# Centricity Reporting 101

**PRESENTED BY** 

Mike Baeske, Software Applications Specialist – Team Leader



# Objectives

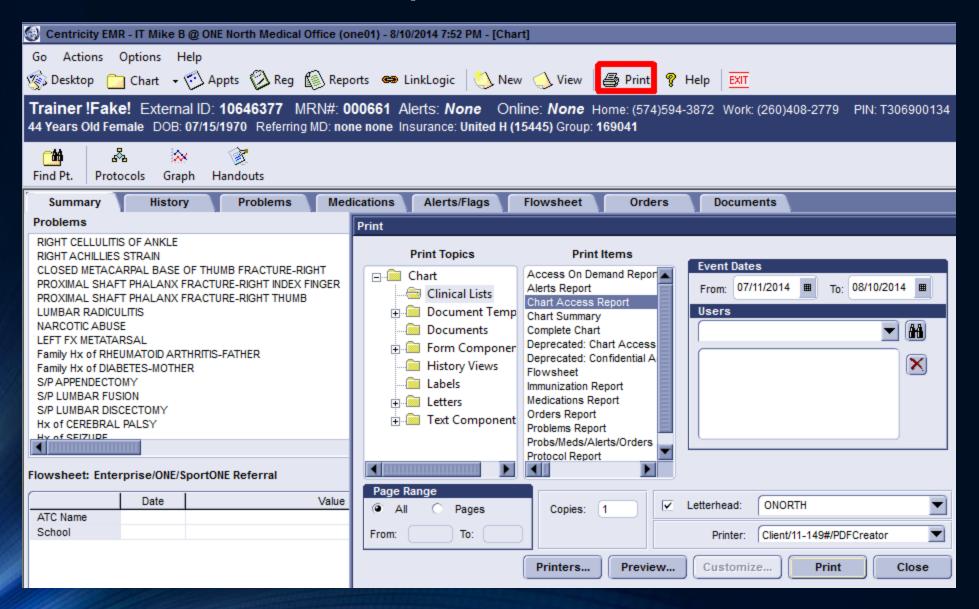
- 1.Discover the reporting tools that are readily available in Centricity
- 2.See how Crystal Reports and Word documents can be generated based on SQL coding
- 3.Learn about key tables, views, and functions in Centricity

### Ortho NorthEast

- An Orthopedic practice founded in 1962
- 12 locations throughout northeast Indiana
- 26 physicians, 7 anesthesiologists, 13 CRNAs, 24 mid-levels, 14 PT/OT

### **Prebuilt Centricity Reporting Tools**

### Chart Access Report



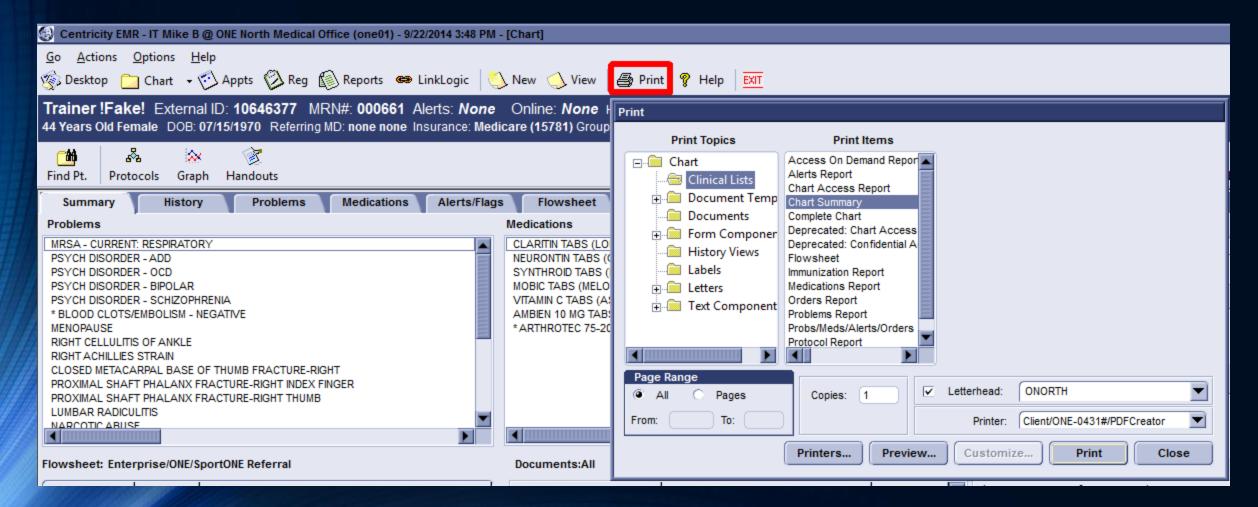
### Patient Chart Access

From: 8/8/2014 To: 8/8/2014

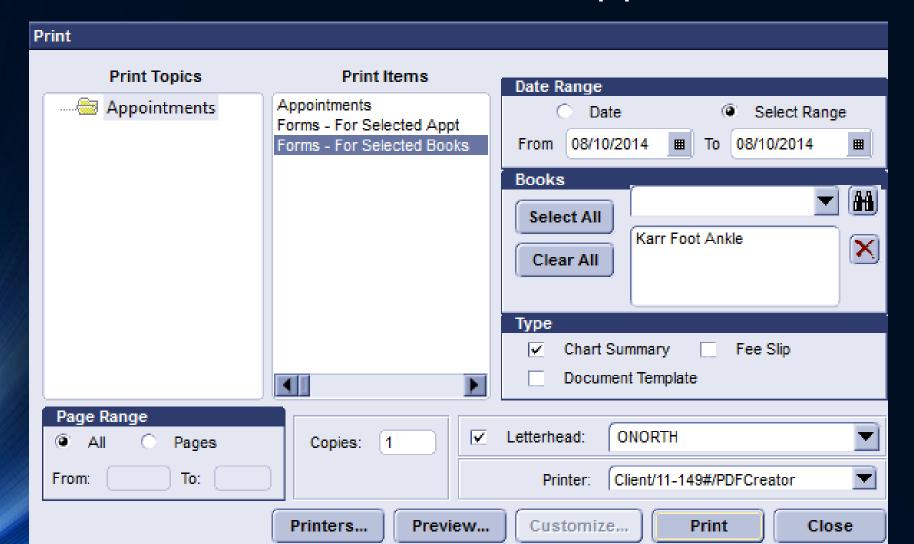
Patient | Faks |, Trainsr (443122-2326001)

