



Lost Creek Consulting, Inc.

Managing Interfaces with Centricity EMR

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Big Questions

- What does it take to manage an interface?
- What skills are required?
- How much time is devoted to this?
 - Is this a full time job?
 - Are there times when it is busier?
- ? Other questions ?

■ Scott Carroll

- Heart and Vascular Institute of Florida
- Senior Systems Analyst
formerly EMR Project Manager

Lost Creek Consulting, Inc.

David Erickson

Integration Consultant

What is an interface?

- Merriam Webster:
- a: the place at which independent and often unrelated systems meet and act on or communicate with each other <the man-machine *interface*>
- b: the means by which interaction or communication is achieved at an interface.

What is LinkLogic

- The name for the part of Centricity EMR that controls the import and export of data
- The collection of specifications describing the files used to import and export data from Centricity EMR

What can be interfaced?

- Demographics I,O
- Documents I,O
- Lab Results I,O
- Schedules I
- Procedures O
- Problems O
- Allergies O

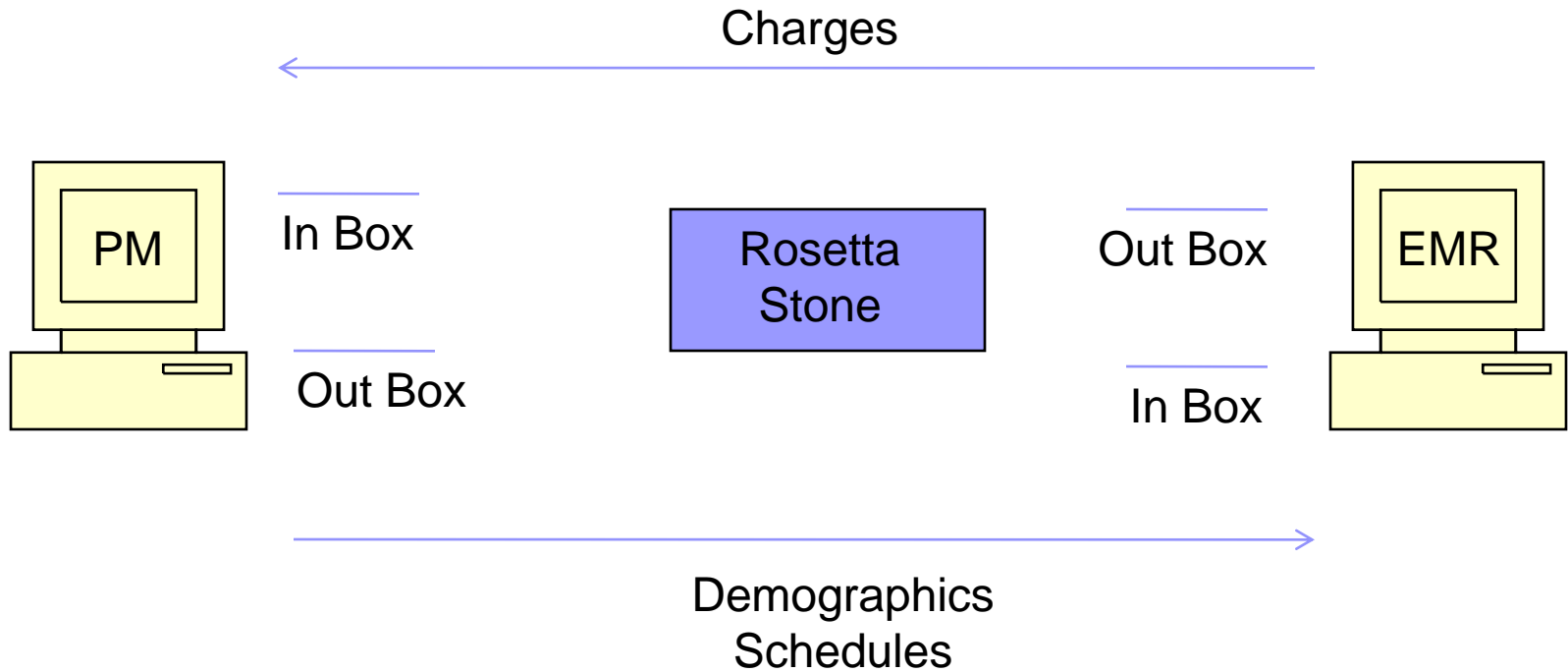
Interface Issues

- Sending the messages
- Identifying the patient
- Mapping values
- Translating HL7 dialects
- Putting the result on the ordering provider's desktop
- Notifying the provider of abnormal results

Sending the messages

- The outside system sends a file
- Interface Agent reads it and makes changes
- Data Transfer station reads it
- Loads into EMR

How does an interface work ?



Sending the message: When the interface stops...

- Reboot the DTS
- Restart MIK
- Restart Rosetta Stone
