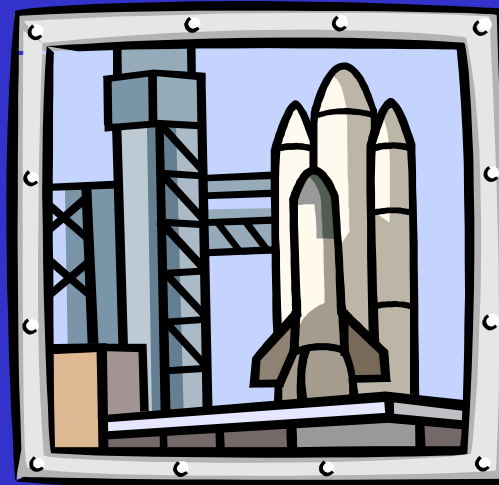


SAS and the CRO



Peter Stagg

Quintiles Ltd

Discussion



- ◆ About Quintiles
- ◆ SAS usage in Biostatistics
- ◆ Internal challenges
- ◆ FDA requirements
- ◆ Client requirements
- ◆ Data formats
- ◆ Reporting standards
- ◆ CDISC
- ◆ How we have adapted
- ◆ Summary

About Quintiles



- ◆ Operates in 39 countries
- ◆ 18000 employees
- ◆ Runs NT server, NT workstation, Unix, Vax
- ◆ Server and desktop SAS licences
- ◆ Runs Oracle clinical



SAS usage in Biostatistics



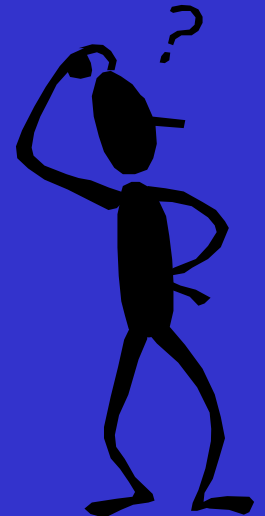
- ◆ Extract data from Oracle Clinical
- ◆ Transfers files as export files
- ◆ Creation of derived datasets
- ◆ Output tables, listings and graphs
- ◆ Patient narratives
- ◆ Statistical analysis



Internal challenges



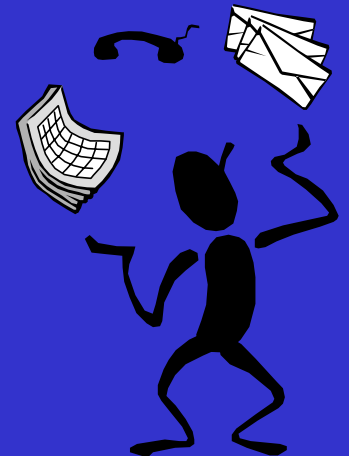
- ◆ New sites have different systems
- ◆ Different standards required for each project
- ◆ Transferring data/project between sites
- ◆ Customers with different SAS versions/operating systems
- ◆ Data collection methods
- ◆ Output into suitable format
- ◆ In text tables for medical writing



FDA requirements



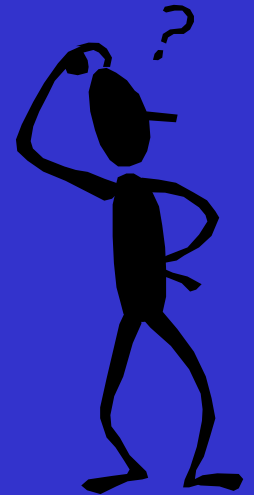
- ◆ 21 CFR Part 11
- ◆ Electronic records
- ◆ Electronic signatures
- ◆ Computer system validation (CSV)
- ◆ Audit trails
- ◆ Version control
- ◆ Electronic submissions



Customer requirements



- ◆ Aim of the study
- ◆ What is expected from Quintiles
- ◆ Data formats
- ◆ Report formats
- ◆ Turnaround time
- ◆ Code delivered for review
- ◆ Our system or theirs