Event Date/Time	Event	<u>User Name</u>
8/8/2014 9:11:42AM	Access a normal chart	IT Mike B (ALL)
8/8/2014 9:11:52AM	Chart tab changed	IT Mike B (ALL)
To tab:	Summary	
8/8/2014 9:18:05AM	Access a normal chart	IT Mike B (ALL)
8/8/2014 9:18:07AM	Chart tab changed	IT Mike B (ALL)
To tab:	Summary	
8/8/2014 9:18:11AM	Document change	IT Mike B (ALL)
Docum en t sum mary:	08/08/2014 - Office Visit	
	action: Created Document	TOTAL TO ALTER
8/8/2014 9:18:11AM		IT Mike B (ALL)
Documentsummary: 8/8/2014 9:18:11AM	08/08/2014 - Office Visit  Chart tab changed	IT Mike B (ALL)
To tab:	Do cum en ts	II MIKEB (ALL)
8/8/2014 9:18:11AM	Begin a chart update	IT Mike B (ALL)
Document summary:	08/08/2014 - Office Visit	II MINOD (ALL)
	Document change	IT Mike B (ALL)
Docum en t sum mary:	~	
	action: Contributed to Document	
8/8/2014 9:18:25AM	View a normal document	IT Mike B (ALL)
Docum en t sum mary:	08/08/2014 - Office Visit	
8/8/2014 9:18:25AM	Chart tab changed	IT Mike B (ALL)
To tab:	Orders	
8/8/2014 9:18:54AM	Document change	IT Mike B (ALL)
Documentsummary:	08/08/2014 - Office Visit	
	action: Created Document	ID 161 D COTT
8/8/2014 9:18:54AM		IT Mike B (ALL)
Docum en t sum mary:	08/08/2014 - Office Visit	

### **Chart Summaries**



### Chart Summaries-Entire Appointment Book



### **Chart Summaries**

- Controlled by chartsum.rtf file in crwrpts folder
- Wordpad and Notepad / Notepad ++ are key tools for editing file
- MedicaLogic Expression Language (MEL) controls data being shown

Datient Information Chart Summary

### Patient Information Name: Demo!Fake! Home Phone: Address: Work Phone: Patient ID: Fax: Birth Date: 03/01/1900 Status Active Marital Status: Gender: Female Contact By: Race: Patient Declined Soc Sec No: Language: Resp Prov: MRN: Referred by: Emp. Status: Email: Sens Chart: No Home LOC: All External ID: Problems **Procedures** Medications

No flows heet view found at path: Enterprise\Printing\Chart\_Summary\Immunizations

**Immunizations** 

Allergies and Adverse Reactions

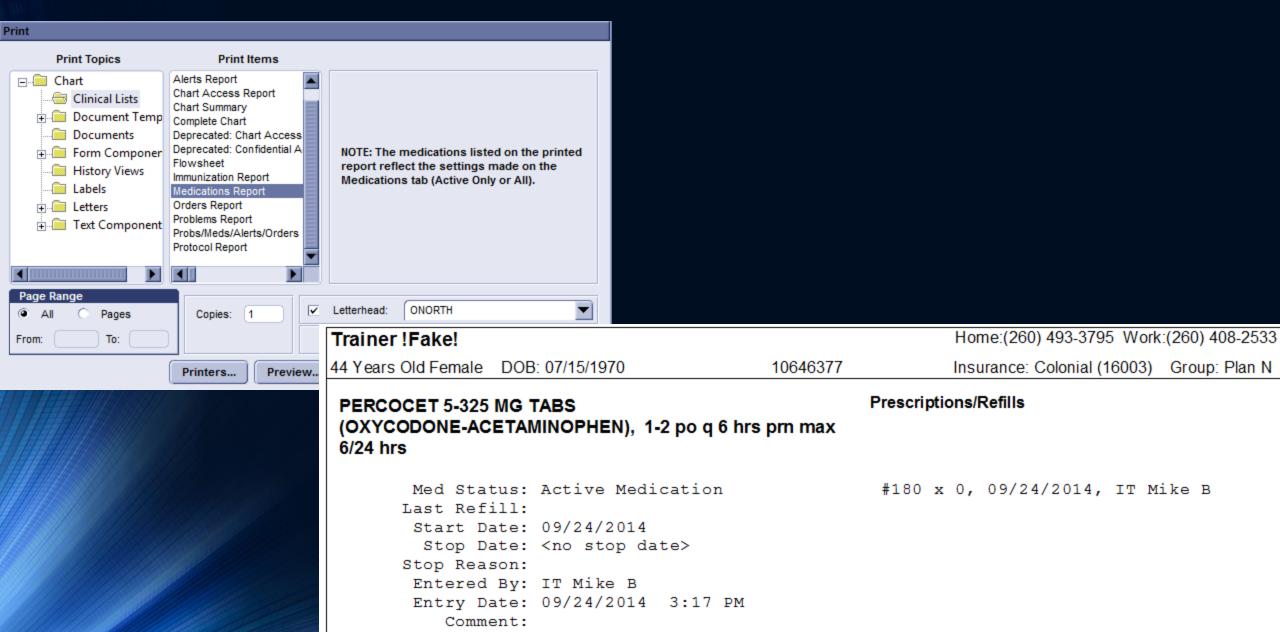
Directives

For our patients' safety, we verify the health history on every visit. To ensure the information is accurate please let us know of any changes.

