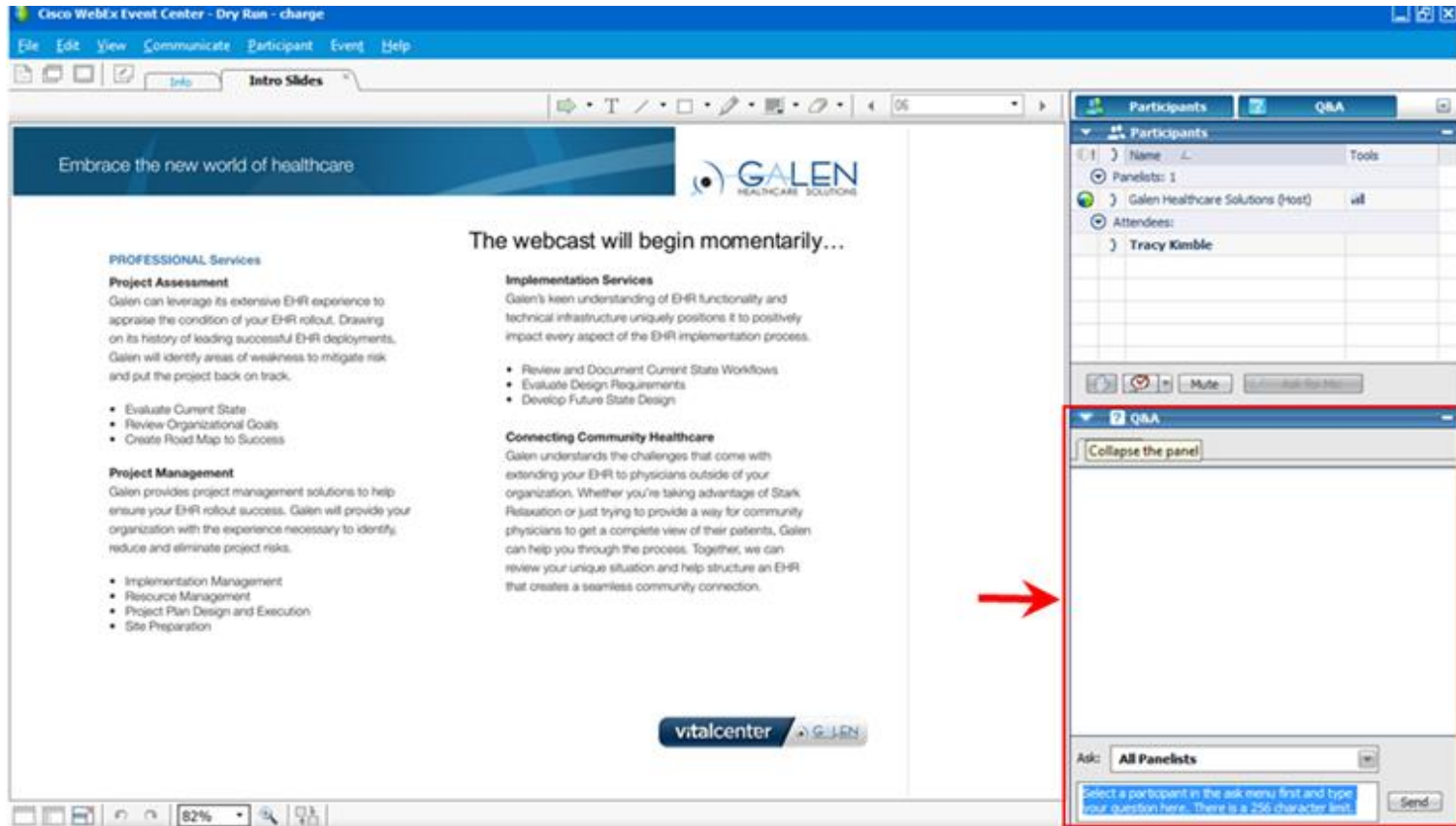


# Clinical Data Conversions: Functional and Technical Considerations

Empowering Extraordinary Patient Care

Your phone has been automatically muted. Please use the Q&A panel to ask questions during the presentation!



The screenshot shows a Cisco WebEx Event Center window titled "Cisco WebEx Event Center - Dry Run - charge". The main content area displays a presentation slide with the following text:

Embrace the new world of healthcare

**PROFESSIONAL Services**

**Project Assessment**  
Galen can leverage its extensive EHR experience to appraise the condition of your EHR rollout. Drawing on its history of leading successful EHR deployments, Galen will identify areas of weakness to mitigate risk and put the project back on track.

