

Electronic Data Entry - Moving Beyond Excel and Access

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Why not Access or Excel?

- Weak to nonexistent auditing
- No user accounts - weak password protection
- Poor data validation
- No way to centrally collect data = multiple versions
- Weak reporting capabilities
- Will choke on large amounts of data

- But they're so easy to use!

What is the best EDC system for me?

- It depends
- Factors to consider:
 - Need for data validation, skip logic
 - Number of users and sites (web vs. local)
 - Reporting needs
 - Future expansion
 - Time
 - Money

Access & SQL

- Access front-end with SQL Server back-end
- Closest approximation to Access
- Easiest way to “fix” legacy databases
- Drawbacks
 - Potential migration issues (with VB code, Access-specific SQL)
 - Not web-based
 - Limited validations (unless programmed)

REDCap*

- Designed for small-to-medium research studies
- Quick, easy setup
- Forms generated from Excel sheet
- Drawbacks:
 - Limited form controls and data validations
 - No control over look-and-feel
 - Minimal reporting capabilities
 - Siloed data
 - “Opaque” data model

*Primary support provided by CCTST

InfoPath & SQL

- Advanced data validations
- Complex workflows
- Custom data models
- Drawbacks:
 - Longer development time
 - BMI assistance required for setup
 - Advanced features can be overwhelming

Custom Programming

- Typically use SQL back-end
- Advanced data validations
- Complex workflows
- Custom data models
- Can include audio & video
- Drawbacks:
 - Longer development time
 - \$\$
 - BMI (or other developer) needed for changes/modifications

SharePoint

- Primary use: team-based websites - calendars, document libraries, discussion boards, etc.
- Support for basic data collection
- Web-based data manipulation, integration with Office 2007
- Relatively easy to use
- Drawbacks:
 - Lots of options
 - Advanced features require developer support
 - SharePoint lists may not be most appropriate data format

OpenClinica*

- Suitable for clinical trials & INDs
- XML-driven
- Currently being evaluated and validated by OCTR

*Primary support provided by OCTR

eForms/Teleforms*

- Only system capable of processing paper forms
- Drawbacks:
 - Limited online capabilities
 - End result is Access database
 - Designed for paper

*Supported by DBE

i2b2

- Contains (or will contain) data from most clinical system (Epic, DocSite, etc.)
- Working to add data collection capabilities
- Augment clinical data with research variables
- Eliminate double-data entry (hopefully)

Questions?

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- For further information:
 - Web: <http://bmi.cchmc.org>
 - E-mail: help@bmi.cchmc.org