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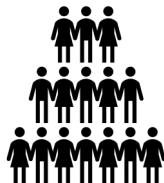
Data Transparency



CSS 2022 Working Groups Update

PHUSE Data Transparency Working Group has been active since 2014

70+
Members



2
Virtual
meetings per
Year



Virtual
Collaboration
throughout
the Year



19
Deliverables
Published



CSS
Break-out
Sessions with
Regulators

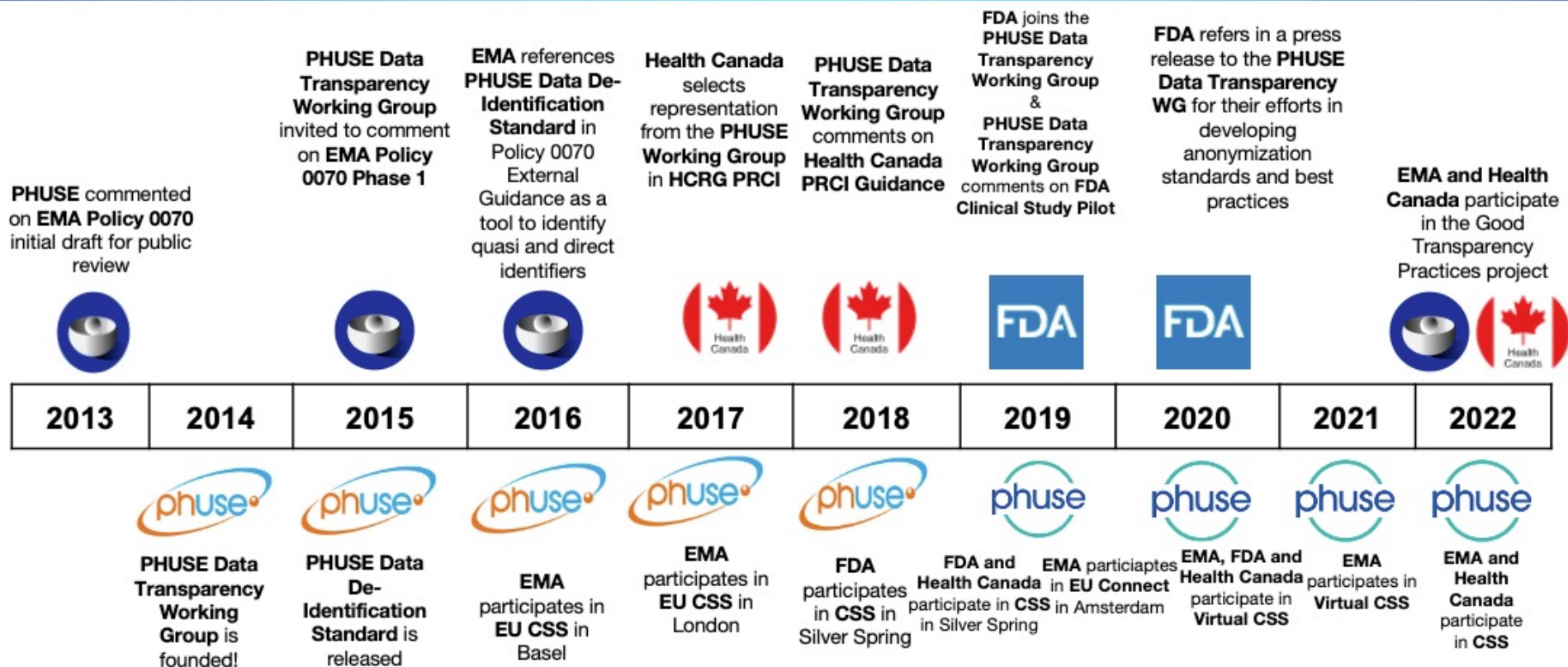


Current Projects

Educating General Population	EU CTR
Good Transparency Practices	Rare Disease/Small Population Data Sharing
Stakeholder's Deliverables Review	Internal Clinical Study Data Sharing Process
Synthetic Data	



PHUSE, Data Transparency & Interaction with Regulators



DT Working Group Leadership Team

**Stephen
Bamford**



Stephen is the Head of Clinical Data Standards & Transparency at the Janssen Pharmaceutical Companies of Johnson & Johnson. He has over 25 years of experience in the management of clinical trial and research data with pharmaceutical, life science and research organizations. In 2004, Stephen founded the PHUSE organization.