- Look for errors

Identifying the patient

■ Field Match:

- ExternalId only
- ExternalId and DOB or Last
- Last, First, DOB, Gender
- SSN, Last, First, DOB

Identifying the patient

■ Errors:

- Data entry errors
 - Misspelled names
 - Wrong birthdate
- MRN mapping errors
- Name change / timing errors

Mapping values

- Doctor Ids (NPI – EMR login)
- Location of care
- Gender code (M – Male, F – Female)
- Result code – observation id

Mapping Values: Doctor id

- Need a cross reference file
 - Lab's doctor number
 - Centricity's provider login

01234,hwinston

9877,rjanoff

Mapping Values: Lab result code

- Result code cross reference file
- Result codes
01568,LOI-1236
- This is NOT the order code

Cross Reference Management

- Result code mapping
- Order code mapping
- Doctors
- Multiple Laboratories

Cross Reference Manager

xRef Manager

Welcome Labs Config

Lab: Labs Quest Diagnostics Include: Search Config / Refresh ...

Name	Unit	Code	Description	EMR Code	EMR Name	EMR Description
Allergen for Giant Rag...		3532				
Allergen for Penicillin G		3526				
Allergen for Penicillin V		3527				
Almond (F20) IgE		3524		MLI-93176	ALMOND IGE	Almond (F20) Immuno CAP RAST
Alpha Lactalbumin (F7...		3583				
Alpha-Amino Adipic A...		994.37				
Alpha-Amino Butyric A...		994.46				
ALT		1019		LOI-1742-6	SGPT (ALT)	alanine aminotransferase (SGPT), serum
Alternaria alternata (M...		3536		MLI-75837	ALTERNALTIGE	Alternaria alternata IgE
Amphetamines		4210		LOI-3349-8	AMPHETAMI UR	amphetamine screen, urine
Amphetamines, GC/M...		4234				

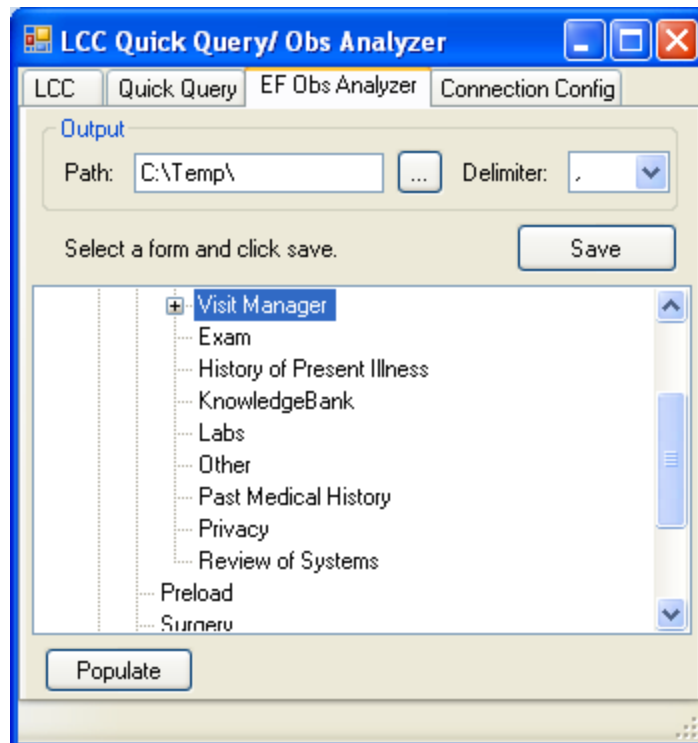
Centricity Include: Alpha-Amino Adipic Acid Search Show only Top 50 Matches