- Evaluate Current State
- Review Organizational Goals
- Create Road Map to Success

**Project Management**  
Galen provides project management solutions to help ensure your EHR rollout success. Galen will provide your organization with the experience necessary to identify, reduce and eliminate project risks.

- Implementation Management
- Resource Management
- Project Plan Design and Execution
- Site Preparation

**Implementation Services**  
Galen's keen understanding of EHR functionality and technical infrastructure uniquely positions it to positively impact every aspect of the EHR implementation process.

- Review and Document Current State Workflows
- Evaluate Design Requirements
- Develop Future State Design

**Connecting Community Healthcare**  
Galen understands the challenges that come with extending your EHR to physicians outside of your organization. Whether you're taking advantage of Stark Relaxation or just trying to provide a way for community physicians to get a complete view of their patients, Galen can help you through the process. Together, we can review your unique situation and help structure an EHR that creates a seamless community connection.

At the bottom of the slide are logos for "vitalcenter" and "GALEN HEALTHCARE SOLUTIONS".

On the right side of the interface, there are two panels. The top panel is titled "Participants" and shows a list of participants:

Name	Tools
Panelists: 1	
Galen Healthcare Solutions (host)	url
Attendees:	
Tracy Kimble	

Below the participants list are buttons for "Mute" and "Unmute My Microphone".

The bottom panel is titled "Q&A" and contains a "Collapse the panel" button, a large empty text area for questions, and a "Send" button. Below the text area is a dropdown menu set to "All Panelists" and a small text box with the instruction: "Select a participant in the ask menu first and type your question here. There is a 256 character limit."

A red arrow points from the main content area towards the Q&A panel.

# Introduction

## August Borie

- Enterprise EHR Consultant
- **2+ years working in Healthcare IT**
- **Experienced in conversions, implementation, and configuration with AEEHR**
- **Exposure to a variety of EMR systems for conversion**

## Fallon Hartford

- Associate Interface Analyst
- **M.S. in Health Informatics**
- **2+ years working in Healthcare IT**
- **Experience in conversions, Crystal reporting, ETL, Works database training**

# Overview

- **Why are there so many decisions to make?**
- **Functional Considerations**
- **Technical Considerations**
- **A few gotchas**
- **An opportunity to ask your questions**



# So Many Decisions!



- **Why?**

- Sometimes adding a large amount of data
- Very difficult to change once data has been loaded
- Way the data is stored in the source system does not always play nice with how the target system accepts it
  - Way the source system records medication refills may be different from how the target system records them
- Often need to think long term and about the global context in the organization
  - Mapping highly utilized medication in source system to rarely used medication in target system may not be a good idea

# Still More Decisions!

- **What?**
  - Scope
  - Mapping
    - Need to match values from source system to dictionary values from target system
  - Workflows
    - Verify and Add
  - Need to make decisions for large amount of data based upon a relatively small subset

# Functional Considerations



The screenshot shows the Allscripts Enterprise EHR login interface. At the top, the text "Allscripts Enterprise EHR™" is displayed in white on a green background. To the right is the Allscripts logo. Below the title are two input fields for "Login ID" and "Password". A checkbox labeled "Show Last-Session Information" is present. Three buttons are visible: "New Session", "Last Session", and "Option". At the bottom right of the green area, the text "Centricity Framework 5.02.00.036 Enterprise EHR 11.3.0.655.030" is shown. Below the green area, the Allscripts logo is repeated on the left. In the center, there is a section titled "Organizational News" with a paragraph of text: "CUSTOMIZE...Edit the document TWCUSTOMIMAGE to place client logo and you can place Organization news here should you choose. To delete, go to the Organization News section in PHB Comp Admin." On the right, there is a section titled "Important Notices" with a scrollable area containing a disclaimer: "The information provided by this system is intended to supplement the knowledge of physicians and other healthcare professionals. This information is advisory only and is not intended to replace sound clinical judgment in the delivery of healthcare services. You are advised to review the definitions, functionality, and limitations of the system. Allscripts and its suppliers and licensors disclaim all warranties, whether expressed or implied, including any warranty as to the quality, accuracy, and suitability of the information provided by the system for any purpose." Below this is a copyright notice: "Copyright © 1998-2013 Allscripts LLC; Portions Copyright © 1998-2013 Wolters Kluwer Health, Inc.; Portions Copyright © 1998-2013 MediMedia Information Technologies, Inc.; Portions Copyright © 2013 Medicomp Systems, Inc. All Rights Reserved. CPT Copyright 2013 American Medical Association. All Rights Reserved."