Annointment: < None>

Name: Mrs. N ewPatient !Fake! Home Phone: 280-555-5555 Address: Office Phone: Office P	Pauent informatio	ni-Chait Summary	Appointment	<none></none>
ONE (External)ID:  Birth Date: 02/15/2002 (12)  Gender: Female  Marital Status  Married  Pharmacy:  Narcotic Contract:  Referred by: Alan Karr MD  Insurance:  Sensitive Chart: No  Blood Pressure:  Diagnoses  Negative  Surgeries  Negative  Patient History  Negative  Family History  Negative  Medications	Name:	Mrs. NewPatient !Fake!	Home Phone:	260-555-5555
Birth Date: 02/15/2002 (12) Email: Gender: Female Marital Status Married Pharmacy: ASC (MRN): Narcotic Contract: Height: Referred by: Alan Karr MD Weight: Insurance: BMI: Sensitive Chart: No Blood Pressure: Diagnoses Negative Surgeries Negative Patient History Negative Family History Negative Medications	Address:		Office Phone:	
Birth Date: 02/15/2002 (12) Email: Gender: Female Marital Status Married Pharmacy: ASC (MRN): Narcotic Contract: Height: Referred by: Alan Karr MD Weight: Insurance: BMI: Sensitive Chart: No Blood Pressure: Diagnoses Negative Surgeries Negative Patient History Negative Family History Negative Medications				
Gender: Female Marital Status Married Pharmacy: ASC (MRN): Narcotic Contract: Height: Referred by: Alan Karr MD Weight: Insurance: BMI: Sensitive Chart: No Blood Pressure: Diagnoses Negative Surgeries Negative Patient History Negative Family History Negative Medications	ONE (External)ID:		Fax:	260-555-5555
Pharmacy: Narcotic Contract: Referred by: Alan Karr MD Weight: Insurance: Sensitive Chart: No Blood Pressure:  Diagnoses Negative Surgeries Negative Patient History Negative F amily History Negative Medications	Birth Date:	02/15/2002 (12)	Email:	
Narcotic Contract: Referred by: Alan Karr MD Weight: Insurance: BMI: Sensitive Chart: No Blood Pressure:  Diagnoses Negative Surgeries Negative Patient History Negative F amily History Negative Medications	Gender:	Female	Marital Status	Married
Referred by: Alan Karr MD Weight: Insurance: BMI: Sensitive Chart: No Blood Pressure:  Diagnoses Negative Surgeries Negative Patient History Negative F amily History Negative Medications			ASC (MRN):	
Insurance: BMI: Sensitive Chart: No Blood Pressure:  Diagnoses Negative Surgeries Negative Patient History Negative F amily History Negative Medications	Narcotic Contract:		Height:	
Sensitive Chart: No Blood Pressure:  Diagnoses  Negative Surgeries  Negative Patient History  Negative Family History  Negative Medications	Referred by:	Alan Karr MD	Weight:	
Diagnoses Negative Surgeries Negative Patient History Negative Family History Negative Medications	Insurance:		BMI:	
Negative Surgeries Negative Patient History Negative Family History Negative Medications	Sensitive Chart:	No	Blood Pressure:	
Surgeries Negative Patient History Negative Family History Negative Medications	Diagnoses			
Negative Patient History Negative Family History Negative Medications	Negative			
Patient History  Negative Family History  Negative Medications	Surgeries			
Negative Family History Negative Medications	Negative			
Family History Negative Medications	Patient History			
Negative Medications	Negative			
Medications	Family History			
	Negative			
Allergies and Adverse Reactions	Medications			
Allergies and Adverse Reactions				
	Allergies and Adverse Reactions			

### Patient Medication History



### MU2 Core Measure 6 Audit Report: Clinical Decision Support



Execute - MEL Decision Support

Date/Tim e	Action Type - Description	Patlent Name	<u>User ID</u>	Machine Name	Outcome
10/02/2014 10:59:54PM	Execute - MEL Decision Support	!Fake!, Trainer (443122-2326001)	m baeske	ORTHONE/CDC-XEI	Success
Data type : Clinical		(**************************************			
Use rO K:	OK				
Please verify the patient is N of patient is allergic to any of the	OT a liergic to any of the following before ordering ( ese consider using Orthovisc.	Gel-One: Cinnamon, Chicken, Egg.	, Feathers, or P	oultry products. If the	

!Fake!. Trainer

(443122-2326001)

m baleske.

ORTHONE/CDC-XEL Success

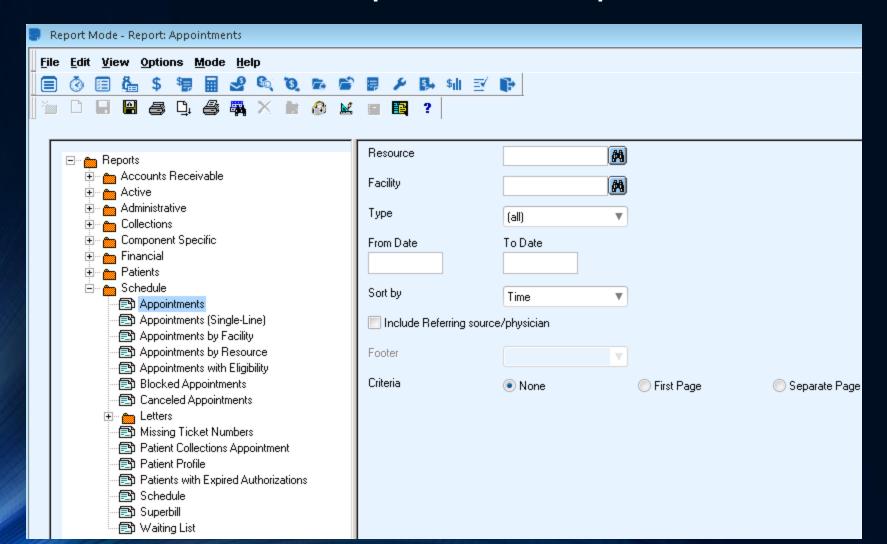
Data type : Clinical

10/02/2014 11:00:02PM

UserOK: OK

Please verify the patient is NOT allergic to any of the following before ordering Hyalgan: Chicken, Egg, Feathers, or Poultry products. If the patient is allergic to any of these consider using Orthovisc.

### "Canned" GE Reports in Reports Module



### Reporting Module Color Scheme



# **Inquiry Reporting**

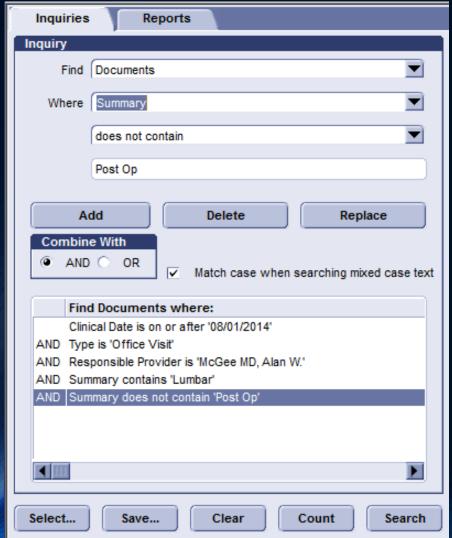
### Inquiries

- Able to setup without needing to know programming languages
- Can save inquiries for future use
- Results can be used to navigate directly to chart area