**Jean-Marc
Ferran**



Jean-Marc is an Independent Consultant with more than 15 years of experience in the Life Sciences industry. Prior to starting his company, Qualiance, he worked as a Statistician and Director of Statistical Programming at Novo Nordisk and Ferring. Jean-Marc has led the PHUSE Data Transparency Working Group since 2014.

**Devaki
Thavarajah**



Devaki partners with pharmaceutical clients, members of the research and healthcare community globally to help meet their clinical trial transparency and disclosure requirements. She has 8 years' experience within the pharmaceutical and healthcare industry.

**Muhammad Oneeb
Rehman Mian**



Muhammad Oneeb Rehman Mian is a Senior Manager of Privacy & Data Enablement for the Clinical Trials Transparency (CTT) business stream at Privacy Analytics. He provides technical leadership and subject-matter expertise for privacy methodology and solutions.

Key Achievements 2020-2021

White Papers (4)



Call for Comments (2)



Blogs (2)

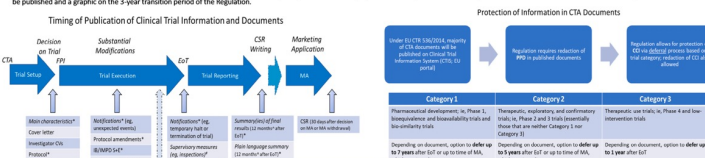


Posters (1)

PP12 Overview of Transparency Requirements for EU Clinical Trials Regulation No 536/2014

Authors: G. Allan, M. Acharya, S. Bagan, S. Davies, L.M. Kilian, E. Lakes, A. Nasir, O. Olatun, O. Thavornraj, B. Tiffin, T. Wicks, W. Wimmer
*gallan4@rztz.nyu.com

The EU Clinical Trials Regulation will be operational on 31 January 2022. It covers interventional clinical trials of investigational medicinal products for human use and will have important impacts on all aspects of trial setup, operation, and reporting in the EU/EEA. Anticipated benefits of the Regulation for the Agency, sponsors, patients, and the public include faster, more efficient trial setup, higher safety standards, and greater insight into trial management and outcome. Publication of information about trials will be greatly enhanced, including earlier publication of protocols and other study documents, a directive to publish investigator's brochures, and a requirement to publish plain language summaries. The aim of this poster is to synthesise complexities around which information and documents will be published and when, outline options for deferral of publication to protect confidential commercial information, and provide tips to sponsors on how to prepare for the Regulation. In addition, there are links to a detailed list of the information/documents to be published and a graphic on the 3-year transition period of the Regulation.



Launch of the bi-annual PHUSE Data Transparency Virtual Meetings In June 2020 gathering 300+ participants

PHUSE "State of the Industry" Data Transparency Survey 2020 with 54 participants/organizations

Key Achievements - 2022

Educate the General Population on Data Privacy and Data Sharing

- Finalisation under way for the first two pilot videos in the video series Evolution of latter topics and forward thinking in mind to create a solid foundation in the audience's knowledge of clinical development prior to delving into more complex concepts.

EU CTR Implementation

- Development of poster summary – 'Overview of Transparency Requirements for EU Clinical Trials Regulation'
- Continued monitoring of transition period; continued discussion of content and timing of next deliverable

Good Transparency Practices

- Started first draft of GTP covering all aspects related to the Data Controller, Data Anonymizer and Data Recipient

Internal Clinical Study Data Sharing Process

- Continued to move towards finalising the white paper and have made great progress. Additional discussions on the content of the white paper. Agreed that this is geared more towards current landscape and not guidelines surrounding internal clinical data sharing.

Rare Disease / Small Population Data Sharing

- Gather a team of experts working with and sharing rare disease data
- First Draft is being finalized for Working Group's review

Synthetic Data

- Initial Training was provided to PHUSE community on a fully functioning data synthesis instance on PHUSE Open Data Repository (PODR).
- Hands-on Workshop at CSS 22 focusing on measuring risk of re-identification in Synthetic Data

ICO Anonymization Guidance Call for Views Answer

- Provided feedback to first four chapters
- Session with Paul Comerford (ICO) at CSS to discuss ICO's initiative and draft content published so far

Plane Builder Award 2020 & 2021



2020

Anne Cutting



2021

George Allan

Plane Builder Award 2022



Devaki Thavarajah



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Data Visualisation & Open Source Technology

CSS 2022 Working Groups Update



Scope

Data Visualisation and Open Source Technology aims to support, address, and answer pertinent questions around Data Visualisation and Open Source Technology. The combination of these two subjects is natural in today's environment given the powerful Data Visualisation tools within the Open Source languages available today. Some of the questions, amongst others, that we intend to address are:

- How do you safely use Open Source languages for analytics and submissions within a Regulatory environment?
- What are the potential uses of Open Source software within a company outside of data analysis for a submission?
- How can interactive visualisations be leveraged appropriately within a clinical environment?
- What are the best practices for creating powerful interactive visualisations?



