

# Introduction to Reporting with Allscripts Professional EHR

Demographics, Provider, Encounter

## Today's presenter:

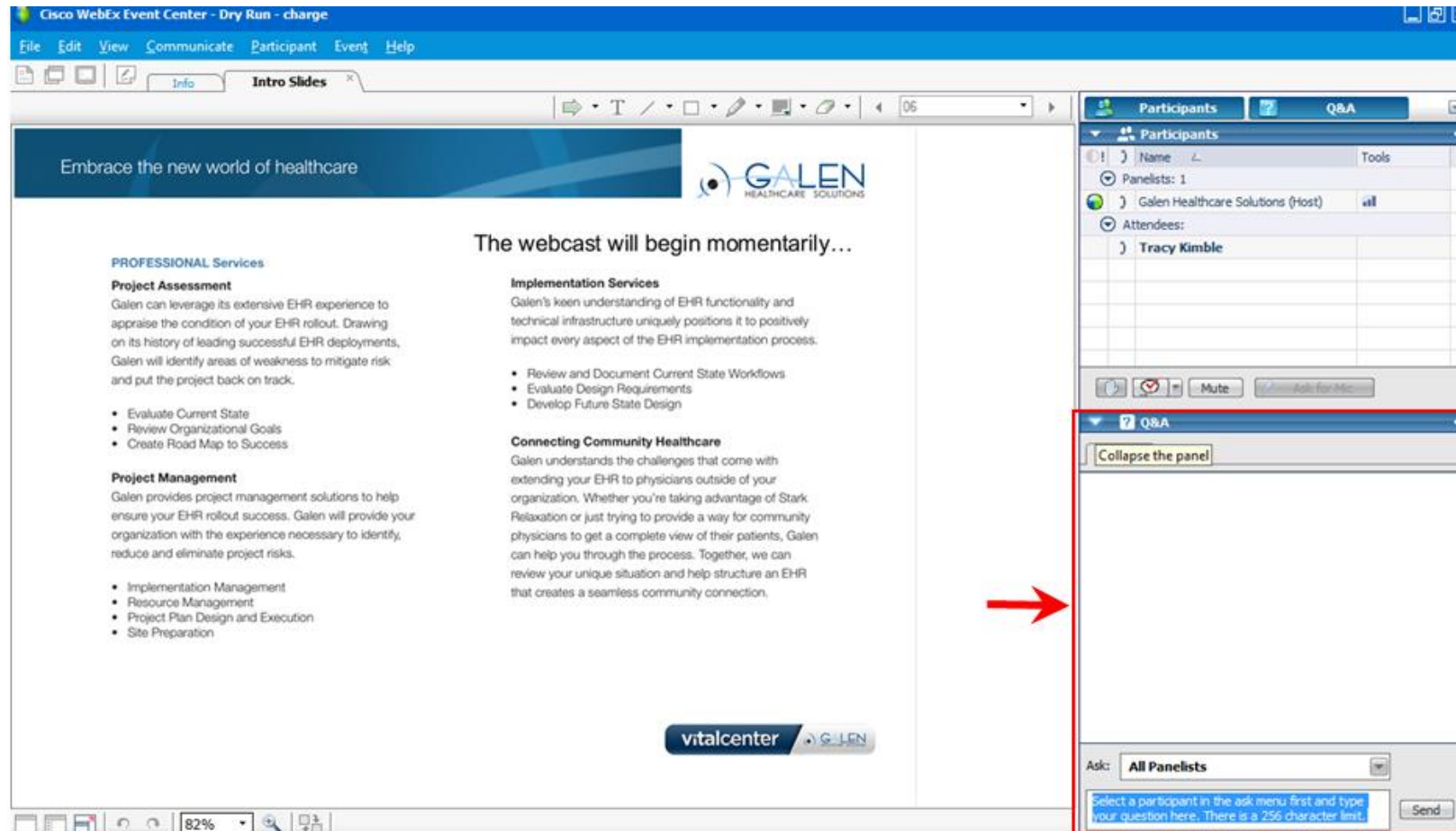


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Your phone has been automatically muted.  
Please use the Q&A panel to ask questions during the presentation.



