

GAMP ACTIVITIES

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Immediate Past-Chair, GAMP America's

GAMP Trainer, ISPE

2023 Richard B. Purdy Distinguished Achievement Award Recipient

Co-Chair GAMP CSA Special Interest Group

Member, GAMP Global Steering Committee – recipient of the 2022 ISPE

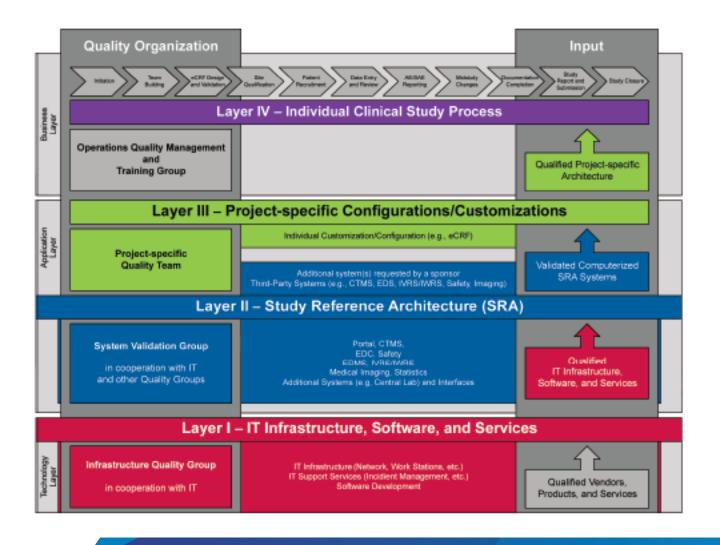
Committee of the Year Award

Recent Drivers in Clinical Trials

- COVID 19
 - Decentralization
 - Real World Data(RWD)/Real World Evidence (RWE)
- Regulatory Updates
 - Notice to Sponsors
 - Guideline on computerised systems and electronic data in clinical trials



Clinical Project Validation Layers - Overview





GAMP Good Practice Guide Validation and Compliance of Computerized GCP **Systems and Data 2nd Edition**

JULY 2024

Ch 01 Introduction

Ch 02 Scope

Ch 03 Regulatory Overview

Ch 04 Process Overview

Ch 05 Process Model

Ch 06 Data Integrity

Appendix 1 Data Privacy

Appendix 2 Decentralized Clinical Trials

Appendix 3 Assessment of Clinical Site Systems

Appendix 4 GCLP

Appendix 5 The Use of Data Science - AI enabled Systems

Appendix 6 RWD RWE

Appendix 7 Open Source Software





GAMP Good Practice Guide Validation and Compliance of Computerized GCP Systems and Data

This eClinical Good Practice Guide aims to highlight a common approach for application and discuss or address the differences in system validation practices between the GMP, GLP, or other GXP areas and GCP environments.

This document is intended to adapt the general principles of ISPE GAMP® 5 Second Edition [3] to the systems supporting the conduct of clinical trials and addressing applicable GCP (inter)national regulatory requirements. It provides a detailed interpretation of the GAMP validation concepts and enables a consistent and standardized application of the risk-based validation approach and principles to processes and their supporting computerized systems when conducting clinical trials.

This Good Practice Guide facilitates the effective and efficient use of valuable resources by the application of appropriate and proportionate practices, encouraging innovative approaches to managing risk to patient safety, product quality, and data integrity while supporting benefit to public health. It is not a prescriptive method or standard but rather provides pragmatic guidance approaches and tools for the practitioner. When applied with expertise and good judgment this good practice guide offers robust cost effective approaches.