Key Achievements of the Last 2 Years

R Package Validation Framework

- Public release of white paper
- Release of valtools R package

R Shiny Interactive Forest Plot

- Stage 1 forest plot prototype completed

End-to-End Open-source Collaboration Guidance

- Project kicked off with active contribution

Clinical Statistical Reporting in a Multilingual World

- Project kicked off in collaboration with R Consortium



Current Projects

Best Practices for
Interactive Analysis
for Decision Making
Submissions

Clinical Statistical
Reporting in a
Multilingual World

Julia Initiative for
High Performance
Computing

R Environment
System Qualification

R Shiny Interactive
Forest Plot

Test Dataset Factory

End-to-End Open
Source Collaboration
Guidance



Project Highlights

Best Practices for Interactive Analysis for Decision Making Submissions

- Active participation, routine meetings and knowledge sharing between team members

Clinical Statistical Reporting in a Multilingual World

- Identifying areas of collaboration with other communities, such as PSI/AIMS and the mmrm R package project from R Open Sci
- Article submitted ASA BioPharm Report
- PHUSE SDE Presentations on project findings

End-to-End Open-source Collaboration Guidance

- White paper draft in progress with active contributors
- Poster at CSS this year! (Make sure to check it out!)

R Shiny Interactive Forest Plot

- Stage 1 forest plot prototype complete (<https://forest-plot.netlify.app/>)
- Requirements for aesthetic improvement for the forest plot update for the Stage 1 prototype have been finalised.
- Requirements for the volcano plot have been finalized
- Draft outline and literature review for the accompanying paper for Stage 1 has been completed and team are now working on the white paper.



Collaborations

R Consortium (CSRMLW)

- Active interest and input from R Consortium working groups
- Relevant as an extension to work done by R Validation Hub



Plane Builder Award 2020 & 2021



2020

We didn't exist yet!



2021

Ellis Hughes



Plane Builder Award 2022



Melvin Munsaka



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Emerging Trends & Technologies

CSS 2022 Working Groups Update



Scope

“This Emerging Trends & Technologies Working Group will be an open, transparent forum for sharing pre-competitive means of applying new technologies and is being challenged with creation of well-defined collaborative projects that will describe, prioritise, assess, and assist advancement of these opportunities.”



Key Achievements of the Last 2 Years

Real World Evidence

- White Paper
- Community forum events

Investigating the Use of FHIR in Clinical Research

- HL7 and CDISC collaboration
- Connectathon

Digital Biomarkers in Clinical Submissions

- Project up and running

Cloud Adoption in the Life Sciences Industry

- Cloud Adoption Framework

Best Data Practices for Rare Disease Patient Foundations and Researchers

- New working group project



Current Projects

Best Data Practices
for Rare Disease
Patient Foundations
and Researchers

Cloud Adoption in
the Life Sciences
Industry

Digital Biomarkers in
Clinical Submissions

Investigating the Use
of FHIR in Clinical
Research

Real World Evidence



Collaborations

industry, researchers
and patient community

- awareness and education about best practices for collecting regulatory quality data for rare diseases

HL7

- HL7 Vulcan and BR&R stakeholder initiatives

CDISC

- CDISC to FHIR Joint Mapping IG

Community Forum

- The Role of the Statistician and Statistical Programmer in Real-world Data Analysis.

Community Forum

- Challenges in Real World Data Ingestion and Standardization



Plane Builder Award 2020 & 2021



2020

David Hood



2021

Geoff Low



Plane Builder Award 2022



Berber Snoeijer



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Nonclinical Topics

CSS 2022 Working Groups Update



Scope

The Nonclinical Topics Working Group aims to improve nonclinical assessments and regulatory science

*by identifying key needs and challenges in the field and then establishing an **innovative** framework for addressing them in a **collaborative** manner.*

*We jointly identify, discuss, and prioritize topics to be considered for further work each year. Importantly, the group works in a **supportive** framework for specific nonclinical data standardization implementation considerations for SEND and identifies key needs for data mining and decision support **excellence**.*