The screenshot shows a Cisco WebEx Event Center window titled "Cisco WebEx Event Center - Dry Run - charge". The main presentation area displays a slide with the title "Embrace the new world of healthcare" and the Galen Healthcare Solutions logo. The slide content is divided into three sections: "PROFESSIONAL Services", "Implementation Services", and "Connecting Community Healthcare". The "PROFESSIONAL Services" section includes "Project Assessment" and "Project Management". The "Implementation Services" section includes a list of services. The "Connecting Community Healthcare" section includes a paragraph about extending EHR to physicians. The right sidebar contains a "Participants" panel and a "Q&A" panel. The "Q&A" panel is highlighted with a red box and a red arrow pointing to it. The "Q&A" panel has a "Collapse the panel" button and a text input field for asking questions. The text input field has a placeholder text: "Select a participant in the ask menu first and type your question here. There is a 256 character limit." The "Ask:" dropdown menu is set to "All Panelists".

Cisco WebEx Event Center - Dry Run - charge

File Edit View Communicate Participant Event Help

Info Intro Slides

Embrace the new world of healthcare

GALEN  
HEALTHCARE SOLUTIONS

The webcast will begin momentarily...

**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.

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Participants

Q&A

Collapse the panel

Ask: All Panelists

Select a participant in the ask menu first and type your question here. There is a 256 character limit.

Send

# What will we cover today?

- Reporting best practices
- PRO database schemas and syntax
- EMR architecture
  - Dictionary tables
  - Common patient tables
  - Provider tables
  - Encounter tables
- Sample queries
- Q&A – Chat and Live

# Why query the database

- Clinical Informatics
  - improve outcomes, improve patient care, refine/streamline clinical processes
- Summarize data you see in the EHR
- Verify information in the EHR or interfaces
- Export information
  - e.g. Excel for Graphs and Pivot Tables
- Gathering data for reporting initiatives
  - Meaningful Use, PCMH, etc.

## Be Careful

- The Allscripts database is Complex
  - 630 tables
  - 3,500 stored procedures
  - 63 views, 94 triggers
- You can do harm, even by just running queries
- You may not have access – your organization's policies

# What To Do

- Use TEST
  - Test environment, Data Warehouse, Analytics server
  - Query development and testing
- When using Production
  - Get permission from the IT/DBA group
  - Run queries off-hours
  - Ensure it takes a reasonable amount of time
    - Most queries should be less than a minute
- VALIDATE!
  - Always Verify your queries' data

# What NOT To Do

- Never . . .
  - Access the database without proper approval
  - Delete data. Ever.
  - Run *anything* in production during the day
  - Share passwords, even “default” passwords
  - Save patient data on your PC or in email
    - HIPAA concerns
    - Your company’s policies



# SQL Best Practices

- Start with simple queries and expand
  - Use COUNT(\*) to confirm new table joins are correct
  - Use TOP function
- Use (NOLOCK) table hint
- Use BEGIN/COMMIT/ROLLBACK commands
  - Especially for UPDATE

# Lookup Tables and Normalization

- Required for the application to run effectively
- Dividing large tables into smaller, more manageable tables and defining a relationship between each
- Yes, it makes reporting more difficult
- [http://en.wikipedia.org/wiki/Database\\_normalization](http://en.wikipedia.org/wiki/Database_normalization)

# EMR Database Schemas

- Database Schemas
  - a way to logically group objects such as tables, views, stored procedures etc.
    - think of a schema as a container of objects
  - can be created and altered in a database
  - can be owned by any user, and schema ownership is transferable
- Schemas Sort objects into categories
  - DBO: related to Interface
  - HPSITE: Patient related schema
    - includes dynamic data (data that is constantly being updated)
  - HPSYSTEM : No patient data
    - includes static data (data that does not often change)
    - Includes reference data that cannot be altered by the client, i.e. dictionary tables
- Database.Schema.Table.Column
  - i.e. EMR.HPSITE.DEMOGRAPHICS.DEM\_LASTNAME

## Clinical Tables: EMR.HPSITE

<b>TABLES</b>	<b>PRIMARY KEYS</b>
<b>DEMOGRAPHICS</b>	IMREDEM_CODE
<b>SCHEDULE</b>	IMRESCHED_CODE
<b>ENCOUNTER</b>	IMREENC_CODE
<b>CONTACT</b>	IMRECONTACT_CODE
<b>IMMUNIZATION_RECORD</b>	IMMREC_ID
<b>LABORDERS</b>	IMRELABORDER_CODE
<b>MEDICATIONS</b>	IMREMED_CODE
<b>PROVIDER</b>	IMREPROV_CODE
<b>RESULT</b>	RESULT_ID
<b>VITALS_DATA</b>	VITALS_CODE
<b>DX</b>	IMREDX_CODE
<b>HX_DIAGNOSIS</b>	HX_DIAGNOSIS_ID