# Scope of Conversion

- **Multiple ways to filter the data**
  - Decide what data types will be converted
    - Immunizations, allergies, medications, results, problems, documents, vitals, images
  - Not every data type may be present in the source system
    - If organization has no inbound results interface then there may not be results to extract
  - Different ways to filter clinical data depending on need
- **Clearly define what fields will be converted**
  - Can help to display where fields render in the target system
  - All fields might not be available to convert



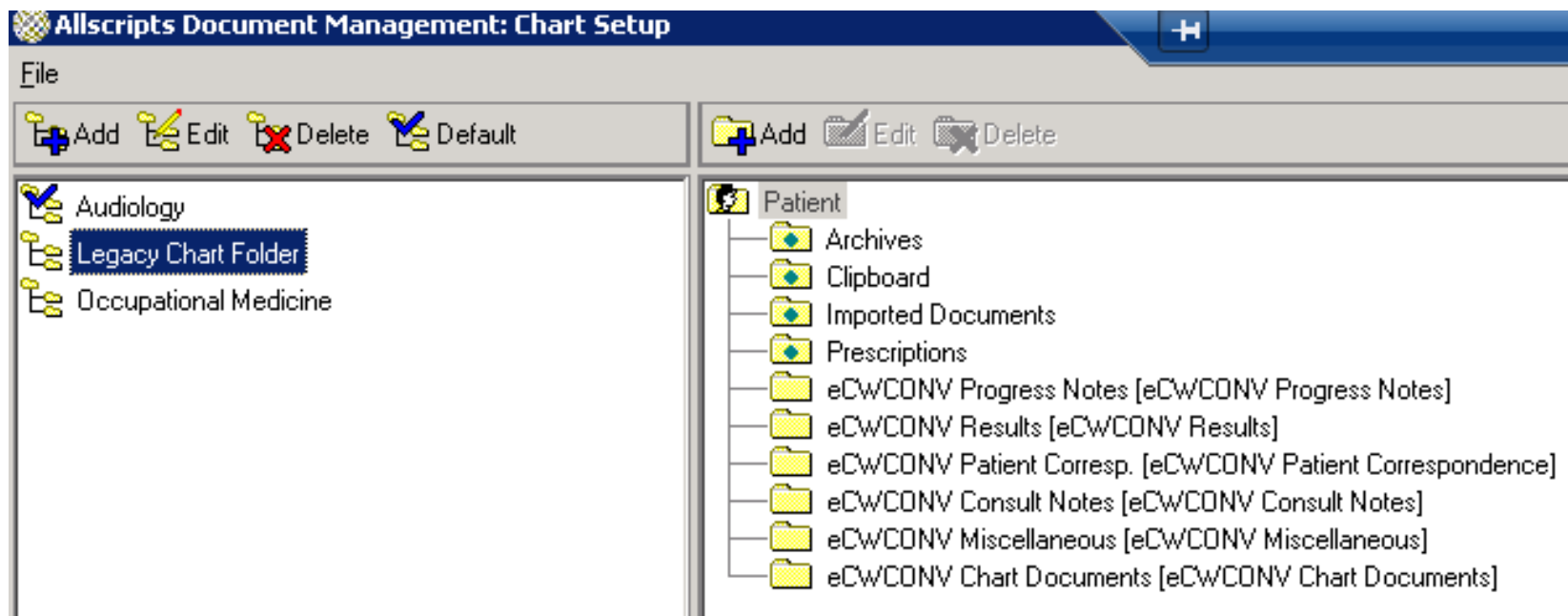
# Current Medications vs. Medication History

- **Current Medications**
  - Only shows most recent occurrence of medication
  - Not necessarily last time it was prescribed
- **Medication History**
  - Each time medication was recorded will convert separately
  - Can clog up Past Medications

# Scanned Images

- **EEHR**
  - Integrate documents into current EEHR chart structure
  - Build a new “Conversion” section of the chart
    - Can help if there is a large number of scanned images
- **ADM (Allscripts Document Management) – “Scan”**
  - Need to build folders if converting images to new document types
  - Create new chart group for conversion
    - Most likely will not be scanning to chart group after conversion
  - If existing document types are utilized, no work needs to be done

# Example of Separate Scan Chart Structure



# Annotations

- **Easy way to signify that clinical data came from another system**
- **Way to add data that is not able to be mapped or able to be brought over discretely**
  - Free text comments in source system