Key Achievements of the Last 2 Years

SEND Industry Feedback Survey

- 2021 SEND Survey – focus: ease of use, Study Data Technical Conformance Guide, pace of change, DART preparedness, non-submission use
- 2022 SEND Survey – focus: Scope of SEND, Implementing flexibility in SEND, manual edits, non-CDISC initiatives and automation opportunities

Nonclinical Script Assessment

- SEND data factory : improvements and update presentation at CSS 2021, moved to hosted website
- sendigR: Published to CRAN; facilitates a query-able SEND database, to enable cross study analysis (PHUSE and Biocelerate collaboration)
- toxSummary : R Shiny App to Visualize and Summarize Nonclinical Toxicology Studies (FDA contribution)

Harmonization of SEND Implementation to Enable Historical Control Data Analysis

- Published White Paper: [Recommendations for Populating Control Type with CDISC SEND Controlled Terminology](#)
- Recommendations for Exchanging Vehicle Details provided to CDISC - White Paper pending publication,
- Controlled Terminology lists to support harmonization recommendations provided, and subsequently implemented by CDISC
- Detailed investigation on data challenge to find clinical signs of concern, through use of Result Category completed and submitted to CDISC for consideration



Key Achievements of the Last 2 Years

nSDRG v.1.2 published Template & Guideline update

- New [nSDRG template and guideline](#) update published to consider current thinking, leveraging SEND Survey, public review, Reviewer feedback and Study Data Technical Conformance Guide

SEND Dataset QC Best Practices

- Published White Paper: [Recommendations for SEND Dataset QC Best Practices](#)
- Poster: SEND Dataset QC Best Practices - Common explanations for FDA / CDISC validation issues

SEND Implementation User Group

- Migrated the SEND Implementation WIKI, Forum and News sites to advance.phuse.global, and continue to answer industry questions, pass on SEND news and provide extensive fundamental information.

Testing Simplified TS Examples – Project Completed

- Published industry reference presentation + public webinar on “[Testing Simplified TS Examples Against FDA Technical Rejection Criteria](#)”



Current Projects

To insert hyperlinks for
project webs.

Nonclinical
Scripts

Nonclinical Study
Data Reviewers
Guide

SEND Industry
Feedback
Survey

SEND QC Best
Practices

SEND
Implementation
User Group

Harmonization of
SEND
Implementation



Project Highlights

SEND Industry Feedback Survey

- Since 2015, an annual survey is conducted to learn the pulse of Industry on SEND implementation topics, issues, opportunities and innovative ideas.

Nonclinical Script Assessment

- Exploring automation opportunities to benefit nonclinical study operations
- CSS 2022 Poster presentation: PP12- A Machine Readable Structure for Generating Nonclinical Study Protocols

Harmonization of SEND Implementation to Enable Historical Control Data Analysis

- Collaborating with BioCelerate to identify opportunities to improve data usability through CDISC standards and controlled terminology. Current topics are Study Site and Animal Supplier terminology and leveraging BioCelerate cross-study analyses explorations for further harmonization opportunities.



Project Highlights

Nonclinical Study Data Reviewers Guide

- Optimizing SEND dataset review with best practice nSDRG guideline, current to sdTCG and Industry implementations

SEND Dataset QC Best Practices

- Providing key insights into current QC activities performed by industry as well as best practice recommendations for QC procedures. The aim is to promote more consistent QC procedures to help regulatory reviewers be more confident the SEND data accurately represents the data in the study report.

SEND Implementation User Group

- An ongoing and committed resource providing current facts and interpretations on SEND implementation, issues and news, resourced by deep SEND experts from across industry. Available for new questions, while updating previous content to keep up to date.



Collaborations

Biocelerate

- Engage the common interest and skills of PHUSE and BioCelerate collaborators to continually improve the value of data standards implementation, in concert with study operations for Nonclinical regulatory science.

CDISC

- Leverage the very deep SEND and study conduct expertise of the PHUSE Nonclinical Working Group to identify, investigate and make recommendations for data standardization opportunities that can address nonclinical data challenges for scientists.

FDA/Industry

- Commit to maintain and publicly provide the Nonclinical Study Data Reviewers Guide template as an example, in alignment to current FDA Study Data Technical Conformance Guide and Industry best practices.

CDISC Japan User Group

- Exchange with CJUG partners on topics of strong common professional interest, to realize benefits from mutual inputs, transverse perspectives and expert reviews of deliverables that potentially strengthen global understanding of nonclinical data standards implementations.



