

# Worldwide Index of Serotype Specific Antibody Responses (WISSPAR): A Database and Dashboard for Exploring Immunogenicity Data from Clinical Trials

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## BACKGROUND

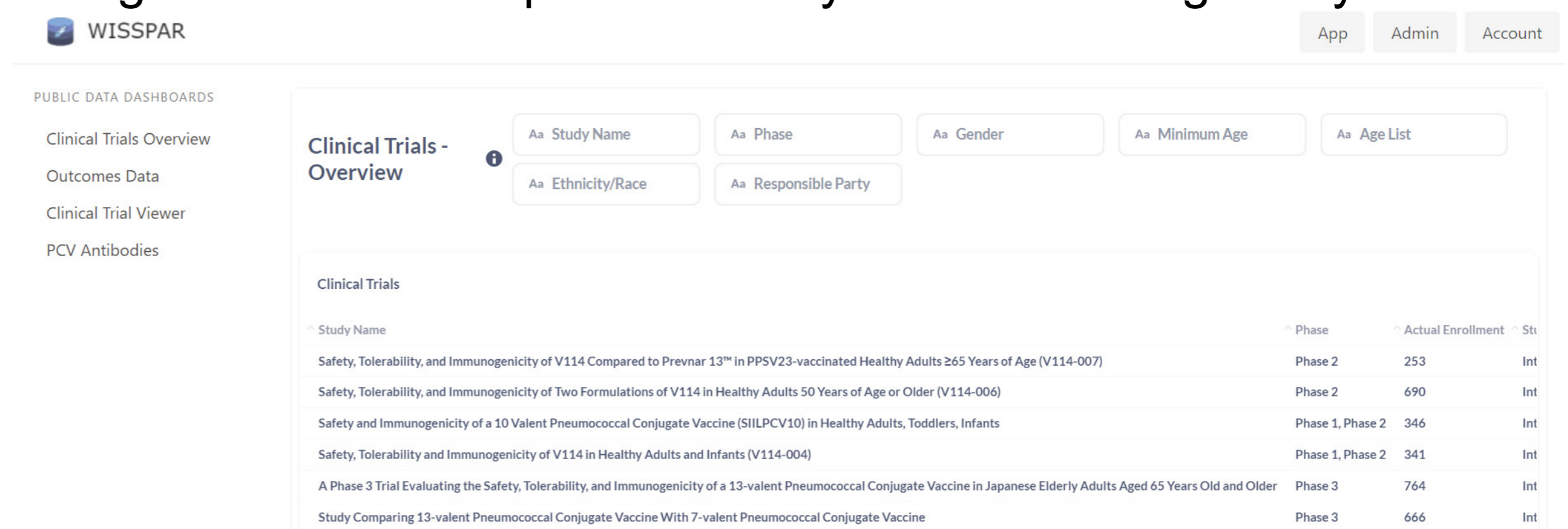
- New pneumococcal conjugate vaccines (PCVs) are typically licensed based on non-inferiority of serotype-specific antibody responses in clinical trials.
- For the first several years after these new vaccines are available, these immunogenicity data are the only basis of comparison among different PCVs.
- To improve the usability of publicly available immunogenicity data, we collected them into a standardized, custom database with improved searching and data visualization capabilities.

## METHODS

- We searched clinicaltrials.gov for trials of PCVs that provided data about aggregated immunogenicity results, either alone or in head-to-head comparisons.
- Using these data, we are creating a custom SQL database with standardized fields.
- Curation of the database is ongoing

