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Data Repository Experts Since 1998

The Report Request Life Cycle

2018 International MUSE

Session #1103

Friday June 1st, 10:00am

Presenter: Howard Minor

The Need For Information

Data is the foundation for making better business decisions

Well established reporting is no longer a “Nice to Have”, or on the “Wish List”

Reports are the key interface to:

- Process Workflows
- Valuable Insights
- Better Decision Making

* A well established reporting process becomes the foundation for mastering the flow of mission critical information

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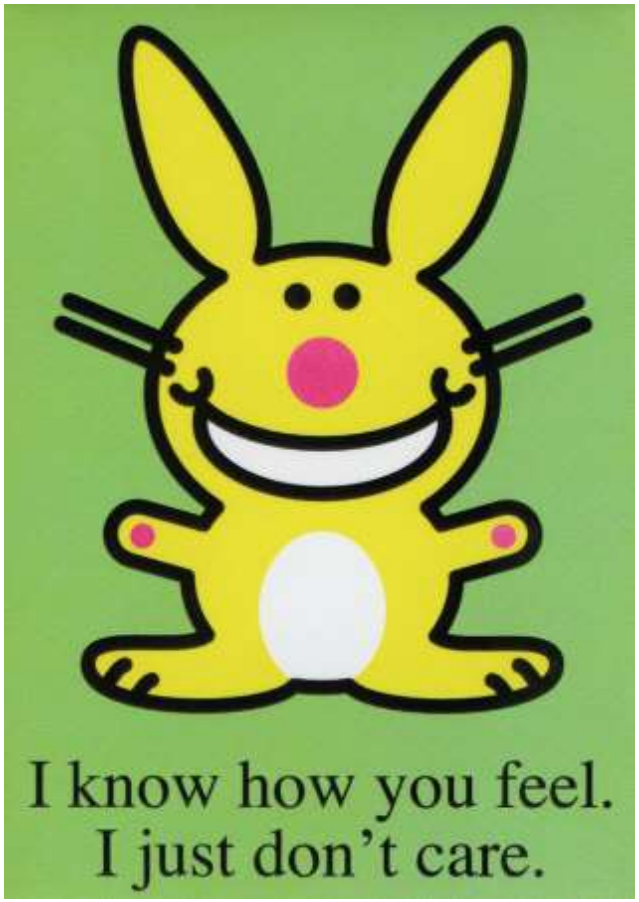
“I don’t write reports, why should I care?”



Create a better quality report request

Bridge the gap between the technical and clinical disciplines

Even if you don’t write reports, you probably use them

Better understand the challenges involved in custom report construction

Be a part of the solution the increasing information challenge

Improving process related to I.T. actually help everyone

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The Stages of a Report Request

Stage	Description
1. Initial Request	Inception, idea, or birth of report
2. Clarification	Discussion of requirements, intentions, questions
3. Data Research	Where is data coming from?
4. Technology Decision	What tools or report technology to use?
5. Construction & QA	Actual building of report and initial validation
6. Formatting	Presentation and aesthetics
7. Delivery	How will users access?
8. Storage	Archiving of request, documentation, materials

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Initial Request – Common Methods

METHOD	PROS	CONS
Word of mouth (Passing in hall, phone call)	• Easy for the requestor • Ad-hoc can be quick and effective	• Limited instructions or details • Little or no documentation
Email	• Some documentation • Can be stored, searched	• Miscommunication • Could get lost or delayed
Formal Request Document	• Strong base for documentation • Vital information collected up front • Enforces uniformity among all requests	• Time and effort to agree on standards • Staff may not have time to fill out details • Can be difficult to enforce
"GateKeeper"	• Enforce process and work load control • Manage priorities • More realistic goals and better communication	• Slower process • Dedicated staff member may be difficult to allocate • May hinder communication between requestors and developers

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Initial Request – Questions that need to be answered

Regardless of how the report is requested, key information needs to be collected to help facilitate the planning and development of ANY report.

Most often, report requestors don't give much thought to these problems but they all need to be answered at some point in the process.

Possible Questions	
Who is it for?	Knowing the audience can help determine how the output needs to be presented
What fields?	What specific fields are you looking for? Summary totals? Are specs available?
Reason for the report?	Helps with prioritization A similar report may already exist that the requestor may not be aware of
Run frequency?	One time run only? Daily? Monthly? On demand?
Security?	Who needs to have access? Who should be prevented?
Delivery?	Who will run it? Automated?
Formatting?	Special requests on the layout? Is it for internal or external purposes?
Output type?	Web? Excel? .PDF? .CSV? Any special rules or use?

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Initial Request – Questions to Consider

How much time is being lost in your reporting process because not enough information is being provided up front?