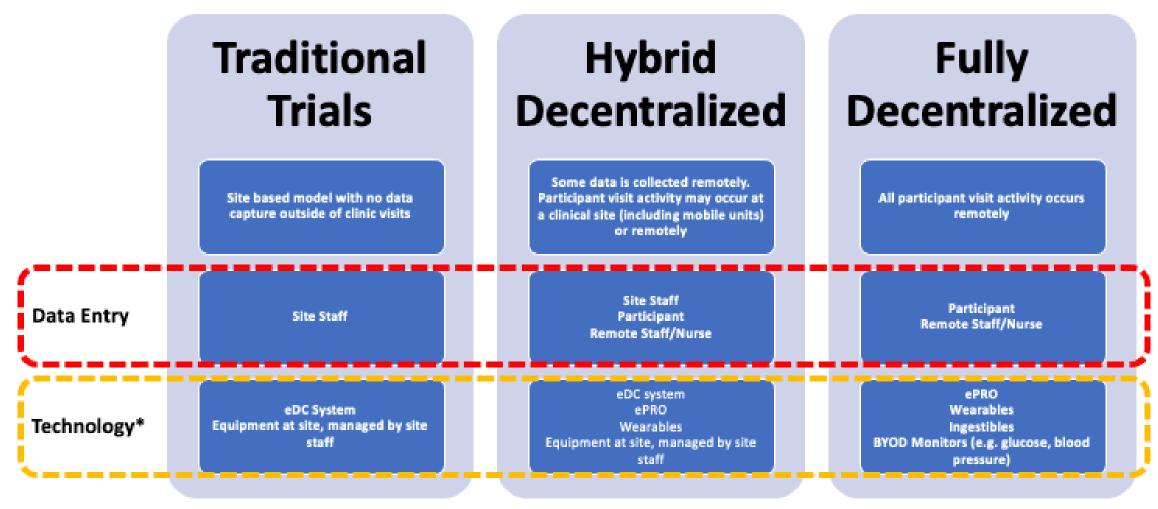
Guidance on the Life Cycle of Computerized GCP Systems

This Guide aims to provide guidance on the life cycle of computerized GCP systems, including:

- 1. Understanding the business process supported by computerized systems
- 2. Understanding the unique risks associated with clinical data
- 3. Understanding the complex issues of managing computerized systems on a variety of infrastructure platforms at different version levels across multiple organizations
- 4. Suggesting possible validation approaches, system classifications, and challenges
- 5. Ensuring compliance with applicable regulations with a particular emphasis on data integrity and dataflows considering challenges through outsourcing of services and technology



Decentralized Clinical Trials



^{*} Example of technologies, but not limited to these



Real World Data - Real World Evidence

- RWD is typically collected and aggregated for specific, non-regulated purposes but evaluated and used in a regulated context e.g. in clinical trials or Pharmacovigilance
- There have been more than a dozen
 New Drug Approvals in the last 10 years that utilized RWE



Clinical

Demographics, EHR Data, Lab Test Results, Diagnoses, Procedures, Pathology/ Histology Data, Radiology Images, Microbiology Data, Provider Notes, Admission/ Discharge and Progress Reports, Performance Status



Medication

Medication Orders,
Administration
(Dose, Route, NDC/RxNorm
codes), Concomitant
Therapies,
Point of Sale Data,
(Prescription & OTC)
Prescription Refill, Allergies



Claims

Medical Claims, Prescription Drug Claims, Other Drug and Treatment Use Data



Molecular Profiling

Genomic and Genetic
Testing Data (SNPs/Panels),
Multi-Omics Data
(Proteomics,
Transcriptomics,
Metabonomics,
Lipidomics), Other
Biomarker Status



Family History

Historical Data on Health Conditions and Allergies Relating to Patient and Extended Family, Smoking Status, Alcohol Use



Mobile Health

Fitness Trackers, Wearable Devices, Other Health Apps Measuring Activity and Body Function



Environmental

Climate Factors, Pollutants, Infections, Lifestyle Factors (diets, stress), Other Environmental and Occupational Sources



Patient Reported

Patient Reported
Outcomes, Surveys,
Diaries (diets, habits),
Personal Health Records,
Adverse Event Reporting,
Quality of Life Measures



Social Media

Patient Communities, Twitter, Facebook, Blogs



Literature

Disease Burden, Clinical Characteristics, Prevalence/Incidence, Rates of Treatment, Resource Use and Costs, Disease Control, Quality of Life Measures



RWD/RWE and **GAMP**

If RWE is used in a regulated context, the processes and tools used to generate the RWE should be validated.