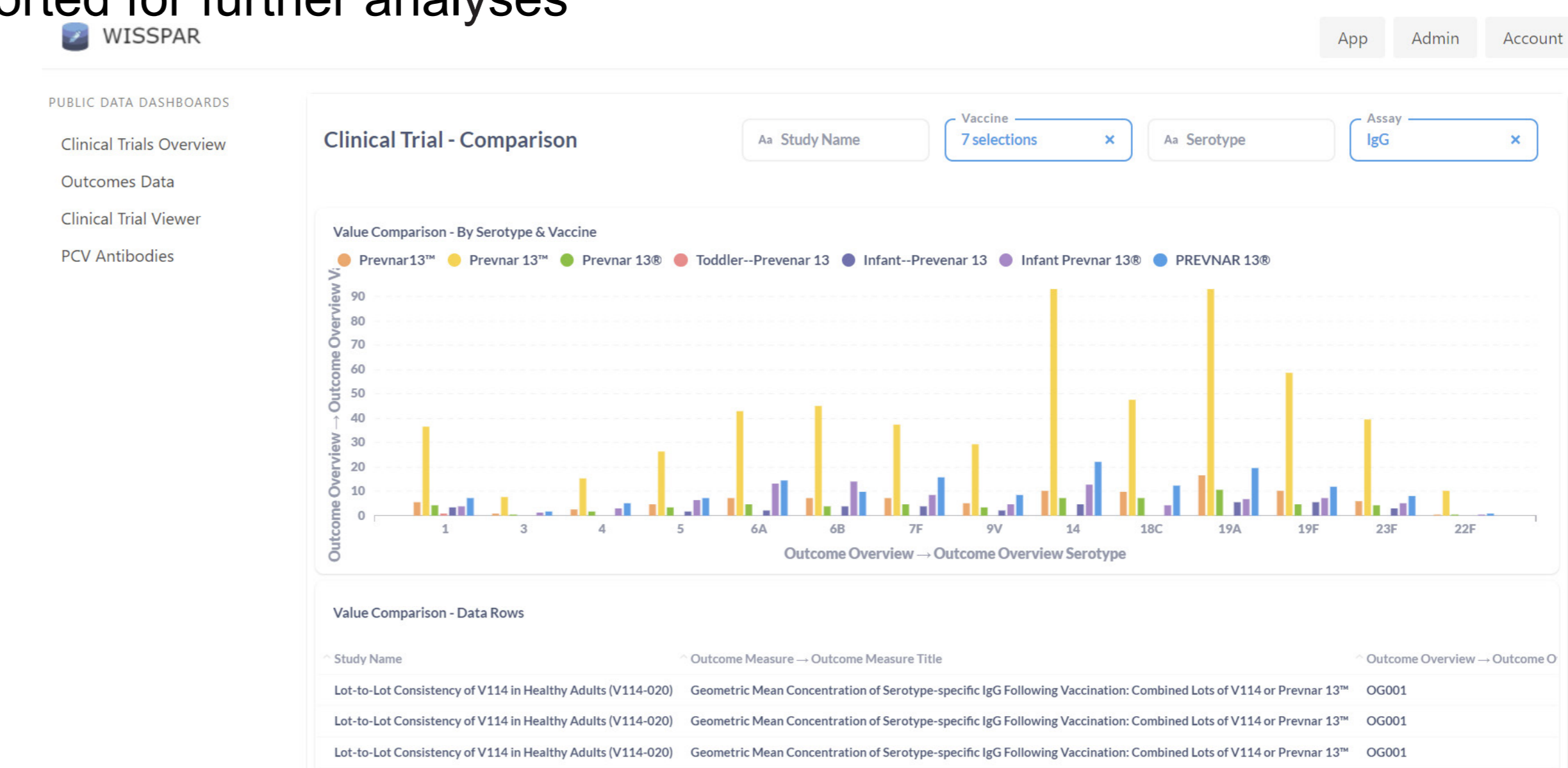
## WISSPAR Clinical Trials Overview

The WISSPAR database consolidates information from PCV clinical trials and facilitates longitudinal and comparative analyses of immunogenicity data