# Dictionaries

- **HPSYSTEM.DICTIONARIES\_MASTER**

- Lookup table for master list of codes
- Dict\_Type
  - Race, Sex, Status, Unit, Priority, Lang, Lab\_type, Ethnicity, etc.
- Dict\_Code
  - Unique code for a value in a dict\_type

- **HPSITE.DICTIONARIES\_SITE**

- Dictionary entries that are specific to the site

- **HPSITE.DICTIONARIES\_VIEW**

- View that combines the two dictionaries above

# Common Patient Tables

- **HPSITE.DEMOGRAPHICS**
  - Name, DOB, SSN, Bloodtype, Language, Marital Status
- **HPSITE.ADDRESSES**
  - holds addresses for 5 types of entities
    - Patient, Provider, Site, Insurance Carriers, Institutions
- **HPSITE.INSURANCES**
  - contains insurance information for the patient
- **HPSITE.DEMOGRAPHICPICTURE**
  - link to picture in the EHR that is associated with the patient
- **HPSITE.PHARMACYFAVORITE**
  - Contains primary pharmacy information
- **HPSITE.DEMGUARANTOR**
  - contains patient guarantor information

# Patient Matching Parameters

- These parameters ensure that a particular clinical item is linked to the correct patient
- All values come from HPSITE.DEMOGRAPHICS
  - MRN
    - Dem\_ExternalID
  - Last Name
    - Dem\_LastName
  - First Name
    - Dem\_FirstName
  - Date of Birth
    - Dem\_Dateofbirth
  - SSN
    - Dem\_ssnum