# Categories of Inquiries

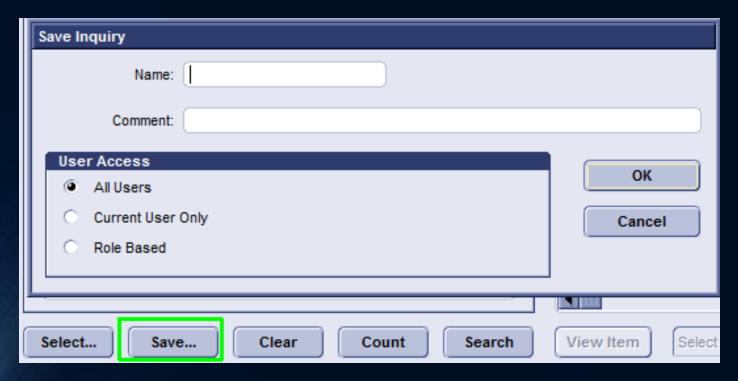


### Setting Up Inquiries



- Ability to setup multiple conditions separated by AND's or OR's
- Can count or search
- Search results can take user directly to data

# Saving Inquiries



### Meaningful Use Stage 2 Reminders

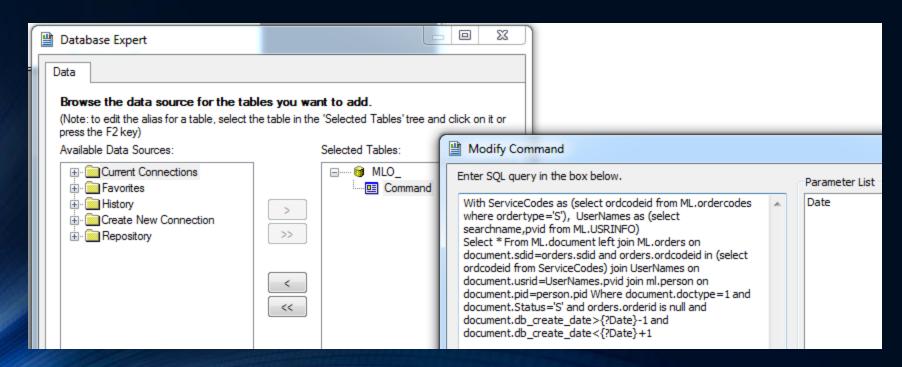
• Inquiries combined with Letters can be utilized:



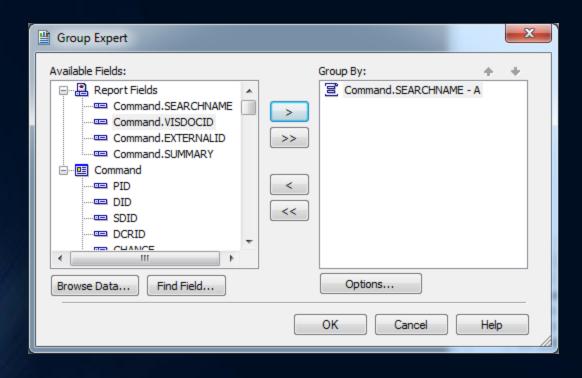
# EMR Crystal Report Development

### Creating an EMR Report

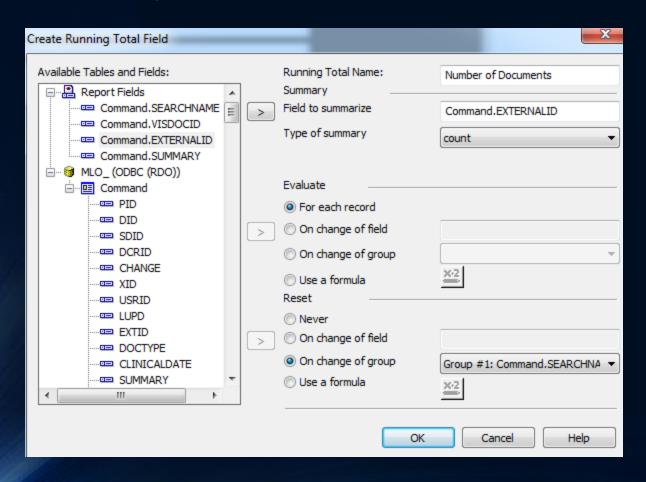
- Reports must be built in external editor
- ODBC connection utilized to build query
  - MLO\_default live system



## Organizing Data



### **Running Totals**

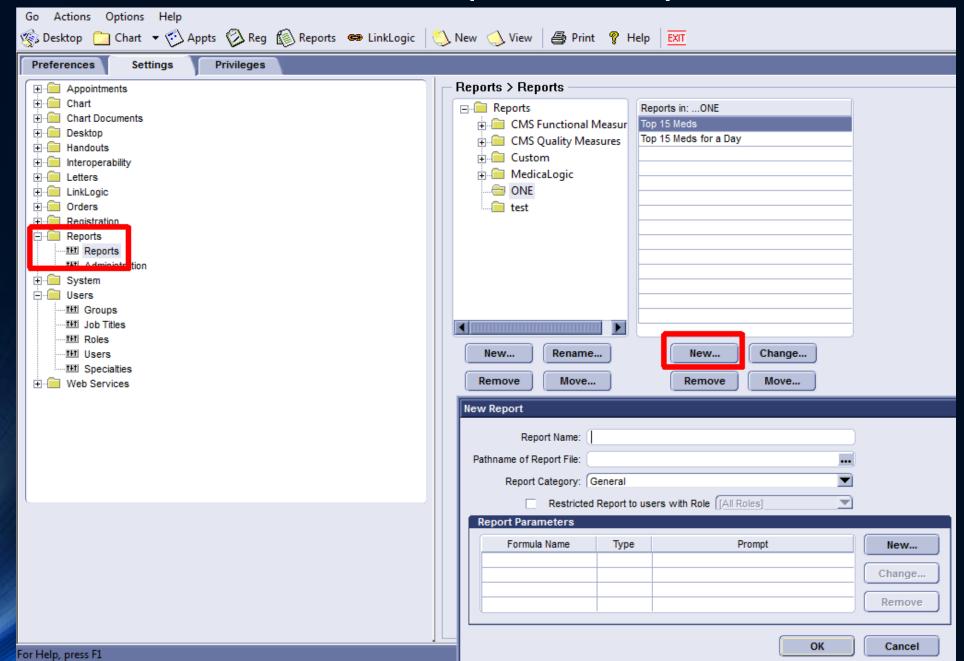


## Report Layout

Page Header		Documents Missing Orders			
	PROVIDER	EXTERNALID DOC#	SUMMARY		
Group Header #1:	. Group #1 Name	1			
Details	Ð	EXTERNALID , VISDOC	SUMMARY		
Group Footer #1:		Total Docu	ments: #Number of		