Data formats

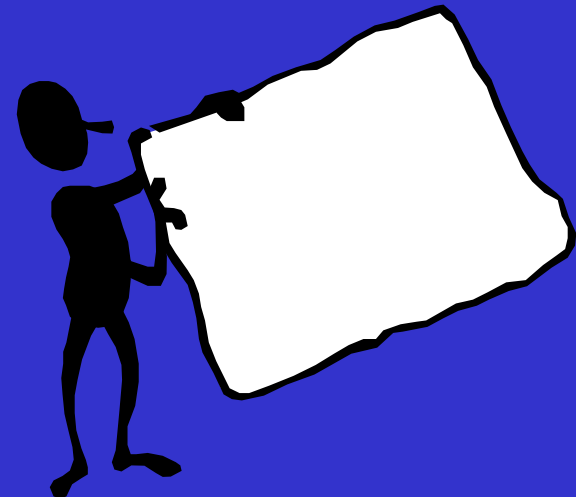
- ◆ Data from various sources
- ◆ Quintiles standard
- ◆ Data received from
 - Customer
 - Electronic Diary (minidoc)
 - External labs
 - Fax collect
 - Electronic data collection
 - ECG data



Reporting standards



- ◆ Quintiles standard format
- ◆ Client standard format
- ◆ Client standard template format
- ◆ Open standard



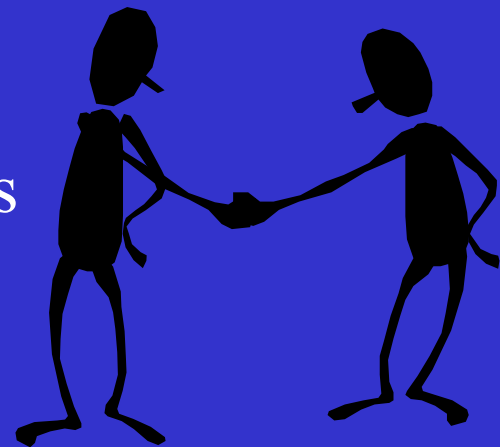
- ◆ Clinical Data Interchange Consortium
- ◆ Consortium of several organisations
- ◆ Vendor neutral platform independent standard
- ◆ Primarily uses XML as data standard
- ◆ Sets guidelines for dataset standards



Advantages of a data standard



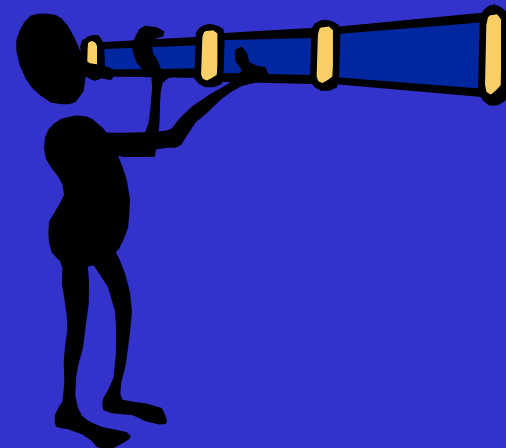
- ◆ Uniformity across the study and all studies
- ◆ Submission requirements identical
- ◆ Data types known (metadata)
- ◆ Reduces the need to design new dataset formats
- ◆ Reusable code for analysis
- ◆ Datasets meet FDA submission standards



How we have adapted



- ◆ Developing a common SAS standard
- ◆ Audit trail systems
- ◆ Maintain a single platform environment
- ◆ Develop a working relationship with SAS
- ◆ SAS certification
- ◆ Investigate new ways of doing business
 - SAS® Enterprise guide
 - SAS® Drug development
 - SAS/Intrnet®
 - CDISC



Summary



- ◆ SAS has the flexibility to fit into our business model
- ◆ CDISC model provides industry wide data standard
- ◆ The use of SAS is governed by customers needs
- ◆ FDA requirements control data submissions
- ◆ SAS functionality needed to be demonstrated
- ◆ The ability to do more is there, who takes the first step?

References



- ◆ www.sas.com
- ◆ www.cdisc.com
- ◆ **CDISC presentation by Graham Bunn Feb 2002**
- ◆ **21 CFR part 11 Document**