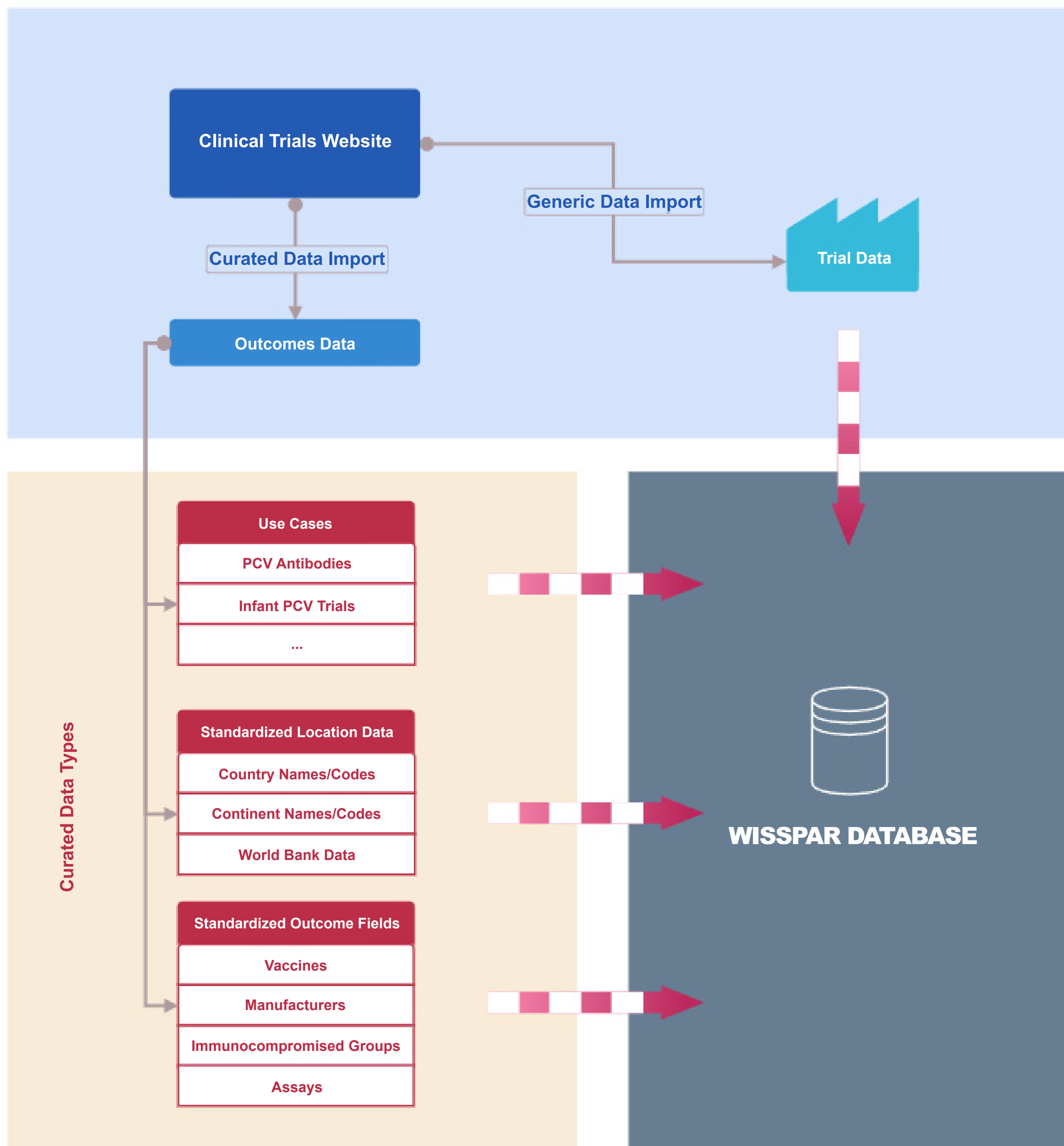


## WISSPAR Outcomes Data

Measurements from specific trials, and specific assays within trials, can be selected and exported for further analyses