How effective is the communication between everyone involved with the request?

- Developers
- Consumers
- Managers

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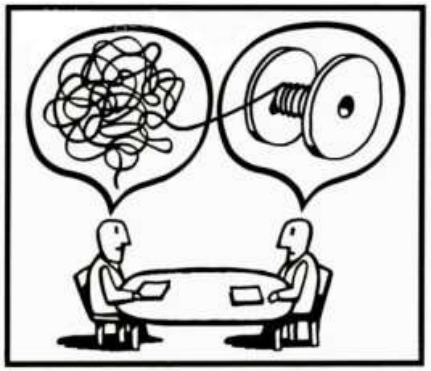
Clarification



Despite your best efforts to collect the information at the request level, sometimes there are factors that simply can't be conveyed without some sort of a discussion. This is especially the case in healthcare where the rules within the data itself can be extremely complicated. It's not realistic to expect any one individual to understand all aspects of the environment or have the required clinical experience in all the modules and processes involved.

Good communication also helps people become more aware of what it takes to actually develop a new report and some of the details that need to be considered.

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Clarification – Challenges

Differences in Terminology	Can be a large barrier between technical and clinical staff
What are you trying to do?	Somebody REALLY needs a report but they don't exactly know what they want. Developers are left to guess.
Other Considerations?	Special criteria, exclusions, calculations
Outside Factors?	Other priorities/projects, unforeseen challenges

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Clarification – Questions to Consider

In your environment, what are some examples of when poor communication resulted in significant rework and frustration? What did you learn?

Are reporting decisions about complex functionality, clinical situations, or financial calculations being made by the appropriate people?

Example: Informational Census

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Data Research

Once you have the specifications defined as well as you can, construction begins by investigating the data requirements. This almost always involves some detective work to figure out where the data is going to come from.

Questions	
Which applications and databases?	In NPR, where is the report going to reside?
What tables or segments?	Try to determine where most of the data is coming from
Which fields?	At the smallest level, what are the exact fields you will need
Can I get to everything I need?	Some data can only be accessed from certain places. Locked or restricted access?
Any manipulation or special calculations?	Some fields may not exist. It may be necessary to run a calculation, average, total, or translation.
Can I recycle or modify an existing report?	Once the fields are mapped, it may be wise to recycle something you already have. Maybe an existing report can be used by only adding a few new fields?

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Data Research – Questions to Consider

What are some methods you have used to help find where the needed data fields are?

Are you taking the time to plan out where all your data is coming from BEFORE you jump into the report construction?

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Technology Decision – (Basic Options)

Base	Technology	Description	Pros	Cons
MT NPR	NPR	Native MEDITECH language for NPR based applications	• Native integration to MEDITECH • Integrates into MEDITECH environment	• Cumbersome, hard to learn • Limited formatting options • Limited support
MT MAT	Report Designer	Native MEDITECH language for MAT/NPR applications	• Native integration to MEDITECH • Integrates into MEDITECH environment	• Cumbersome, hard to learn • Limited formatting options • Limited support
Data Repository	Excel	Simple output to standard Excel worksheet	• Easy to read and work with • Most people are familiar	• Doesn't scale • Doesn't update
Data Repository	'Enhanced Excel'	"Smart" Excel worksheet that can pull data directly from database	• Use ODBC connection to update data • Macro programming allows for wide possibilities with no software overhead	• Can be difficult to setup and program • Distributed files can be hard to maintain
Data Repository	Crystal Reports	Very mature and dominant ODBC reporting tool	• More advanced with aesthetics and formatting	• Runs a bit 'Heavy' • Can be expensive
Data Repository	SQL Reporting Services (SSRS)	Standard reporting environment from Microsoft SQL Server	• Native web environment • Integrates nicely with Active Directory	• Some formatting limitations • Advanced features are limited
Data Repository	COGNOS, Impromptu, Reportnet, Tableau	Other ODBC compliant reporting options	• Users could create their own reports • Some have great formatting and deployment features	• Can be expensive • May require significant training or learning curve

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Technology Decision – Questions to Consider

Define the tools and options you currently have available for your report creation. What are the advantages and disadvantages of each?

In your environment, is the reporting technology decision being made *before* or *after* the requirements are considered?

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Construction and QA

I've combined construction and QA in the same step because in most cases, it is a good idea if they are done simultaneously. Especially with more complex or advanced reports.

Construction begins by assembling the required data and/or presenting it onto the report canvas. This process will obviously vary greatly depending on the technology you've chosen for the report.