Name	Unit	EMR Code	Description	Score
ALPHA 1 GLOB		LOI-2865-4	alpha-1 globulin, serum	5
ALPHA 2 GLOB		LOI-2868-8	alpha-2 globulin, serum	5
AMINO A PLAS		LOI-1784-8	alpha amino acid nitrogen (PT, PLAS, QN)	5
ALPHA 1, CSF	%	MLI-498.27	alpha-1 globulin, CSF (cerebrospinal fluid), by electrophoresis	5
ALPHA 2, CSF	%	MLI-498.28	alpha-2 globulin, CSF (cerebrospinal fluid), by electrophoresis	5
ALPHA 1%	%	MLI-6518	alpha 1 globulin, serum, as percent of total serum protein	5
ALPHA 2%	%	MLI-6519	alpha-2 globulin, serum, as percent of total serum protein	5
ALPHA 1 ALBUMIN		LOI-1922-5	alpha-1 globulin, serum, as percent of total serum protein	?

MAP Create XRS
Map Compare... Create CNV

How do I know which
observation term to use?

EF Obs Analyzer



EF Obs Analyzer

ObsAnalyzer1.xlsx - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Developer

Clipboard Font Alignment Number Styles Cells Editing

Security Warning Data connections have been disabled Options...

A1 Forms

	A	B	C	D	E	F	G	H	
1	Forms	Obs	Obs	Obs	Obs	...			
2	OB Initial Intake	FOB name	Educa level	type of work	Occupation#1	BabyPhysName	Hosp pref	ref source	FC
3	Histories	Family Hx	Past Med Hx	Social Hx	SH reviewed	FH reviewed	PMH reviewed	Social hx	Fa
4	HPI - Anticoagulation Tx	PTT control	PTT patient	INR	PT control	PT patient	Ex Tx Durat	Chief Cmplnt	Cu
5	Assessment/Plan	Disposition	workup plan						
6	Health Habits & Risk Factors	Pas cig smok	sun exposure	Seatbelt use	exercise typ	Exercise tim	Exercise	Caffeine Use	Di
7	Exam General Multi-system	Rectal exam	affct-mood	MSE:recall	MSE:orient	judg insight	sensa exam	Deep ten rfl	Cr
8	Risk Factors	Exercise	Caffeine Use	HIV rsk eval	DRUG USE	ALCOHOL USE	Pas cig smok	SMOK ADVICE	Or
9	Vital Signs	BP systolic	Resp rate	pulse rhythm	Pulse rate	Temp site	Temperature	Weight	He
10	Patient Authorization	ROI dte exp	ROI dte sign	ROI signatur	ROI pay info	ROI address	ROI name	ROI reason	RO
11	Health Status Questionnaire	HOI/1.100.1	HOI/1.99.1	HOI/100.11.4	HOI/100.11.3	HOI/100.11.2	HOI/100.11.1	HOI/1.122.10	HO
12	Nursing Intake Form	BP diastolic	BP systolic	Resp rate	pulse rhythm	Pulse rate	Temp site	Temperature	W
13	Health Risk Inventory	HOI/1.256.1	HOI/1.255.1	HOI/1.254.1	HOI/1.253.1	HOI/1.252.1	HOI/1.251.1	HOI/1.250.1	HO
14	Physical Exam - Peds w/ DD	Visual acuit	affct-mood	MSE:recall	MSE:orient	judg insight	Neuro exam	sensa exam	De
15	Physical Exam - Respiratory	MSE:orient	skin sq insp	digit nails	strengt tone	gait station	LYMPH NODES	liver spleen	ab
16	Vital Signs - Extended	BP site #3	BP site #2	BP site #1	BP dia #3	BP sys #3	BP dia #2	BP sys #2	BF
17	Assessment/Plan - Pediatrics	Disposition	Impression	workup plan					
18	HPI - Depression	DRUG USE	ALCOHOL USE	Caffeine Use					
19	Diabetes Type I Comp Follow-up	Plan	Impression	Diah foot ck	Extremities	Neuro exam	MSK EXAM	Abdomen exam	He