**Medication Viewer**

[Details](#) [Rx History](#) [Annotations](#) [MAR History](#)

**Lipitor 40 MG Oral Tablet** Lipitor 40MG, 1 (one) Tablet daily ,08/01/2012

Lipitor 40MG, 1 (one) Tablet daily ,08/01/2012; Qty: 30 (Tablet); Refill: 11; Recorded as History: **09Apr2013** L  
AHS Pro

Ordered by: Authorization: **Not Required** Rx #:  
Rx Benefit: **None**  
Therapy: **Managed by:** Start Date: **01Aug2012** Status: **Active**  
Date: **01Aug2012**

## Rx History

**Recorded as History 09Apr2013** Last Updated By: **Conversion,** AHS Pro  
Lipitor 40 MG Oral Tablet, Lipitor 40MG, 1 (one) Tablet daily ,08/01/2012; Qty: 30 (Tablet); Refill: 11;

Ordered by: Authorization: **Not Required** Rx #:  
Rx Benefit: **None**  
Therapy: **Managed by:** Start Date: **01Aug2012**

## Annotations

Order Annotated 09Apr2013 01:17PM by **Conversion,** AHS Pro  
Lipitor 40 MG Oral Tablet  
OK for generic  
Prescription sent to: Coborns #2016, 645 LAKE STREET S, LONG PRAIRIE, MN, (320) 732-2915