This process will involve juggling a collection of tables, segments, fragments, or sub reports that may need to be built independently. Unfortunately, there is no magic book or checklist to explain all the scenarios of report construction. Especially for more advanced requests, it almost becomes an art form that is learnt only by practice, creativity, and more practice.

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Construction and QA – Building and Checking

Tip	Examples
Keep things simple!	Organize thoughts and data into manageable pieces. Smaller pieces are easier to QA and can continually validate results as you build.
Learn your tools!	Templates, shortcuts, pre-defined layouts, printed cheat sheets
Different techniques	Do the same thing in different ways to ensure accurate results
Constantly QA	Double check results as you build Do the results make sense?

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Construction and QA – Questions to Consider

How well do you know your reporting tools? Are there features or shortcuts that you're not taking advantage of?

Are you testing results in smaller, more manageable increments?

Do you ever validate results by using two different reporting methods?

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Formatting – Consistency and Aesthetics

Consistency:

From a corporate standpoint, it's a great idea if all your reports have the same basic look and 'feel'. This may be more difficult if you use different reporting tools, but this is important for branding purposes and creates a more unified working environment.

Fonts and Colors:

Decide ahead of time on a uniform standard set of fonts, colors, and graphics that should always be used for your reporting.

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Formatting – Standard Tags

Standard Tags

Do not underestimate the importance of adding additional information to your reports. Even though it may not have value to the content, this information can be critical for organization and documentation control.

Possible Tag	Reason
Title and Subtitle	Have the name reflect the content as much as possible
Page # of #s	Even if the report is only one page, it is helpful for users to know if they are missing something or not.
Execution Date/Time	Databases are constantly changing. Could be important to know at what point in time this report was generated.
Full Name and Path of Report	Especially if printed to a hard copy. It could be convenient to know where it came from.
Original Author	Quickly identify the person responsible if any questions or issues
Special Criteria Used	Not always possible, but VERY helpful to answer questions about filters, calculations, or criteria
Company Name or Logo	Nice way to identify corporate property
Confidentiality Notification	Standard legal speak indicating the possibly sensitive content of the report.
Version Number	May be helpful if the report structure changes frequently or if someone references an old copy

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Formatting – Questions to Consider

Does your team have a pre-established set of formatting rules?

Are your report layouts consistent between all developers?

Have you done any simple research to find out what users like or dislike about your current report formatting?

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Delivery – Learn your tools!

Once the report is complete, it is ready to be made available to the consumers. The delivery method and technology is one of the elements that should mostly be defined during the requirements gathering phase. The various methods of delivery also depend on your reporting technology, network environment, and end user skill set.

Question	Consideration
Delivery Frequency?	How often is this report going to be run? If it's only once a year, it may not make sense to build special menus, routines, or complex processes for an infrequent run.
Who is going to run it?	Several people? A special group? One or two individuals?
Security considerations?	Can all users have access? Or does a barrier need to be in place?
Delivery method?	Can it be automated? Needs to run on demand? Both?
Delivery format?	Flat file? .PDF? Excel? .CSV?

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Delivery – Questions to Consider

Do your users know how to execute reports created from different technologies?

Ho do your consumers find their available reports? Are they organized in a way that is easy to understand and navigate?

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Storage – Accessing Later

The storage phase is a key part of the process for record keeping and future support. In most cases, a developer can end up with a collection of working documents, notes, emails, and spreadsheets that somehow were involved in the end result. It makes sense to store this information so it can be easily referenced for later use.

What to save:

- Documents
- Description of custom processes & special instructions
- Resource files, graphics

Where and how to save it:

- Physical storage
- Ease of retrieval
- Searchability

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Reporting Process – Questions to Consider

How often do you review your reporting process as a department or facility?

What is working?

What are some opportunities for improvement?

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Discussion, Q&A

Thank you!

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Look for our MUSE sessions

- Tuesday, May 29
  - 702 - Custom BCA Dashboards with Visual Insight
  - 703 - The Alphabet Soup of Clinical Quality Measures Reporting and Reimbursement: 2018 Updates
  - 704 - Soup to Nuts - Data Repository 101
  - 802 - Report Designer Fundamentals
  - 804 - Soup to Nuts – Data Repository 102
- 1010 - Revenue Cycle Optimization: Tools and Strategies for Success
  Wednesday May 30 at 2:30 pm
- 1087 - HIE: Effective Integration and Interoperability
  Thursday May 31 at 1:45 pm
- 1104 - The DR Overnight DBA
  Thursday May 31 at 2:45 pm
- 1091 - Electronic Reporting: Quality Management Cycle Concepts that Achieve Reliable Results
  Friday June 1 at 9:00 am
- 1103 - The Report Request Lifecycle
  Friday June 1 at 10:00 am

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