Do	cument	s Mi	ssing Orders	
PROVIDER	EXTERNALID	DOC#	SUMMARY	
Barr MD, Jeffrey W.				
	795539	99	FU lumbar ESI	
	To	tal Docu	ments: 1	
Berghoff MD, William J.				
	776788	277	Post op LTK Rev	
	To	tal Docu	ments: 1	
Conner MD, David M.				
	10660966	80	Suture removal	
	To	tal Docu	ments: 1	
Gemlick MD, Brett F.				
	718210	55	rt knee post-op	
	9940920	65	rt rotator cuff post-op	
	10049430	99	reck rt shoulder #5	
	To	tal Docu	ments: 3	
Hamlet MD, Ward P.				
	9274490	181	It thumb 13	
	Total Documents: 1			

### EMR Report Setup



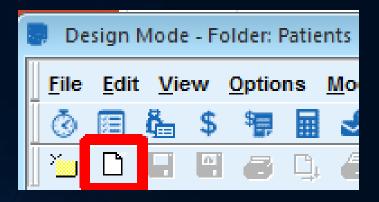
### CPS Crystal Report Development

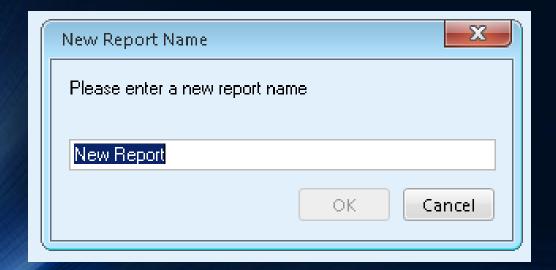
### Creating a New Report

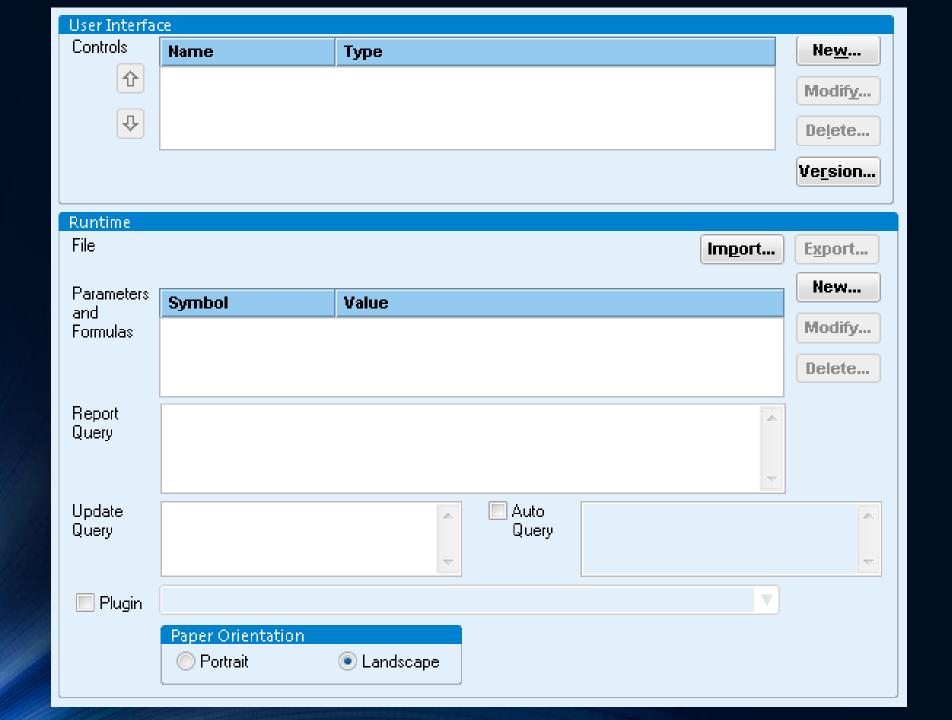
• Must be in Design Mode for the option to create a new report:



