Real-World Evidence

Generate life-saving insights and value from real-world data throughout the pharmaceutical life cycle

Maximize ROI from real-world data and drive speed to value via:

Improved efficiency in clinical treatment design, development and delivery.

Expanded access to real-world evidence to achieve better insights, increase safety and deliver value faster.

Effective data management throughout the life cycle of clinical investigation.

The Issue

Pharmaceutical companies need to understand how their products perform in the real world. The primary objective is to better measure the value that a device, medicine or vaccine brings to patients in a real-world clinical setting that may differ from patients participating in randomized clinical trials. Life sciences organizations have a wealth of real-world data (RWD) from a variety of sources, including commercial data providers that repackage electronic health records and insurance claims, disease registries, safety and complaints data, hospital and lab information, wearable device data, physician notes, social media and more.

The challenge for life sciences companies is to manage and analyze RWD promptly to generate insights that address needs spanning the product life cycle from discovery and R&D to regulatory inquiries and commercialization. The process requires finding the right data source, getting the data in a format that can be queried, and preparing the analytical environment to analyze the large amounts of divergent patient-related data. The scientific and reproducible evidence that can be generated to answer key questions and drive value is real-world evidence (RWE).

The Challenge

Managing and storing complex RWD. It's difficult to manage the life cycle of big data, including data capture, storage, maintenance, use and archive.

Collaboration among different stakeholders. The number of people who can access and analyze RWD in an organization is limited due to the requirement of programming skills.

Analyzing real-world data is time-consuming. Real-world data is typically very large, and not in a structure ready for creating and analyzing patient cohorts. Large amounts of new data arrivals make updating analytical and reporting techniques and cohorts difficult.

Governance. Lack of transparency, reproducibility and governance can hinder the value of RWD and jeopardize the organization's ability to maintain compliance standards across the data.

Our Approach

SAS provides a scalable analytics platform that gives statisticians, data scientists, methodologists and quantitatively trained scientists an environment they can trust and easily use. We provide a framework that helps customers:

- **Manage data.** Cleanse, standardize, load and integrate real-world data prior to using it.
- **Meet industry data standards.** Apply SAS® capability for FHIR and OMOP data model integration.
- **Integrate data stores.** Profile, integrate, cleanse and move data stored in Hadoop or other stores with an intuitive interface that doesn't require coding.
- **Provide access to any user.** Directly interact with complete patient populations, quickly determine feasibility of studies based on the number of patients meeting criteria and reduce time and resources extracting patient populations interactively using a programming interface (for tech users) or an intuitive "point-and-click" user interface (for business type users).
- **Visualize and analyze cohort data.** Easily explore and gain insight to cohort characteristics and evidence obtained in data and make that accessible for in-memory analysis and visualization in SAS or other technologies of choice (R, Python, third-party visualization tools).

SAS delivers best-in-class data integration and high-performance analytical and visualization capabilities to help life sciences companies solve the challenges of interoperability and achieve faster time to insight from real-world data to real-world evidence.

The SAS® Difference

SAS gives organizations a means to tap the potential of real-world evidence, aligning the most advanced analytic technologies to collect and derive intelligence using their existing SAS investment.

SAS helps life sciences companies **improve efficiency** and **drive speed to value** through RWD, including:

- Improving automation and collaboration for all teams and users.
- Accessing up-to-date code sets and data ontologies that provide consistency and reliability.
- Building cohorts faster from complex data sets with full lineage documentation from data to analysis.
- Enabling quick discovery for trial feasibility analysis, synthetic control arms, safety and efficacy, and more.

SAS enables companies to **increase collaboration** around RWE by:

- Removing barriers between stakeholders by improving collaboration when generating and disseminating RWE.
- Democratizing access to RWD and RWE without extensive programming skills.
- Accessing an open environment with full transparency and integration with open source.

SAS helps life sciences organizations **effectively manage RWD** via:

- A single analytics platform to increase transparency, consistency and reproducibility of analysis and support data compliance standards.
- The ability to navigate, visualize and explore data quickly.
- Integration of RWD from internal and third-party sources.

SAS and Symphony Health will create a novel analytics platform to harness the power of Symphony Health's clinical and health care data to deliver real-time insights for stakeholders across the drug development continuum.

> "This is a game changer for the industry and our clients, as we are partnering with a known, scalable analytics company in SAS, that every pharma company is familiar with, to leverage our rich data and consulting capabilities to deliver value at scale and speed to clients."
>
> – **Doug Fulling**, President, Symphony Health

For more information, please visit SAS for Real World Evidence.