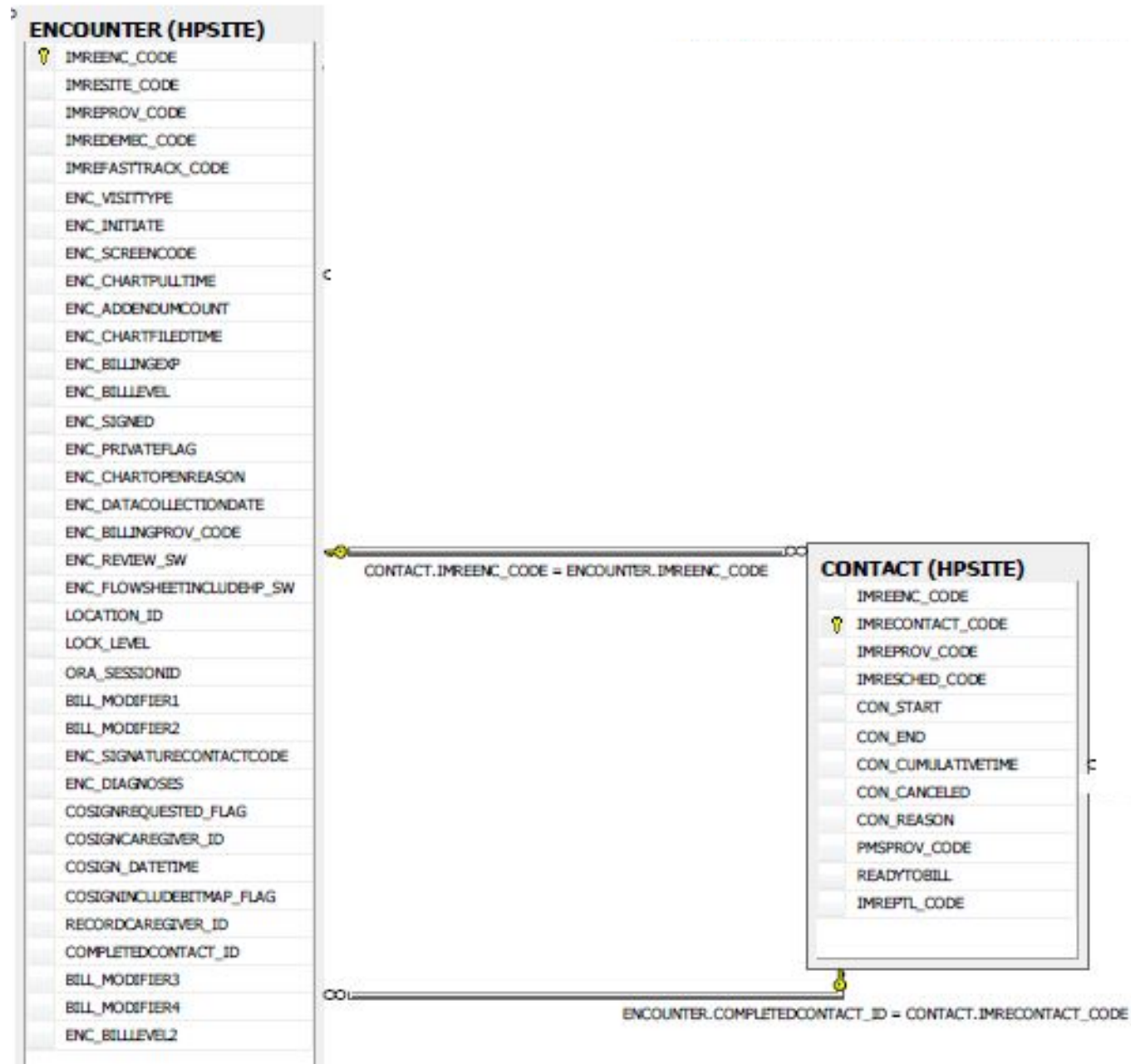
# Provider

- **HPSITE.PROVIDERS**
  - primary record for providers
  - information including provider code and specialties is found here
- **HPSITE.ADDRESSES**
  - holds addresses for 5 types of entities
    - Patient, Provider, Site, Insurance Carriers, Institutions
- **HPSITE.PROVIDERLICENSES**
  - stores info regarding medical licenses
  - can store multiple licenses per provider
- **HPSITE.PROVIDER\_LOCATION**
  - cross-reference of caregivers and locations
  - also defines default location
- **HPSITE.PATIENT\_PHYSICIANS**
  - contains provider information
    - both PCP and referring provider information
- **HPSITE.PROVIDER\_IDENTIFIER**
  - stores all provider ID information
    - i.e., NPI, UPIN, DEA



# Encounter

- **HPSITE.ENCOUNTER**
  - every update to a patient chart must be tied to an encounter
  - this table holds information about the encounter and the recorded dates
- **HPSITE.CONTACT**
  - holds one record for each encounter-provider-event
    - an encounter-provider event is everything that happens between the time a provider starts a contact until she/he saves the contact in the application
- **HPSITE.SCHEDULE**
  - a list of all patient and business related events scheduled for each provider on any given day
    - i.e. appointments made in EHR
- **HPSITE.PMS\_APPOINTMENTS**
  - contains scheduled appointments from the practice management system
- **HPSITE.ENCOUNTER\_TAKEN**
  - a record is inserted into this table when a provider accepts a patient encounter from another provider
  - this ensures that the original provider still has the record of their encounters



## Query to Find Tables associated with Clinical Table Key

```
SELECT t.name AS table_name,  
SCHEMA_NAME(schema_id) AS schema_name,  
c.name AS column_name  
FROM sys.tables AS t  
INNER JOIN sys.columns c ON t.OBJECT_ID =  
c.OBJECT_ID  
WHERE c.name LIKE '%imredem_code%'  
ORDER BY schema_name, table_name;
```

# Demographics Search

- Write a query that displays demographic information about a patient
  - Name
  - Gender
  - DOB
  - Marital Status
  - Address
  - Race
  - Status
  - Language
  - PCP

## Patient Encounters

- Find a count of how many patients have had an finalized encounter documented in their chart since 1/1/2010

# Canceled Appointments

- Patient MRN
- Name
- Date of Birth
- Schedule Date
- Status

# Galen Training Offerings

- Database Trainings
  - Allscripts Professional
  - Allscripts TouchWorks
  - Allscripts Analytics
- ConnectR or Common Interface Engine (CIE) Training
- Allscripts Analytics End-User Training
- Sysadmin Training

[galenhealthcare.com](http://galenhealthcare.com) or [sales.galenhealthcare.com](http://sales.galenhealthcare.com)

# Questions?





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

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