### Creating a New Report

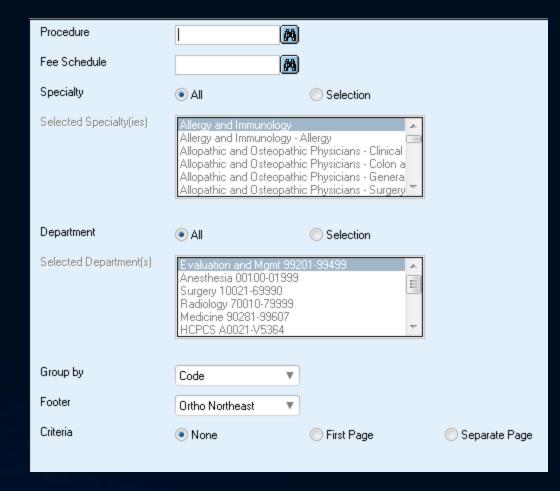






### Report Control setup





### Types of Controls

### Available Controls

### Check

Currency Date

Date Range

Drop List

GroupBy SortBy

List

Masked Edit

Radio Group

Select, Allocation Set

Select, Appointment Type

Select, Batch

Select, Charge Sets

Select, Clearinghouse

Select, Company

Select, Diagnosis

Select, Doctor

Select, Employer

Select, Facility

Select, Fee Schedule

Select, Guarantor

Select, Insurance Carrier

Select, Insurance Group

Select, Inventory Item

Select, Modifier

Select, Patient

Select, Physician

Select, Place of Service

Select, Procedure

Select, Resource

Select, Task Queue

Select, Transaction Column Set

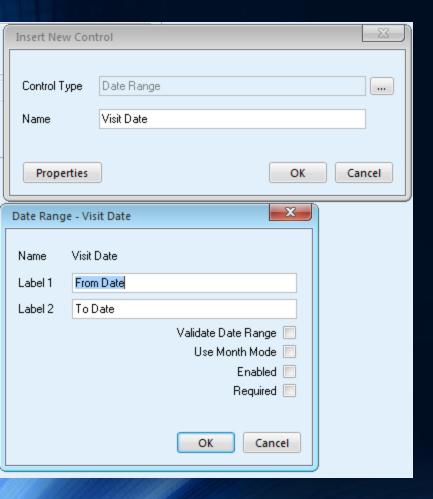
Select, Type of Service

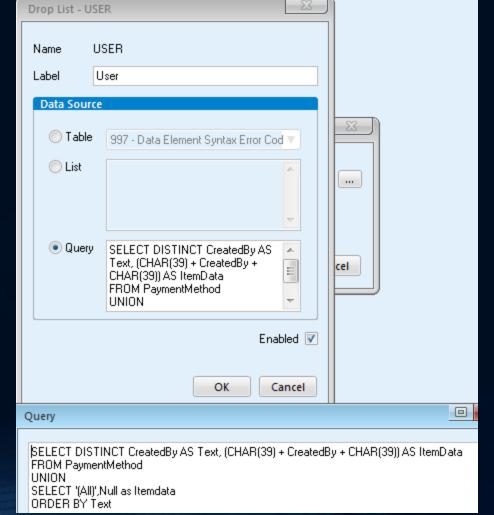
Select, Vendor

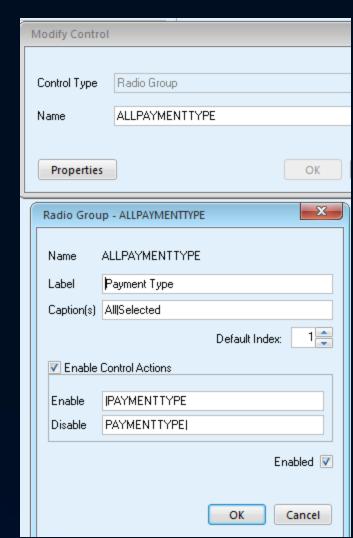
Spin Edit

Text

### Control Setup





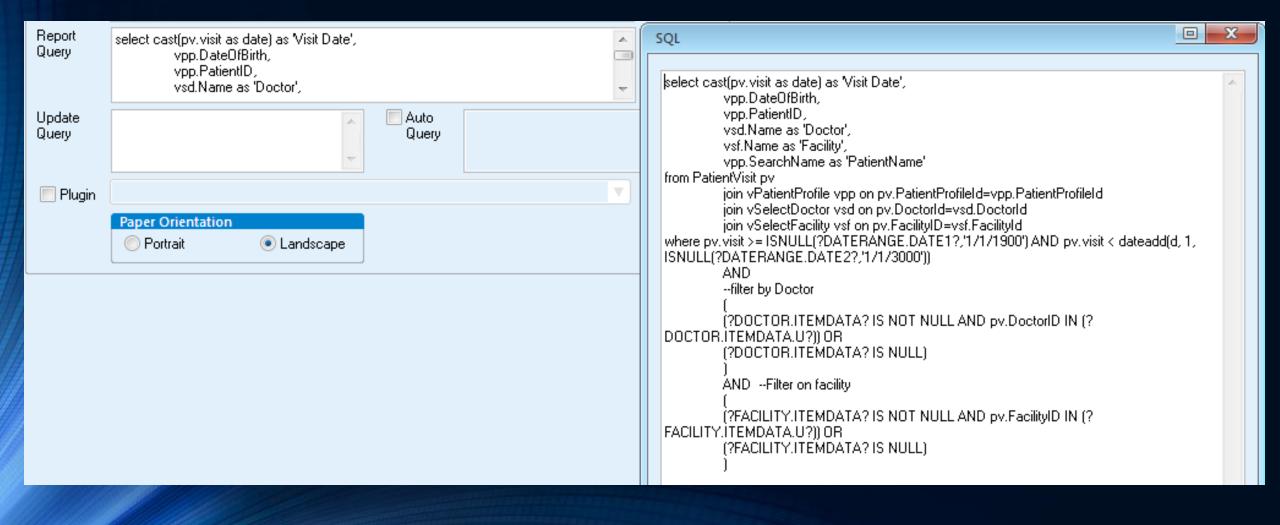


### Parameters

Parameters [ and	Symbol	Value	
Formulas	?DATE2	?DATERANGE.DATE2.U?	ah.
	?REPORTNAME	?REPORT.NAME.U?	~
	4	· · · · · · · · · · · · · · · · · · ·	

- .U returns data unquoted
- .TEXT returns string representation
- .ITEMDATA returns ID
- .VALUE pulls index from radio buttons

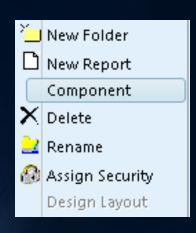
### Retrieving Data

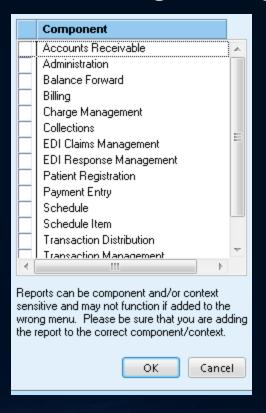


### Setting Up Context Sensitive Reports

### Report Configuration

• Alter the component setting in design mode to enable in different modules





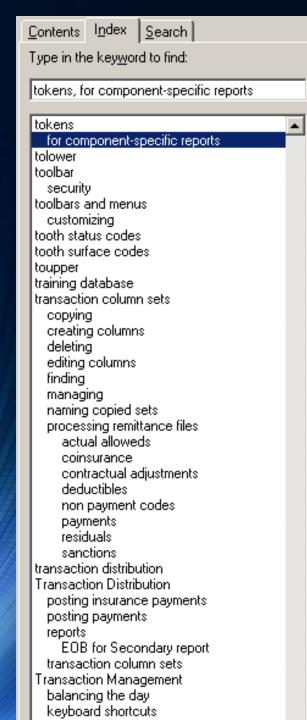
### Pulling Contextual Data

Predefined Tokens used to extract contextual data

SQL

Select PatientProfile.PatientID, Guarantor.Prefix, Guarantor.First, Guarantor.Middle, Guarantor.Last, Gu From PatientProfile , Guarantor, PatientVisit, InsuranceCarriers

Where PatientVisit.TicketNumber in [?SELECTED\_BILLING\_TICKETNUMBERS.ITEMDATA.U?] and PatientVisit.CurrentInsuranceCarriersid=insuranceCarriers.insuranceCarriersid





### Valid tokens for module-specific reports

Click the links below to see module-specific report tokens (ControlName.ControlProperty) with a description of the selected token. For example, AR\_STATUS.ITEMDATA and AR\_STATUS.TXT are tokens for the billing visit. ITEMDATA is an internal value for the control property (for example, the value 303 for Dr. Andrew Jones). TXT is either a description of the information referred by the ITEMDATA (for example, Dr. Andrew Jones) or is the same as the ITEMDATA value (for example, a ticket number).

