How do different rollout strategies compare to no vaccine scenarios?
- How can evolving real world data be incorporated into forecasting and decision making?

A consistent, transparent modelling framework was essential to support production, supply, and demand planning across geographies.

The Solution

Clarivate developed a fully customizable COVID 19 Epidemiology Vaccine Forecaster to support real time modelling and scenario analysis.

Key features included:

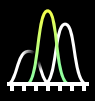
- **Dynamic epidemiology forecasting:** Daily updated data to track forecasts against real world COVID 19 epidemiology.
- **Global coverage:** Modelling across 45 countries, with the ability to pool countries into custom regions.
- **Vaccine scenario modelling:** Comparison of up to four vaccines with differing effectiveness and uptake assumptions.
- **Outcome forecasting:** Projections of COVID 19 cases, hospitalisations, ICU admissions, and deaths under multiple rollout strategies.
- **User driven insights:** Interactive inputs, pre loaded assumptions, and exportable, time stamped charts for stakeholder communication.

The Results

The COVID 19 Vaccine Forecaster enabled stakeholders to make informed, data driven decisions during a rapidly evolving global health crisis.

Outcomes included:

Clear visibility into vaccine eligible populations across major global markets



Quantified impact of vaccination strategies on healthcare system burden

Side by side comparison of vaccine and no vaccine scenarios

Improved planning for vaccine production, supply, and demand

A flexible, scalable tool supporting ongoing decision making as assumptions evolved

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