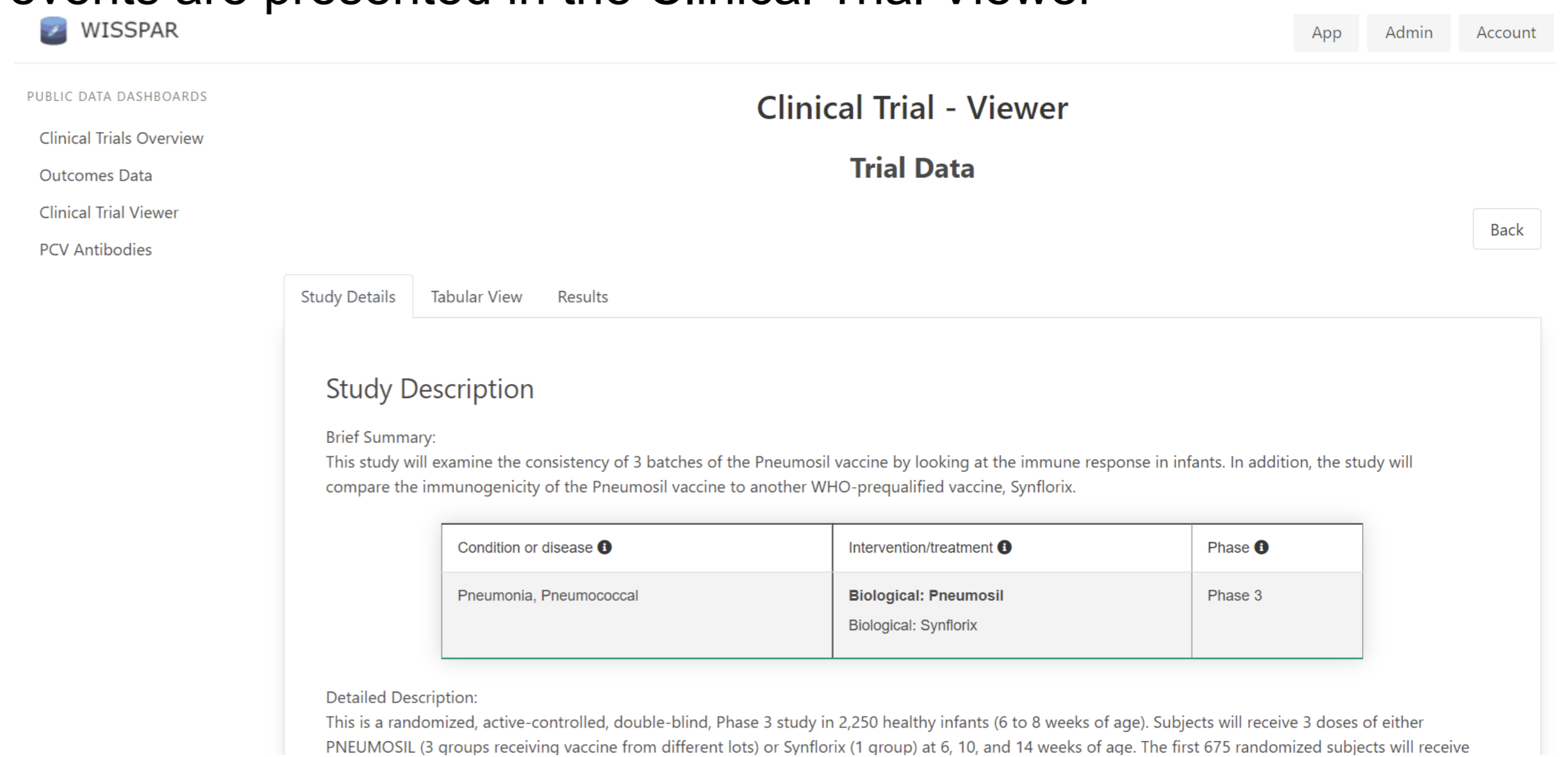


## Structural Schematic of WISSPAR Database



## WISSPAR Clinical Trial Viewer

Further details about individual trials, including enrollment, dose scheduling, and adverse events are presented in the Clinical Trial Viewer



## Visual Comparison of Antibody Concentrations between PCVs

The database has a built-in R shiny app to provide comparative measurements of serotype-specific antibody levels across multiple generations of PCVs



## CONCLUSIONS

- A centralized dashboard showing the compiled results of numerous clinical trials can be used to assess PCV efficacy across populations at a glance
- Curating this database provides a valuable resource for scientists, clinicians, and policy-makers interested in integrated, global measurements of vaccine-derived immunity