Concept

Report elements

Report modes

Note. There are no tokens for Administration or Balance Forward.

### Tokens for module-specific reports

- <u>Accounts Receivable</u>
- 🗷 Billing

Token (ControlName.ControlProperty)

Description of

the token for the selected visit(s)

BILLING\_STATUS.ITEMDATA Billing status

BILLING VISITID.ITEMDATA Visit ID

BILLING TICKETNUMBER.ITEMDATA Ticket number

SELECTED\_BILLING\_VISITIDS.ITEMDATA Comma

separated list of visit IDs

SELECTED\_BILLING\_TICKETNUMBERS.ITEMDATA

Comma separated list

of ticket numbers

## Registration Tokens

■ 🖸 Registration

Token (ControlName.ControlProperty) Description of

the token for the current

patient

PATIENT\_PATIENTPROFILEID.ITEMDATA Patient profile

ID

PATIENT\_PATIENTPROFILEID.TEXT Patient profile

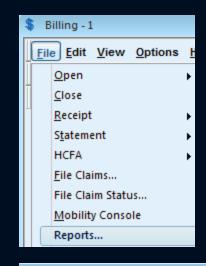
ID

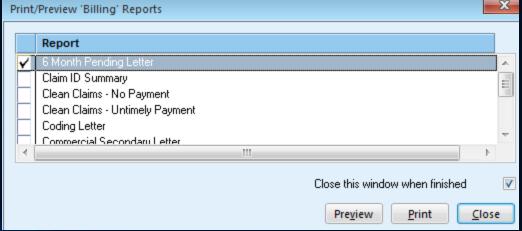
PATIENT\_NAME.ITEMDATA Full name

PATIENT\_NAME.TEXT Full name

### Running Context Sensitive Reports

- Use File menu to select the report
- Can directly Print or Preview and send to PDF or Excel





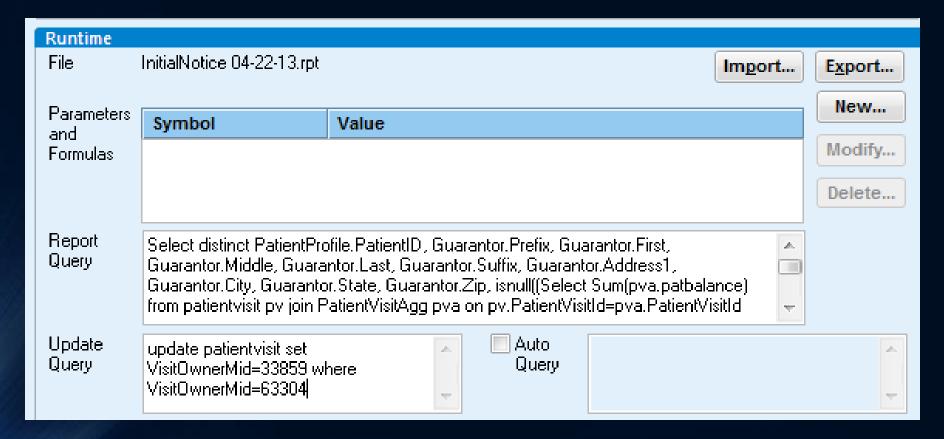
# **Active Reports**

### Creating Active Reports

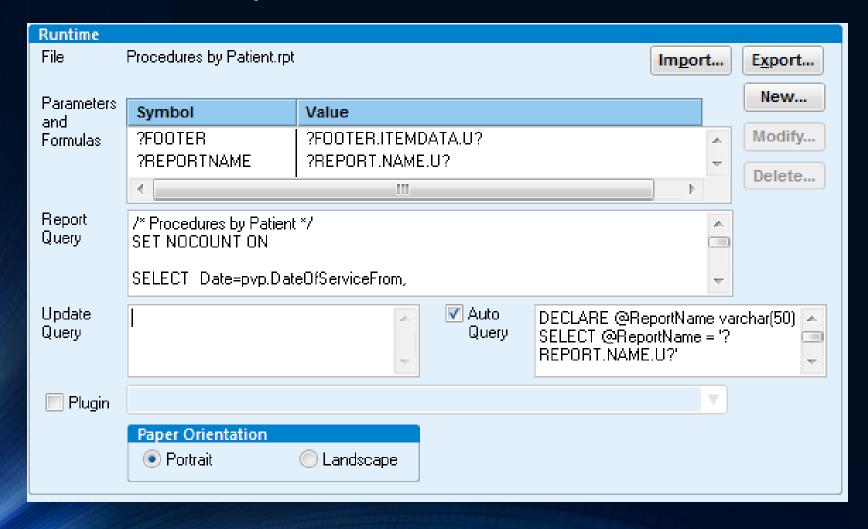
- Reports can be built to alter the database
  - Must be extremely careful with development!
  - Setup limiting Where clause first
- Two ways of implementing alterations:
  - Update Query
    - Requires user to confirm that they want to alter
       Database

- Auto Query
  - Always alters the database automatically when report is executed

### Update Query



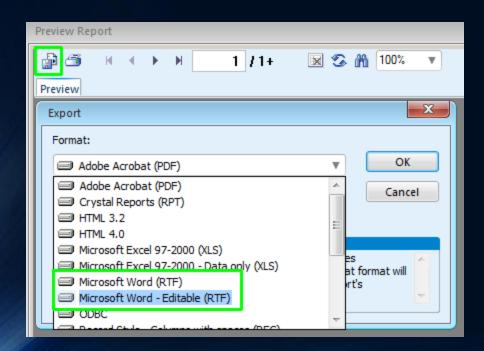
## Auto Query



# Generating Word Documents

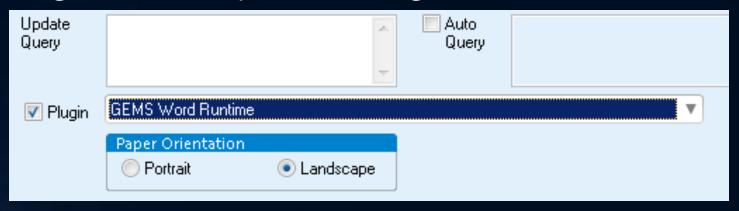
### **Exporting to Word**

- Can export any report to Word via Print Preview Screen
- Results tend to be mixed