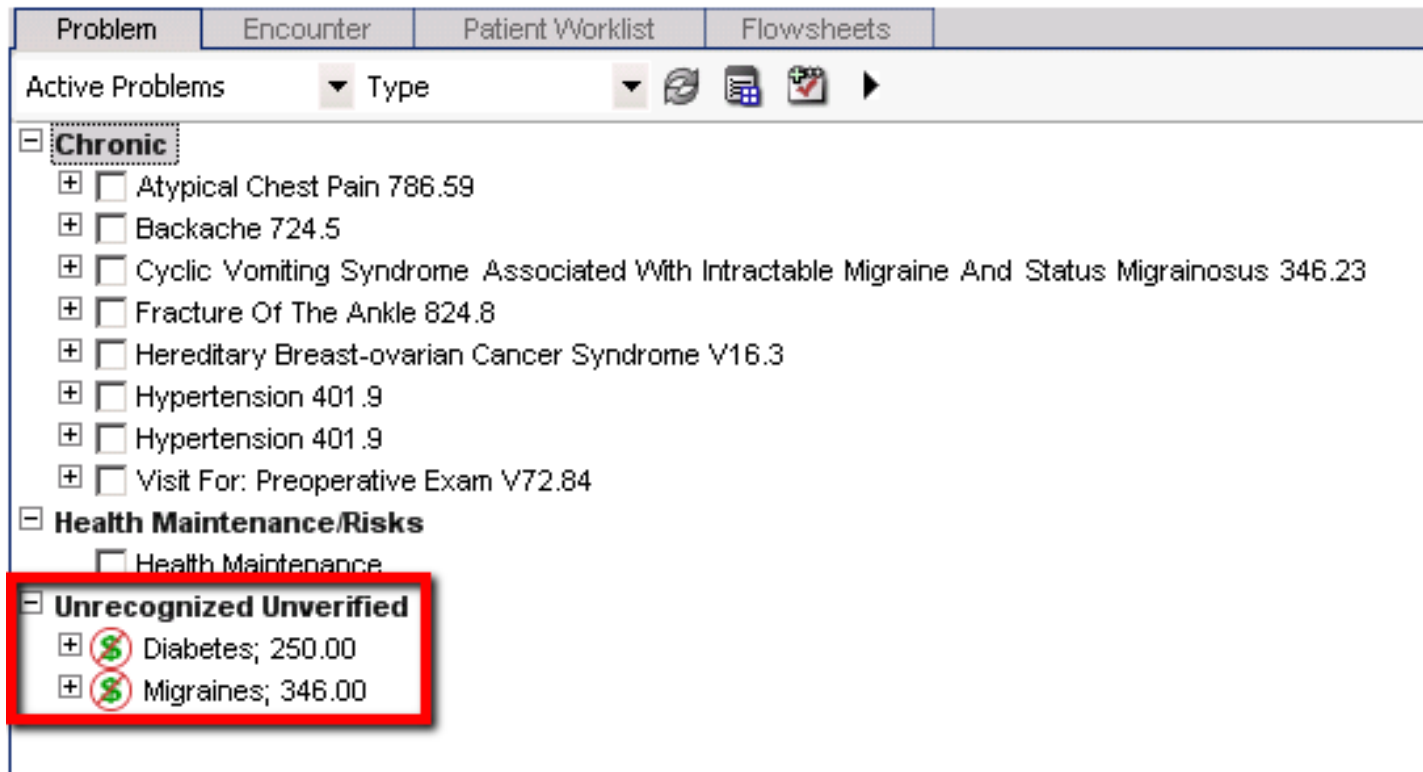
# Providers

- **Map all providers**
  - Able to associate providers to meds prescribed, orders placed etc.
  - Not always connected to most recent record
- **Use generic “conversion” provider**
  - At a quick glance allows users to see where item came from
  - Conversion MD, HeartPro
- **Non-providers**
  - Administered by
  - Recorded by
  - Can use annotations as well

# Unverified Items

- **The good**
  - Does not require time to map
  - Allows users to build a patient's chart history on the fly for ambiguous items
- **The bad**
  - Items are not functional within EEHR
  - Items do not participate in DUR (Drug Utilization Review) checking
  - Items do not auto-cite into a note
  - Cannot assess and charge for unverified problems
  - Immunizations display under the Orders Component
- **Make sure users know the Verify and Add workflow**

# Verify and Add Workflow Demo



The screenshot displays a software interface with a navigation bar at the top containing 'Problem', 'Encounter', 'Patient Worklist', and 'Flowsheets'. Below this is a section titled 'Active Problems' with a 'Type' dropdown menu and several icons. The main content area is a list of medical conditions, each with a plus sign and a checkbox. The list is organized into three categories: 'Chronic', 'Health Maintenance/Risks', and 'Unrecognized Unverified'. The 'Unrecognized Unverified' category is highlighted with a red rectangular box and contains two items: 'Diabetes; 250.00' and 'Migraines; 346.00', each with a plus sign and a red 'S' icon.

Category	Problem	Value
Chronic	<input type="checkbox"/> Atypical Chest Pain	786.59
	<input type="checkbox"/> Backache	724.5
	<input type="checkbox"/> Cyclic Vomiting Syndrome Associated With Intractable Migraine And Status Migrainosus	346.23
	<input type="checkbox"/> Fracture Of The Ankle	824.8
	<input type="checkbox"/> Hereditary Breast-ovarian Cancer Syndrome	V16.3
	<input type="checkbox"/> Hypertension	401.9
	<input type="checkbox"/> Hypertension	401.9
	<input type="checkbox"/> Visit For: Preoperative Exam	V72.84
Health Maintenance/Risks	<input type="checkbox"/> Health Maintenance	
Unrecognized Unverified	<input type="checkbox"/> Diabetes	250.00
	<input type="checkbox"/> Migraines	346.00



# Preferences to Allow Verify and Add

- **Enable Allergy Verification**
  - When enabled, this preference allows organizations to require the validation of newly entered allergies per user.
    - Set to N
- **Enable Problem Verification**
  - Determines if problem verification is enabled. When enabled, problems that are entered by users that are not providers are added to the Unverified Problem Group.
    - Set to N
- **Enable Rx-Orders Verification**
  - If the preference is set to Y for a user, the Verify and Add menu is not available when selecting an Unverified item. In other words, this preference must be set to N to verify and add an Unverified Item.
    - Set to N

# Mapping Considerations

- **Use counts to map most commonly used items**
- **What items to exclude (NKA, NKDA, No Known Medications etc.)**
- **Think critically about why values may be present**
  - Data could have been entered incorrectly
- **Take into consideration how items will display in EEHR**
  - Section for problems
    - History of, Family History of etc.
- **Ancillary mapping needs**
  - Route of Administration
  - Body Site
  - Manufacturer
  - Allergy Reaction

# Mapping Considerations (cont.)

- **Manually Created Items**
  - Might not want to map to custom created meds, immunizations, problems etc.
- **Results**
  - Map all discrete results
  - Use auto file results process
    - Can increase OID and RID dictionaries dramatically
- **Unverified Items**

# Create Valuable Conversion Team

- **Need to include clinical resources**
- **Helpful if analysts have experience with both target and legacy system**
- **Testing team**
  - Experience with testing workflows for converted items
- **Have technical/server resource available**

# Technical Considerations



# Discrete vs. Non-discrete Conversion

- **Non-Discrete Conversion**

- Chart Summary of Data
  - Less work
  - Won't duplicate data
  - Not Reportable

