Are Audit Trails Really Needed?

Posted on August 17, 2012 by Richard S White

I am regularly asked the question 'Are audit trails really needed?'

This debate has sparked worldwide discussions which have tended to focus on 'Are they needed to pass regulations?'

In truth, it is dependant on a variety of factors, such as the research area your involved in, the type of data you collect, what you do with the data, the regulatory bodies that control your area of research, institutional interpretation, primary investigator interpretation and plenty more.

However, whether they are needed to pass regulations is only one aspect to consider. There are three more extremely significant areas we must consider.

If a well designed audit trail is in place that not just stores all user activity but provides a means to analyse it, this ensures primary investigators / administrators can gain total control over their team, their data and their discoveries.

1) Team Activity Monitoring

A well designed audit trail can answer the following questions relating to team activity:

- Who inserted, edited, or deleted data, and when?
- How many records are data entry assistants entering each day?
- What was the activity of each team member?
- How long did they spend in the database?
- Did each team member complete the tasks they were assigned?

2) Data Consistency Monitoring

A well designed audit trail can answer the following questions relating to data consistency:

- Are there any inconsistencies in our data?
- If an inconsistency is found who was responsible and when?
- Has this inconsistency affected any other data?
- Have data sets been extracted since the data was corrupted?
- What happened with these data sets, and will we have to re-run our analysis?
- What effect is this corruption having on our results?

3) Traceability of Data

Often there can be multiple institutions working toward making the same discoveries. If a discovery is made the person or department that makes it gains major kudos! Therefore, it is extremely important, and in some cases mandatory, to provide proof of the discovery. Having an audit trail that cannot be deleted, not even by administrators can be extremely beneficial and show the full evolution of the data that led to the discovery.

Conclusion

In summary, even though discussions regarding audit trails tend to focus on whether they are needed to pass regulations, the benefits of implementing a well designed audit trail that focuses on team activity monitoring, data consistency and traceability far outweighs whether or not the audit trails is needed to comply with regulations.