### GEMS Word Runtime Report Setup

Plugin allows simple word integration



SQL query used as logic for filling information



### **Document Setup**

- Word document must be setup ahead of time
- Images and text can be statically entered to surround extracted data



5050 N. CLINTON STREET FORT WAYNE, IN 46825 (260) 490-6970 or 1-888-321-6033

September 4, 2014

«InsuranceName»

«AddressLine1» «AddressLine2»

Patient Name: «PatientName»
Patient ID#: «InsuredId»

DOS: «Visit» Dr.:«Doctor»

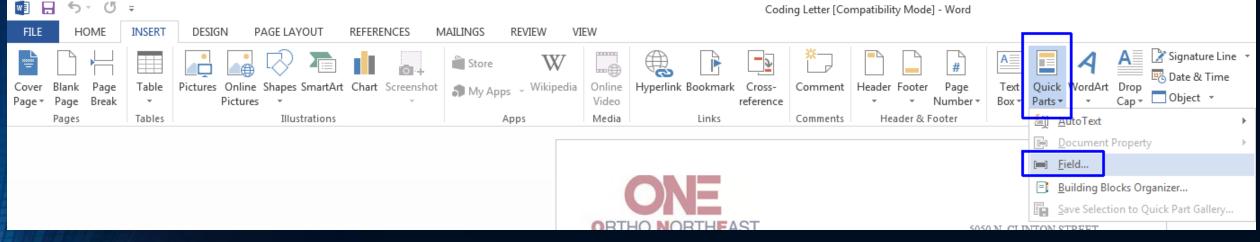
Ticket: «TicketNumber»

Billed Charge: \$«InsAllocation»

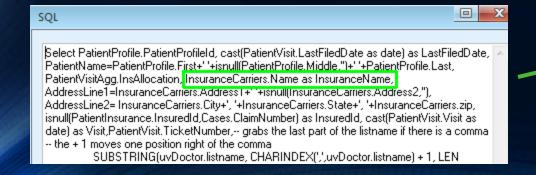
To Whom It May Concern,

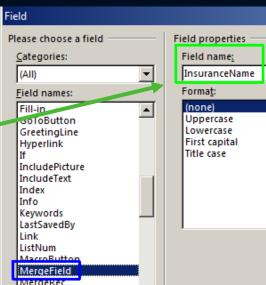
### Document Setup

MergeFields used to pull SQL results



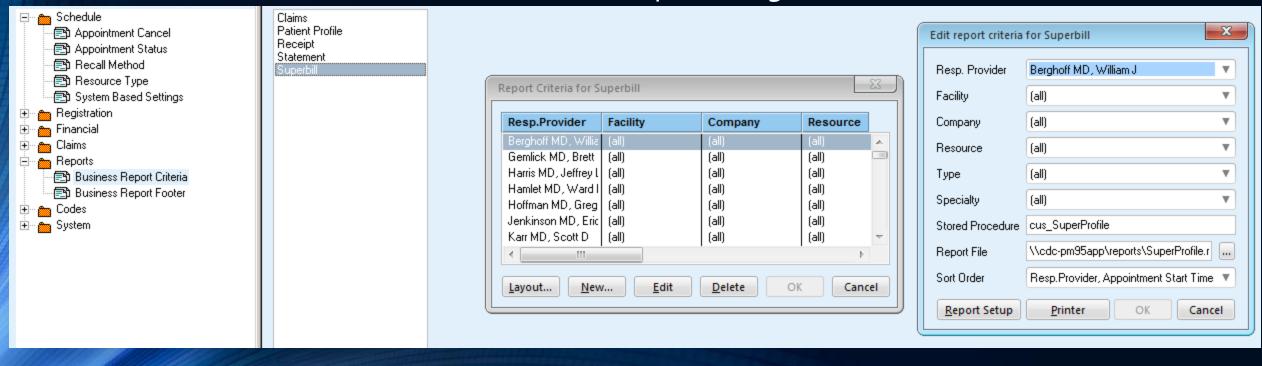
Field name must be identical to SQL select results





## CPS Administration Reports

- Store Procedures determine how information is pulled
- Crystal Reports on servers are used for layout
- Custom criteria determine which report will generate



# Database Tips

### Key Centricity EMR Tables

- PERSON\*
- OBS / OBSHEAD
- ORDERS
- PROBLEM
- ALLERGY
- PRESCRIB / MEDICATE
- USR
- DOCUMENT / DOCDATA
- DOCROUTE

- FLAG
- LOCREG
- MUACTIVITYLOG
- FAMILYHEALTHHISTORY
- RELPERS / RELBUSS / RELPROV \*
- BUSINESS / SERVPROV \*
- INSURANC \*
- INSURECO \*
- IMMUNIZATION

### Key CPS Tables

- PatientProfile
- Guarantor
- PatientVisit
- PatientVisitProcs
- PatientVisitAgg / PatientProfileAgg
- Cases
- InsuranceCarriers
- PatientInsurance / Cases Insurance

- Appointments
- BillingNote
- Transactions
- DoctorFacility
- Pharmacy
- PatientRelationship / PatientContacts
- MedLists
- ActivityLog

### Key Centricity EMR Views

- VPERSON
- RPTOBS
- RPTAPPT
- USRINFO
- INSURANCE\_INFO
- RPT\_AUDIT\_EVENT

- VACTIVEALLERGY
- VACTIVEMEDICATE
- VACTIVEPROBLEM

### Key CPS Views

- vSelectCase
- vSelectCompany
- vSelectDoctor
- vSelectFacility
- vSelectGuarantor
- vSelectInsuranceCarrier
- vSelectPatient

- vPatientAppointments
- vPatientInsurance

### Key Centricity EMR Functions and Procedures

- CONVERT\_ID\_TO\_DATE()
  - Used to convert certain date fields into actual date values
- CONVERT\_DATE\_TO\_ID()
  - Used to take a date value and convert to special numeric date\*

- ARCHIVE\_OBS()
  - Boost chart loading speed by archiving older observations
- SEND\_FLAG()
  - Used to Automatically generate a flag in the EMR

## Key CPS Functions and Procedures

- FunctionMonthlyFinancialSummary
- FormatName
- FormatPhone

- CMS1500\_V0212
- MPMBlocked
- MPMPatientProfile
- MPMReceipt
- MPMStatement
- MPMSuperbill
- MPMUB92