Plane Builder Award 2020 & 2021



2020

Bob Friedman



2021

Mark Carfagna



Plane Builder Award 2022



Michael Rosentreter



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Optimizing the Use of Data Standards



CSS 2022 Working Groups Update



Scope - Optimizing the Use of Data Standards (ODS)

ODS Working Group aims to identify specific gaps, issues and challenges that prevent FDA and industry from Optimizing the Use of Data Standards.

This Working Group will collaborate to close those gaps and differences in interpreting the use of data standards.



Key Achievements of the Last 2 Years

Bio-research Monitoring Data Reviewers Guide (BDRG) Package

- Published BDRG package (22-Jun-2022) & referenced in FDA's BIMO Technical Conformance Guide (Aug 2022)

Expert Answers to Community Questions

- Team of experts from industry, CDISC and FDA participating in a panel discussion with curated questions on TCG and Test Data Submissions (July 2021)

Published 5 White Papers

- Best Practices for the Submission of Data in Japan (2021)
- FDA and PMDA Study Data Submission Distinctions v1.1 (2021)
- Data Standards for Non-interventional Studies (2020)
- Industry Experiences Submitting Standardized Study Data to Regulatory Authorities (2020)
- Integration Strategies in Support of ISS/ISE Submissions (2020)



Current Projects

Best Practice in Data
Standards
Implementation
Governance

Implementation of
Estimands (ICH E9
(R1)) using Data
Standards

SDTM ADaM FAQ
Implementation

Clinical Integrated
Study Data Reviewer's
Guide

NEW
Document
Management of ODS
Regulatory Referenced
Deliverables

NEW
BIMO FAQ



Best Practice in Data Standards Implementation Governance

2 Co-leads

23 Volunteers to define project scope and deliverables

33 Question survey addressing the development, use, management and governing of data standards. *March 2022*

170 Survey responses; analyzing survey results & challenges

ODS WG Session – Tue 09:00-10:30; Wed 11:00-12:30

Poster Session – Tue 17:00



Implementation of Estimands using Data Standards

2 Co-Leads

51 Volunteers across 3 Sub teams

- Data Collection & Tabulation
- Estimands Analysis Sets
- Handling intercurrent events, imputation and estimation

Performed impact assessment of the Estimands framework and defining best practices and recommendations

ODS WG Session – Tue 11:00-12:30; Wed 13:30-14:30



SDTM ADaM FAQ Implementation

5 Responses to industry questions

Data submissions, SDTM ADaM IG nuances, validation/conformance

Hosted Expert Answers to Community Questions

11 Responses in 2020-2021

Imputing partial dates, trial design, validation/conformance

ODS WG Session – Tue 15:30-17:00



Clinical Integrated Study Data & Analysis Data Reviewer's Guide

icSDRG & iADRG Package including:
template, completion guidelines, example doc

- 180+ comments during public review period (April 2022)
- Incorporate and updating feedback



New ODS Projects

BIMO FAQ

ODS WG Session – Wed 13:30-14:15

Document Management of ODS Regulatory Referenced Deliverables

ODS WG Session – Wed 14:15-15:00



Collaborations

FDA Oncology Safety Data Standards

- FDA reviewers & analyst, industry, CRO, software developers
- Minimize the variability and inconsistency on the use of CDISC ADaM data standards and the OCE/OOD standard safety data request

PHUSE Japan E- Data Team

- Global PHUSE collaboration
- Provide feedback on white paper, companion to FDA and PMDA Study Data Submission Distinctions v1.1

CDISC

- CDISC and PHUSE SDTM ADaM Implementation FAQ
- CDISC Implementation Primer (2021)



Plane Builder Award 2020 & 2021



2020

Kiran Kumar Kundarapu, Merck

Co-Lead, Clinical Integrated Study Data & Analysis Data Reviewer's Guide



2021

Julie Maynard, Johnson & Johnson

Co-Lead, BIMO Data Reviewer's Guide



Plane Builder Award 2022



Ellen Asam, Merck

Sandra VanPelt Nguyen, Pfizer

*Co-Leads, Best Practice in Data Standards
Implementation Governance*



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Risk Based Monitoring



CSS 2022 Working Groups Update

Risk Based Monitoring Working Group



Scope

- Innovative approaches in risk management and data analytics to proactively manage data quality and subject safety risks
- Support the pharmaceutical industry with change management challenges related to moving towards risk-based approaches

