virtusa

electronic Sample Collection Schedule (eSCS)

Automated reconciliation and monitoring of sample collections

The success of clinical trials depends on a pharmaceutical company's ability to properly conduct biological specimen analysis. Sample collection requirements in such trials are becoming more complex due to precision medicine and focused biomarker analysis.

The guidelines specified in a protocol document are manually transcribed into legacy systems, spreadsheets, or collaboration systems and then emailed by study coordinators to site personnel. The logistics around the trial are typically in "visit files," which specify the subjects that are scheduled to provide samples.

An amendment in the protocol document only confuses the downstream process. This quasi-manual approach or methodology often leads to the undesirable result of sufficient samples not being collected or adequately recorded. Finally, without a comprehensive catalog of samples for each trial, the sponsor's R&D team has no visibility as to what is available in the biobanks for in-silico research and whether there is broad consent to use those samples.

Digitizing end-to-end sample collection processes with eSCS

To address the common barriers, improve clinical trial efficiency, and optimize the use of scientific assets, Virtusa has developed an innovative digital solution called **electronic Sample Collection Schedule (eSCS).** The solution enables automated reconciliation, monitoring, and reuse of biosample data.

We designed eSCS with intent-led, detailed workflows required by Good Clinical Practice (GCP). Our strategic process flow helps clients develop a future-state architecture that simplifies sample collection and supports reconciliation of the required sample collection against what was collected by the investigator sites.

- Supports both structured and unstructured data by applying NLP algorithms
- Creates an organized plan for visits, subjects, and samples
- Provides a comprehensive and detailed reporting process
- Supports intent-led workflow steps with an intuitive user interface
- Gives visual dashboards showing in-progress status
- Supports standard and controlled vocabulary stores all data
- Makes data available for future use in study protocols
- Integrates with clinical research systems and multiple data sources

Solution benefits

Increased efficiency

- 30% reduction in manual effort to transcribe data from the protocol document
- Single source of data for sample collections, eliminating manual trackers
- Proactive monitoring of the sample collection process via visualizations to monitor progress

Automated and accurate reconciliation

- Uses and compares sample collection information with the sample collections schedule
- Allows continuous monitoring of sample collections which can extend to sample tracking
- Framework to build a comprehensive sample registry for the sponsor
- Simplifies in-silico research requests by quickly identifying consent

Reduced costs and improved study protocol execution

- Enhances automation capabilities of sample data tracking and reconciliation
- Faster and agile development of contracts and lab manuals
- Reduces the burden on highly skilled resources for manual data entry

Improved compliance

- Improves data quality and integrity for submissions
- Provides end-to-end traceability and consistency
- Increases accuracy for total sample volumes with informed consent

A leading global pharmaceutical organization accelerated the sample collections process using eSCS

A leading global pharmaceutical organization partnered with Virtusa to design, develop, and deliver a digitized sample collections process with eSCS.

After reconciling the sample collections process gap, we developed a digitized and authoritative catalog for sample entry, a reconciliation tool to ensure the minimum sample collection thresholds are met, and a patient data repository for recording results.

For more information, please contact **marketing@virtusa.com** or visit **www.virtusa.com/industry/life-sciences**