Ready Count: 1442 100%

Translating HL7 dialects

- Interface Engines

- Cloverleaf

- Rosetta Stone

- Interface Agents

- LCC Interface Agent

Transcription

- Dictation

- NotesLink
- Word Macro
- NotesLoader

- ImageLink

- Scanning
- PACS/Dicom images

NotesLoader

NotesLoader Indexer

File Help

Transcription Files: C:\Transcription\2_ManualIndexingQueue\

Name	Size	Type	Created
70-TEST001_Erickson_David_19520917_M_20041...	1377	TXT	1/22/2008 9:24:44 AM
70-TEST001_Erickson_David_19520917_M_20041...	633	TXT	1/22/2008 9:24:44 AM
71-TEST001_Haley_Melissa_19750525_F_2004120...	1804	TXT	1/22/2008 9:24:44 AM
72-TEST001_McGillicuddy_Lucille_19320222_F_200...	1002	TXT	1/22/2008 9:24:44 AM
Consult_NoteText_36	274	TXT	2/8/2008 2:09:36 PM

Refresh

Wrap Text

CHART #: 82226
 PATIENT NAME: David Erickson
 DOB: 6/8/1952
 SEX: male
 SSN:
 NOTE DATE: 10/07/2004
 Sample Clinic, P.C. 1550 Dexter Road, Dexter, OR 97431 541-732-1137

Note for David Erickson on 10/07/2004 - Chart 82226

Dana Darling, M.A.
 Chief Complaint: Chief Complaint (1/1): This 54 year old male presents today complaining of a changing lesion on left temple. Present several months, enlarging.

Patient Information:

Exter. ID: 82226 Name, First, Mid: DAVID
 S.S.N.: Name, Last: ERICKSON
 M.R.N.: Date of Birth: 06/08/1952 Sex: M

Visit Information:

Date of Service: 10/07/2004
 Doctor Initials: HSW EMR ID: hwinston
 Document Type: TN Lock

List matching patients

External ID	Patient ID	S.S.N.	Med.Rec.Num.	First	Middle	Last	Birth	Sex
82226	547-TEST001			David		Erickson	6/8/1952	M

Select Patient Move to Hold Write to EMR

Interface Assessment Worksheet

LinkLogic Manager Duties

- Monitor Data Transfer Station
- Resolve errors
- Update Cross Reference files
- Identify areas where an interface can help
- Work with vendors to create new interfaces

LinkLogic Manager Duties

- Ongoing operations
 - A few minutes each day
 - Depends on quality of data entry
 - Depends on number of transactions
- New interfaces or interface changes
 - Could be full time
 - Until the interface stabilizes
- Needs to be comfortable with technology

LinkLogic Manager

■ Training

- Resolving errors training

 - 2 hours web-x

- Managing Interfaces with LinkLogic

 - User guide and tutorial

- Managing Interfaces with LinkLogic

 - 2 days lecture/lab

- CHUG

■ Questions?