WG Leads



Marion Wolfs

Head Risk Management and Central Monitoring
Janssen R&D



Andy Lawton

Consultant for Risk Based Approach Ltd



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**Working
Groups**



Current Projects

QTL – Quality
by Design

QTL –
Threshold
Setting

Central
Monitoring

Central Monitoring Project

If you are interested in joining, please reach out to Paula Rowley (Paula@phuse.global)



- Access to data
- Cross functional data review plan
- Connection to on-site monitoring
- Recommendation on visualizations and (Statistical) Methodologies
- The impact of De-centralized trials on Central Monitoring
- **Delivery 1: White paper on Challenges in Central Monitoring Implementation**
- **Delivery 2: White paper on Defining Central Monitoring Value**

Delivery 1 has been Submitted for Public Review



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Working Groups

Quality Tolerance Limits – Threshold Setting

If you are interested in joining, please reach out to Paula Rowley (Paula@phuse.global)



The added value Quality Tolerance Limits bring depend on setting meaningful thresholds to parameters that are linked to the scientific design of a clinical trial.

The project will provide insight and guidance to QTL threshold setting methodologies, supporting broader implementation of QTLs in clinical trials.

During the **PHUSE EU Connect** [Nathalie van Borrendam](#) and [Annett Keller](#) will host an **interactive session on setting QTL thresholds**.

SHARE- We will share real pharmaceutical industry experiences of methodologies used to set thresholds as well as QTL Statistical and Programming considerations

DO – During hands-on activities you will have the opportunity to go through an exercise of setting a threshold, comparing methodologies and discuss best approaches

LEARN – By sharing and doing the intent is to learn from each other. This will help drive the implementation of meaningful QTLs in the industry.



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Working Groups



Plane Builder Award 2022



Anne Lawrence & Ann Fleenor



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Safety Analytics



CSS 2022 Working Groups Update



Scope

- A collaboration working to improve the content and implementation of clinical trial safety analyses for medical research, leading to better data interpretations and increased efficiency in the clinical drug development and review processes
- Mary Nilsson, Greg Ball co-leads



Key Achievements of the Last 2 Years

Safety Topics of Interest Analyses and Displays

- Published white paper Jan 2021

Listings for Clinical Study Reports

- Published white paper Dec 2021; CDISC US Interchange 2021 oral presentation; PHUSE Connect poster 2022; PharmaSUG paper 2022; submitted viewpoint article to Pharmaceutical Statistics 2022

Adverse Event Collection

- Published white paper (with TE definition team) Aug 2020; PHUSE blog Dec 2021 and PHUSE 2022 poster (Discontinuing collection of relatedness assessment by the investigator for non-serious events)

Treatment emergent Definition

- Published white paper (with TE definition team) Aug 2020; PHUSE Connect poster 2021



Key Achievements of the Last 2 Years

Education

- Safety Analytics workshop at PHUSE CSS 2021 and EU Connect 2021; Safety content added to PHUSE education page Aug 2022; PHUSE CSS 2022 poster

Lab Analyses and Displays

- Published white paper Aug 2022



Current Projects

Adverse Event
Collection

Treatment
Emergent
Definition

Lab Analyses
and Displays

Hepatotoxicity
Analyses and
Displays

Adverse Event
Groupings in
Safety



Project Highlights

Adverse Event Collection

- CSS 2022 Poster – Discontinue collection of relatedness assessment by the investigator?
- White paper providing recommendations/points to consider is planned

Treatment emergent Definition

- Survey complete; early results were published as a poster 2021; white paper with final results and recommendations/points to consider is planned

Lab Analyses and Displays

- Next phase of project will start – Analyses and displays for labs of special interest

Hepatotoxicity Analyses and Displays

- White paper providing recommended analyses and displays getting close for public review

Adverse Event Groupings in Safety

- Kick-off meeting recently occurred; Lots of volunteers and interest!



Collaborations

ASA/PHUSE Interactive Forest/Volcano Plot

- Project under the DVOST WG
- Combine efforts to create a display with interactive features

Safety Graphics Consortium

- Inform each other on efforts (primarily interactive safety graphics); avoid duplication; find synergies; advocate for each other

Estimands in Oncology Safety Task Force

- Collaborate on if the estimand framework can improve safety analyses and/or how we communicate safety analyses

Re-imagining a Safety Submission Community Forum

- Provides an opportunity to discuss the longer-term vision of how safety is assessed in submissions



Plane Builder Award 2020 & 2021



2020

Nancy Brucken



2021

Bill Palo



Plane Builder Award 2022



Mercy Navarro