- **Discrete Conversion**

- Inserting data into Works Database
  - Reportable
  - Users can use items in workflow
  - More work
  - Can duplicate data if users are already live on EEHR

Browser: http://localhost/AHSWeb/ | Live Search

File Edit View Favorites Tools Help

☆ Allscripts | Home | RSS | Print | Page | Tools

Provider: Hide VTB | Tools | Help | Lock | Logoff

Chart: Daily | Task List | Clinical Desktop | eCalcs | Encounter Form | Worklist | UpToDate | Referral Documents

**Test, Kristie** | Sex: F | MRN: 110322094950903 | W Phone: | FYI: FYI  
 Age: 27 Years | PCP: Bones, Jeff | Security: No Restricted Data | Note: Select  
 DOB: 05/23/1986 | H Phone: | Allergies: Yes | SSN: 0009090999

Select Patient | Adult Patient View | Commit | Pat Loc: | Status: |

Problem | Encounter | Patient Worklist | Flowsheets | Chart Viewer | Health Management Plan | Meds | Orders

Active Problems | Type | Current Medications | None | Alpha | Rec: Never

**Chronic**

- Atypical Chest Pain 786.59
- Backache 724.5
- Classic Migraine (With Aura) 346.00
- Cyclic Vomiting Syndrome Associated With Intractable Migraine And Status Migrainosus 346.23
- Fracture Of The Ankle 824.8
- Hereditary Breast-ovarian Cancer Syndrome V16.3
- Hypertension 401.9

**Unverified**

- Ri Mag Plus 540-40 MG/5ML SUSP; Take 1 tablespoonful every 2-3 hours as needed; Therapy: 29Jun2011-; Last Rx:29Jun2011; Status: NEED INFORMATION - Pharmacy
- Neurontin 100 MG Oral Capsule; TAKE 1 CAPSULE 3 TIMES DAILY; Therapy: (Recorded:06Aug2011) to; Status: ACTIVE

Allergies | Results | All Results | None | 10 of 92 Chart Items (0 Invalid and 62 Audit Items) - Filters Applied

- Health Calculators - Done: 13Sep2012 - Medici, James; Enc: 13Sep2012 - Lab - Medici
- Health Calculators - Done: 18Jun2012 - Bones, Jeff; Enc: 18Jun2012 - Lab - Bones, Jef
- \* Hemoglobin A1C - Done: 21Feb2012 - Allscripts, Provider; Enc: 21Feb2012 - AUDIT -
- Lipid Profile - Done: 21Feb2012 - Allscripts, Provider; Enc: 21Feb2012 - AUDIT - Allscri
- Rapid Strep - Done: 09Feb2012 - Bones, Jeff; Enc: 09Feb2012 - AUDIT - Bones, Jeff (I
- I Urine Pregnancy Test - Done: 01Nov2011 - Bones, Jeff; Enc: 01Nov2011 - AUDIT - B

View | Edit | New | Print | Clinical Exchange Document | Personalize | New | Edit | View | Reconcile | Reconcile Hx | Order D/C

User: TWAdmin Site: New World Health

# Patient Matching

- **Different options for matching**
  - Standard matching vs. Extended matching criteria
- **When would patient matching fail?**
  - Name misspelled
  - Name change
  - Info lacking in legacy system
  - Patients don't exist
- **Other Considerations**
  - Multi-org environment
    - Use of Internal Organization number in Patient table
    - eMPI Enterprise Master Patient Index
  - Merged and Deactivated Patients



# Getting Access to the Data

- **Ways to Access Data:**
  - Direct network access
  - Access to legacy system
    - Galen Securelink
  - Linked server
    - Copy of legacy system to test database of new system
- **Scanned Images**
  - Options:
    - Direct network access
    - Removable device
    - FTP

# Space Needed for Conversion

- **Space needed in Works for discrete item conversion**
  - No easy way to estimate this:
    - Test with % of patients and extrapolate
  - Also take into account scanned images
- **Space needed in Scan warehouse for image conversion**
  - PDFs loaded into scan warehouse
  - 900KB per Chart Summary

# Gotchas

- **Document Conversion**
  - AutoCC flag not set
  - Set SiteID so correct print template renders
  - Non-electronic workflow
- **Document/Image Conversion**
  - Outbound DOC interface?
- **What to do when users rename clinical items**
  - Not convert
  - Map to the renamed item or original item?

# Questions?

**Success stories: <http://blog.galenhealthcare.com>**

Thank you for joining us today, for additional assistance....

You can contact us through our website at [www.galenhealthcare.com](http://www.galenhealthcare.com)