Definition of the business question to be answered for intended use of the RWE (e.g., for clinical trials, reimbursement, drug safety)

Selection of the research approach (e.g., noninterventional study, analysis of social media) and Data source (e.g., EHR systems, product and disease registries)

Methodology (e.g., population, exposure, and outcomes of interest)

Approach to identify and minimize Bias



GAMP Special Interest Groups – Global SIGs New members and Emerging Leaders are encouraged to join

Software Automation & Al

To explore, educate, and bring regulatory/compliance awareness of innovative technologies such as software automation (ex. RPA) and artificial intelligence (ex. ML) to the pharma and biotech industry.

Eric Staib eric.staib@syneoshealth.com Brandi Stockton bstockton23@outlook.com

Blockchain

To help enable the adoption of blockchain technology in regulated environments by exploring use cases, sharing lessons learned, and contributing to thought leadership around this topic.

Jamey Canterbury pareschury proton.me Tanya.sharma@assureallc.com Tanya Sharma 🧖

Cloud

To provide industry guidance and establish clear roles and responsibilities for the use of Cloud solutions in regulated (e.g., GxP) space.

Anders Vidstrup Anette Westphal



anders@vidstrup.dk awe@novonordisk.com Risk Management SIG
To research, explore and propose new models, tools and approaches

based on the latest technologies and innovations in the data science and computing areas (i.e., AI, ML) that can be applied to the Quality Risk Management process to make it more objective, predictive, and efficient in order to protect patients' safety and health.

Anne Woitzik 🙎



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Filip Raps



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Connecting **Pharmaceutical** Knowledge

GAMP Special Interest Groups – Global SIGs New members and Emerging Leaders are encouraged to join

To develop practical approaches to optimizing validation activities through increased focus on Quality Risk Management and critical thinking in line with FDA's Case for Quality and GAMP 5 Second Edition.

Charlie Wakeham



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Lorrie Vuolo-Schuessler (National Vuolo-Schuessl

Agile

To illustrate how Agile software development practices can be used in support of the validation of GxP regulated computerised systems.

Mark Cherry (2)



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Donal O'Brien



Donal.Obrien@3ds.com

MES

Define industry best practices for MES project initiation, planning, execution and operations by establishing a silo breaking collaboration of vendors, industry manufacturers, Quality organizations, consultants and regulators and all involved stakeholders.

Christian Woelbeling 🦃



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Mark Wager



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eClinical

To provide market support for all validation aspects related to computerized GCP system, including understanding the business process and the unique risks, enabling innovation and managing the complex computerized systems across a variety of infrastructure platforms and organizations. Working to update eClinical Guide.

Max Stroebe 🧖

Oliver Herrmann 🖄 oliverherrmann@q-finity.de mstroebe@its.jnj.com



Connecting **Pharmaceutical** Knowledge

GAMP Speakers at ISPE Annual Meeting

Sunday 13 October - Technology in Alignment with EU Guidance & eClinical GPG eClinical Workshop

Petch Ashida Druar – Syneos Brandi Stockton – The Triality Group Lorrie Vuolo-Schuessler – Retired Geetu Abbi – Alkermes

Monday 14 October - Overcoming Challenges of Digital Innovation (AI)

Brandi Stockton – The Triality Group Eric Staib - Syneos

Monday 14 October – Digital Tools Presentations & Panel Discussions

Ken Shitamoto – Gilead Sciences Stephen Ferrell - Strikegraph

❖ Tuesday 15 October – Computerized Systems Quality When it Happened: Considerations in Disaster Recovery Frank Henrichmann - QFINITY

Is the EMA GCP CSV Guideline a blueprint for other GxPs?

Oliver Herrmann – QFINITY

Tuesday 15 October – AI Discussion Panel – Reflections on Past Missed Opportunities (QbD, PAT) and How to Navigate AI for Success

Brandi Stockton – The Triality Group









